Revista ARACÊ
ISSN: 2358-2472

DIGITAL HEALTH AND PUBLIC POLICIES: EVOLUTION AND CHALLENGES FOR BRAZIL

https://doi.org/10.56238/arev6n3-184

Submitted on: 15/10/2024 **Publication date:** 15/11/2024

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ABSTRACT

Digital health is a field that involves the use of information and communication technologies to improve the quality, efficiency, and equity of health services. In Brazil, digital health gained prominence mainly after the COVID-19 pandemic, which required the adoption of social distancing measures and the expansion of access to telemedicine, telehealth, and electronic medical records. However, the country faces several challenges in creating public policies that can guide and regulate the creation, implementation, and use of digital health benefits. Among these challenges, we can highlight the territorial dimension and regional inequalities, which hinder the universalization and integration of health information systems and the availability of adequate technological infrastructure in all areas of the country. This paper presents a review of public initiatives and policies in Brazil, analyzing scientific publications, standards, resolutions and laws that deal with this theme and proposes as a result the challenges that need to be overcome in the development or improvement of existing policies in the field of digital health. Among the existing challenges for the development of these policies are the large population and socioeconomic diversity, which demand personalized solutions adapted to the different realities and needs of users, as well as the guarantee of digital inclusion and health literacy, the unequal distribution of medical professionals and other health categories, which imposes limits on the supply and quality of health services, especially in the most remote and vulnerable areas, and which requires continuous training of workers in digital health, the General Data Protection Law (LGPD) and the adoption of new technologies, which bring new ethical, legal and technical challenges for the protection of privacy and security of personal health data, as well as for the evaluation of effectiveness, the effectiveness and security of digital health solutions. In view of these challenges, it is essential that Brazil develops a national digital health strategy, which can define the objectives, guidelines, responsibilities, and actions to promote the appropriate and sustainable use of information and communication technologies in health, for the benefit of the Brazilian population.

Keywords: Public policies, Digital health, Telehealth.

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ISSN: 2358-2472

RESUMO
A saúde digital é um campo que envolve o uso de tecnologias da informação e comunicação para melhorar a qualidade, a eficiência e a equidade dos serviços de saúde. No Brasil, a saúde digital ganhou destaque principalmente após a pandemia do COVID-19, que exigiu a adoção de medidas de distanciamento social e a ampliação do acesso à telemedicina, à telessaúde e aos prontuários eletrônicos. No entanto, o país enfrenta diversos desafios para criar políticas públicas que possam orientar e regulamentar a criação, a implantação e o uso dos benefícios da saúde digital. Entre esses desafios, podemos destacar a dimensão territorial e as desigualdades regionais, que dificultam a universalização e a integração dos sistemas de informação em saúde e a disponibilidade de infraestrutura tecnológica adequada em todas as áreas do país. Este trabalho apresenta uma revisão das iniciativas e políticas públicas no Brasil, analisando publicações científicas, normas, resoluções e leis que tratam desta temática e propõe como resultado os desafios que precisam ser vencidos no desenvolvimento ou melhoria das políticas existentes no campo da saúde digital. Entre os desafios existentes para o desenvolvimento destas políticas destacam-se a ampla população e a diversidade socioeconômica, que demandam soluções personalizadas e adaptadas às diferentes realidades e necessidades dos usuários, bem como a garantia de inclusão digital e de alfabetização em saúde, a distribuição desigual de profissionais médicos e de outras categorias da saúde, que impõe limites à oferta e à qualidade dos serviços de saúde, especialmente nas áreas mais remotas e vulneráveis, e que demanda uma capacitação contínua dos trabalhadores em saúde digital, a Lei Geral de Proteção de Dados (LGPD) e as adoção de novas tecnologias, que trazem novos desafios éticos, jurídicos e técnicos para a proteção da privacidade e da segurança dos dados pessoais de saúde, bem como para a avaliação da eficácia, da efetividade e da segurança das soluções digitais em saúde. Diante desses desafios, é fundamental que o Brasil desenvolva uma estratégia nacional de saúde digital, que possa definir os objetivos, as diretrizes, as responsabilidades e as ações para promover o uso adequado e sustentável das tecnologias da informação e comunicação em saúde, em benefício da população brasileira.

Palavras-chave: Políticas públicas, Saúde digital, Telessaúde.

RESUMEN
La salud digital es un campo que implica el uso de las tecnologías de la información y la comunicación para mejorar la calidad, la eficiencia y la equidad de los servicios de salud. En Brasil, la salud digital ha cobrado relevancia principalmente tras la pandemia de COVID-19, que requirió la adopción de medidas de distanciamiento social y la expansión del acceso a la telemedicina, la telesalud y la historia clínica electrónica. Sin embargo, el país enfrenta diversos desafíos en la creación de políticas públicas que orienten y regulen la creación, la implementación y el uso de los beneficios de la salud digital. Entre estos desafíos, destacan la dimensión territorial y las desigualdades regionales, que dificultan la universalización e integración de los sistemas de información sanitaria y la disponibilidad de infraestructura tecnológica adecuada en todo el país. Este artículo presenta una revisión de las iniciativas y políticas públicas en Brasil, analizando publicaciones científicas, normas, resoluciones y leyes que abordan este tema y, en consecuencia, propone los desafíos que deben superarse en el desarrollo o la mejora de las políticas existentes en el ámbito de la salud digital. Los desafíos para el desarrollo de estas políticas incluyen la gran población y la diversidad socioeconómica, que requieren soluciones personalizadas

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ISSN: 2358-2472

adaptadas a las diferentes realidades y necesidades de los usuarios, además de garantizar la inclusión digital y la alfabetización en salud; la distribución desigual de profesionales médicos y de la salud, que limita la oferta y la calidad de los servicios de salud, especialmente en las zonas más remotas y vulnerables, y que requiere la formación continua de los profesionales de la salud digital; la Ley General de Protección de Datos (LGPD) y la adopción de nuevas tecnologías, que plantean nuevos desafíos éticos, legales y técnicos para la protección de la privacidad y la seguridad de los datos personales de salud, así como para la evaluación de la eficacia, efectividad y seguridad de las soluciones de salud digital. Ante estos desafíos, es fundamental que Brasil desarrolle una estrategia nacional de salud digital que defina los objetivos, directrices, responsabilidades y acciones para promover el uso adecuado y sostenible de las tecnologías de la información y la comunicación en salud, en beneficio de la población brasileña.

Palabras clave: Políticas públicas, Salud digital, Telesalud.

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INTRODUCTION

In 1995, in Mexico, the first telehealth initiative in Latin America emerged. The Mexican project was based on the experiences accumulated since 1968, when a Mexican cardiologist, a member of the NASA team, worked on the analysis of electrocardiograms sent by space missions (Gertrudiz, 2010; Pacheco, 2011).

In this period, the concept of eHealth emerges, which refers to the use of Information and Communication Technologies (ICT) in the health area and encompasses several tools and strategies, including telehealth (Santos et al., 2014). This term gained prominence in Latin America in 2012, when the Pan American Health Organization (PAHO, 2011) included telehealth as an integral part of the Estrategia y Plan de Acción sobre eSalud, approved by the Member States of the region. The definition of telehealth used by PAHO is the provision of health services through ICTs, especially when distance makes it difficult to access these services.

Since then, several Latin American countries have adopted telehealth as a strategy to expand access to health care, improve the quality of services, and train professionals.

Digital health is presented by the World Health Organization (WHO) as a field of knowledge and practice associated with the development and use of digital technologies in health (PAHO, 2011). In addition, digital health is understood to be more comprehensive compared to its predecessor, electronic health (eHealth).

In Brazil, telehealth began to be implemented in the mid-1990s, with a focus on remote care in hard-to-reach areas. In 2007, the Ministry of Health instituted the National Telehealth Program (PNTeleSUS) with the objective of increasing the quality and problem-solving capacity of primary care in remote and hard-to-reach areas. Since then, the country has invested in telehealth technologies and projects, including teleconsulting, telediagnosis, and teleeducation. The shift from e-health or telehealth to digital health in Brazil was not a one-time and one-off event, but rather a gradual process that unfolded over several years until Decree 9,795/2020, creating the Department of Digital Health linked to the Ministry of Health.

With the COVID-19 pandemic in 2020 and the need for social isolation, telehealth has become a crucial alternative to maintain access to healthcare during the pandemic. Governments and healthcare institutions around the world have quickly adapted their policies and regulations to enable the implementation of telecare solutions and accelerating initiatives and policies for the adoption and application of telehealth.

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MATERIALS AND METHODS

This article reviews public initiatives and policies in Brazil, analyzing scientific publications, standards, resolutions, and laws that deal with the subject. A search was carried out in the Virtual Health Library (https://bvsalud.org/) in March 2024, with the following criteria: Research bases: LILACS, MEDLINE, Coleciona SUS, PAHO-IRIS, WHO IRIS, PIE, RHS Repository and RDSM; Main Subjects: Health Policy, Public Policy; Language: Portuguese; Study design: Qualitative research, observational study, Systematic review, Health economic evaluation and Health technology evaluation. The research used the time frame published between the years 2018 and 2024. The terms used in the research were: e-Health; Digital Health and Telehealth, in a non-combined way. For the term e-Health, 607 articles were found, for the term Telehealth, 1 article was found, and for the term Digital Health, 7 articles. The abstract of all articles was read and studies on regional policies, comorbidities and specific diseases, and initiatives restricted to care specialties were excluded. Three articles resulting from this research were read in full; the authors chose to use as the starting point of the investigation the articles: Digital health and the platforming of the Brazilian government (Rachid et al., 2022) and Telehealth as a State response strategy: a systematic review (Celes et al., 2018).

The largest volume of articles focuses on COVID-19 treatments, by specialties during the pandemic. There is a low volume of academic production on the subject related to public policies for health promotion in Brazil by digital means.

Searches were carried out in the database of resolutions of the National Health Council (https://conselho.saude.gov.br/resolucoes-cns), in the Publications of the Secretariat of Information and Digital Health of the Ministry of Health (https://www.gov.br/saude/pt-br/composicao/seidigi/publicacoes) and in searches on the Google search site for laws and resolutions involving the themes of Digital Health, Telehealth and e-Health.

It is important to highlight the low result of scientific articles on the subject, after the application of filters and the decentralization of information on standards, laws, and public policies on digital health.

After the analyses and historical review, the evolution of public policies in digital health and telehealth in Brazil was traced. In the discussion session, issues that need further investigation are presented, presenting the challenges for current and new policies that promote the implementation of digital health in a Brazilian territory, with a large

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geographical extension, different conditions of telecommunications and ICT networks, different cultures and new technological challenges.

PUBLIC POLICIES ON DIGITAL HEALTH AND TELEHEALTH IN BRAZIL

The World Health Organization defines – in its Package of Tools of the National Digital Health Strategy, as "e-Health is the application of Information and Communication Technologies to Health (WHO, 2006). More broadly, digital health aims to increase the quality and expand access to health care through the use of Information Technologies, including the knowledge and practices inherent to this area of knowledge that contribute to streamlining the flow of care, qualifying health teams and making the flow of information to support decision making in Health more effective and efficient. in its complexity, which involves both clinical decision-making, health surveillance, health regulation and promotion, and management.

The evolution of public policies in digital health and telehealth in Brazil began in the 90s, with the creation of bodies and initiatives aimed at the organization and management of health information. The Organic Health Law of 1990 established that the Ministry of Health should create a national health information system in conjunction with the state and municipal levels. In 1991, the SUS Information Technology Department (DATASUS) was created, incorporating assets from the Social Security Data Processing Company (Dataprev).

Over the years, there has been a significant evolution of digital health and telehealth public policies in Brazil, increasingly seeking to promote the quality and efficiency of the health system through the use of technologies, chart 1, originally presented by Rachid et al. (2022), in the article Digital Health and the Platformization of the Brazilian State, and updated by the authors, presents in a non-exhaustive way the main policies for the promotion of digital health in Brazil.

TABLE 1

The various ordinances, resolutions and laws were created to regulate and strengthen the management of health information in Brazil. In 2000, the National Agency for Supplementary Health (ANS) was created, with the objective of inspecting and regulating the private health sector. In 2004, after the 12th National Health Conference, the National

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Policy on Health Information and Informatics was published, in order to address the theme in a broader and more strategic way.

In 2010, with the advancement of technology and the popularization of the internet, a movement began to incorporate digital technologies in health, such as telehealth. In 2011, the Health Information and Informatics Committee was created, responsible for organizing and strengthening technology initiatives within the Ministry of Health.

As of 2015, several ordinances and resolutions have been created with the aim of promoting and strengthening digital health and telehealth in Brazil. An important milestone was Decree 9,795/2020, which instituted the Digital Government Strategy for the period from 2020 to 2022, establishing principles, objectives, and guidelines for the digital transformation of the federal public administration. In this context, CIT Resolution 46/2019 defined the guidelines for the implementation of the Digital Health Strategy for Brazil 2019-2023, which aimed to integrate and interoperate SUS health information systems.

Other normative instruments that contributed to the advancement of digital health in Brazil were Decree 10,230/2020, which provides for the simplification of care for users of public services; Decree 10,332/2020, which establishes the Federal Development Strategy for Brazil in the period from 2020 to 2031, including digital health as one of the strategic axes; Ordinance GM/MS 1,434/2020, which regulates the use of information and communication technology resources within the scope of the SUS; the Action, Monitoring and Evaluation Plan of the Digital Health Strategy for Brazil 2019-2023, which defines the goals and indicators for the monitoring of digital health actions; Ordinance GM/MS 3.632/2020, which establishes the Connect SUS Program, with the objective of promoting the integration of citizens' clinical data into the SUS; and the Digital Health Strategy for Brazil 2020-2028, which updates and expands the guidelines of the previous strategy.

In addition, in response to the Covid-19 pandemic, specific rules were issued for the use of digital technologies in the prevention, diagnosis, and treatment of the disease, such as: Technical Note No. 7/2020, which provides guidance on the use of telemedicine in facing the health emergency; Technical Note No. 3/2020, which provides for the minimum requirements for the operation of health information systems related to Covid-19; Ordinance GM/MS 1,046/2021, which establishes the rules for the registration of information on services provided to patients with Covid-19; Ordinance GM/MS 1,068/2021, which establishes the National Telemedicine and Telehealth System (SNTT) as a permanent SUS strategy; Ordinance GM/MS 1,768/2021, which creates the National Program to Support

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Oncological Care (PRONON), with a focus on teleoncology; Law No. 14,510 - Telemedicine Law, which provides for the exercise of telemedicine in the country; Decree No. 11,391, which regulates the Telemedicine Law within the Federal District; CNS Resolution No. 719, which approves the guidelines for social participation in digital health; Decree 11,358, which establishes the Digital Health Management Committee of the Federal District; and ORDINANCE GM/MS No. 3,232, which authorizes the transfer of financial resources to states and municipalities for the implementation and qualification of telehealth services.

Digital health is an emerging field that aims to improve the quality, efficiency, and equity of healthcare services through the use of digital technologies. In Brazil, public policies related to digital health have evolved in recent years, seeking to keep up with the demands and challenges of the Unified Health System (SUS).

Despite the advances, there is still much to be done for greater integration of telehealth in the Brazilian health system. Greater investment is needed in structure and training of professionals, as well as public policies that encourage the use and regulation of telehealth. With a growing and increasingly connected population, telehealth and digital health have great potential to transform the way health services are provided in Brazil, bringing more efficiency, accessibility, and quality to the population.

DISCUSSION

Digital Health emerges as a promising solution to expand access to health, especially in remote and socioeconomically vulnerable areas. The Digital Health Strategy for Brazil 2020-2028 (ESD28) maps the challenges and opportunities for the implementation of digital health throughout the national territory (Brasil, 2020). To understand the nuances of this process, it is essential to analyze the characteristics of Brazil that impact the adoption of digital technologies in health. The main challenges for the adoption and expansion of digital health services are presented below.

TERRITORIAL DIMENSION AND INEQUALITIES

The first major challenge is related to its territorial dimension and regional inequalities. Brazil has an extensive territory with great regional diversity, which imposes challenges for connectivity and access to digital infrastructure. Inequality in internet access, especially in remote and hard-to-reach areas, limits the use of digital health solutions.

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Although Brazil ranks 23rd in the World's Digital Inclusion Index (The Inclusive Internet Index, 2022). According to the Regional Center for Studies for the Development of the Information Society (Cetic.br) (G1, 2023), one in three people from classes D and E have not accessed the internet in the last 12 months, which makes it clear that actions and public policies for the expansion of digital health will need to encompass the inclusion of this population, which is the most affected in access to health services.

LARGE POPULATION AND SOCIOECONOMIC DIVERSITY

The large population and socioeconomic diversity are another barrier that will need to be overcome. Brazil has a population of more than 210 million people, with great socioeconomic and cultural diversity. This diversity requires digital health solutions that are adapted to the different realities and needs of the population. The Digital Government Map study states that at the municipal level, the challenge to digital government services, inferring from this study, access to health through ICTs, can be even more serious (Brasil, 2022). Primary research highlights cultural barriers as factors that accentuate the abyss between digital government and the population: 70% point to the absence of digital culture of the citizen as an element of resistance to the use of digital services.

THE COMPLEXITY OF THE SUS

The Unified Health System (SUS) is a complex and fragmented system, with different levels of management and organization. The integration of health information systems and interoperability between different health units are important challenges for the implementation of digital health.

The poor integration of the SIS, low interoperability, inconsistencies in clinical data, unnecessary repetition of consultations and exams, and the difficulty of patients in obtaining their clinical records in their entirety contribute negatively to the health sector, both in the SUS and in supplementary health, impacting on high costs and patient care. In the current context, with the increased use of digital technologies in healthcare, there is an immense amount of data being generated and stored, but underutilized. In relation to this aspect, Santos and Rebouça (2023) says:

> Health institutions in the Brazilian territory – whether public or private – still have, for the most part, their own health system that does not allow the sharing of data and information with each other. As a result of these practices still in force, it is possible to see several inconveniences caused by this lack of interoperability, some of which

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are the lack of security, transparency and repetition of registration, exams, consultations, procedures.

PROFESSIONALS

According to Scheffer, Almeida and Cassenote (2023), the distribution of doctors in Brazil is a serious problem that prevents access to quality health care for a large part of the population. The concentration of specialists in large urban centers is striking, with 19 states (none in the South or Southeast) having fewer doctors than the national average. Seven states even have less than 2 doctors per 1,000 inhabitants.

Basic specialties, such as Family and Community Medicine, also have a significant deficit, with a national average of only 5.54 doctors per 100 thousand inhabitants. This disparity results in difficulties in access to specialized health care for millions of Brazilians, overload of health services in regions with fewer doctors, and worsening of the quality of life of the population living in areas with a shortage of professionals.

It is urgent to implement public policies that encourage the establishment of doctors in remote and low-income areas, and that invest in telecare in order to mitigate this discrepancy. An important point is that the number of qualified health professionals to use digital tools in health is still insufficient. Even though the number is growing, with 33% of physicians nationwide using it in patient care in 2022, as pointed out by Labolsslêre (2022), the capacity building and training of health professionals are essential for the success of digital health.

LGPD AND NEW TECHNOLOGIES

The adoption of digital technology in healthcare can bring several benefits such as telemedicine, remote patient monitoring, and electronic medical record systems. However, the privacy of patient data is a critical issue in this context, as this information is sensitive and must be protected properly.

The General Data Protection Law (LGPD) presents rules on sensitive information in relation to the storage and sharing of data, highlighting the importance of security measures to ensure data privacy. When analyzing the LGPD, according to Tatsch (2021), a crucial point of the LGPD that generates apprehension is the sharing of sensitive health data without the consent of the holder or responsible person. This authorization is not necessary for studies carried out by research bodies or for the protection of health, when carried out by professionals, health services or by a health authority.

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The law allows the communication and shared use of sensitive health data between controllers in various situations of service provision in the area of health, pharmaceutical services, health care (except for private health care plan operators when they aim at the practice of risk selection in the contracting of any modality or the hiring or exclusion of beneficiaries) and for auxiliary diagnostic and therapy services, just as authorization is not necessary for studies carried out by research bodies or for the protection of health, when carried out by professionals, health services or by a health authority.

For the sharing to be considered lawful, it is essential that it be carried out for the benefit of the interests of the data subjects. The law also allows the sharing of personal health data in two other cases: To allow data portability by the holder and to carry out financial and administrative transactions resulting from the use and provision of services.

Although the LGPD presents several permissions for the sharing of sensitive health data, it is essential that such a practice is carried out with caution and ethics, always seeking to protect the rights and privacy of individuals.

NEW TECHNOLOGIES AND THE LGPD

The rapid development of personal data assessment technologies, especially Big Data and artificial intelligence with its aspects (machine learning, deep learning, and natural language processing), has made the LGPD outdated in relation to some technologies, such as those used in digital health (SAS, 2021).

In this context, with the growing consolidation of the network society, inserted in a new digital era, the collection, processing, analysis, transmission and use of personal data of natural individuals become increasingly faster, more efficient and opaque. Even after anonymization, the individual may have difficulty understanding how their information is used in these new technologies, which can have serious consequences.

The LGPD, although it represents an important legal milestone, does not keep up with the fast pace of technological innovations, especially in the area of digital health. The Law does not clearly address the use of data in artificial intelligence or machine learning systems, for example. This lag puts the privacy and security of personal data at risk, requiring an update of legislation to ensure the protection of individuals in the digital age.

The lack of clarity and effective control mechanisms over the use of personal data, even after anonymized, makes the digital society vulnerable to privacy violations and the undue exploitation of information. It is necessary for the LGPD to be reviewed and improved

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to keep up with the pace of technological innovations and ensure the protection of the rights of individuals in the digital age.

CONCLUSION

The adoption and development of digital health strategies brings several benefits with the expansion of access to health for remote and socioeconomically disadvantaged areas, reduction of transportation and accommodation costs for patients, improving the quality of health care, and promoting equity in access to health.

Brazil already had fertile ground for the development of digital health before the pandemic. Law 13,987/2020, sanctioned in April 2020, exceptionally authorized medical consultations by telemedicine during the pandemic, opening doors for the expansion of the practice in the country. The practice has proven to be a valuable tool for expanding access to healthcare, reducing costs, and improving patients' quality of life. However, there are still challenges to be overcome to ensure the full potential of Telehealth in the country.

The regulatory framework for digital health is constantly evolving, with new laws and standards being approved. Compliance with standards and legal certainty are important aspects for the implementation of digital health. Despite the advances, there are still challenges to be overcome for its consolidation in Brazil, such as inequality in internet access, the need for specific regulation, and integration with health systems.

Another point that needs further studies and debates is how the various new technologies have been incorporated into digital health systems and creating new challenges for digital health and data privacy, such as the need for a multidisciplinary approach that involves technology, health, and law professionals to ensure that patient information is treated ethically and securely.

Despite the challenges, recent advances demonstrate the commitment of the region's governments to the development of this area. It is critical to continue investing in infrastructure, professional training, research, and evaluation to ensure that telehealth is an effective tool for achieving universal health.

Overcoming the challenges for the adoption of digital health in Brazil requires joint action by the government, the private sector, academia, and civil society. Through collaboration and investment in infrastructure, capacity building, integration, and regulation, Brazil will be able to build a more efficient, equitable, and accessible digital health system for all.

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Chart 1 – Non-exhaustive list of the main policies for the promotion of digital health in Brazil

Year	Law	Description
1990	Law 8.080/1990 - Organic Health Law	Art. 47 establishes that the Ministry of Health, in conjunction with the state and municipal levels of the SUS, shall organize, within two years, a national health information system (SNIS).
1991	Decree 100/1991	Creates the SUS Information Technology Department (DATASUS) as part of the National Health Foundation (FNS), based on the incorporation of assets from the Social Security Data Processing Company (Dataprev).
1996	Ordinance GM/MS 2.390/1996	Establishes the Integrated Health Information Network (RIPSA).
1998	CNS Resolution 227/1998	Creates the Intersectoral Commission on Communication and Information in Health (CICIS).
1999	Law 9.782 of 1999	Defines the National Health Surveillance System and creates Anvisa.
2000	Law 9.961 of 2000	Creates the National Supplementary Health Agency (ANS).
2002	Ordinance GM/MS 1.919/2002	Creates the Interagency Health Information Network (RIPSA).
2004	Report of the 12th National Health Conference	Publication of the National Policy on Health Information and Informatics after discussion and recommendations of the 12th National Health Conference
2005	CNS Resolution 349/2005	Reforms the Intersectoral Commission on Communication and Information in Health (CICIS).
	ANS Normative Instruction 114/2005	Creates the Committee for the Standardization of Supplementary Health Information (COPISS).
2006	Ordinance GM/MS 495/2006	Determines the restructuring of the Interagency Health Information Network (RIPSA).
2009	Ordinance GM/MS 2.466/2009	Creates the Health Informatics Information Committee (CIINFO/MS).
2011	Decree 7,579/2011	Information Technology Resources Administration System (SISP) for the purpose of defining the information technology resource management policy of the federal executive branch
	Ordinance GM/MS 2.072/2011	Reformulates the Health Informatics Information Committee (CIINFO/MS).

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2015	Ordinance GM/MS 589/2015	Establishes the National Policy on Health Information and Informatics (PNIIS).
2016	CIT Resolution 05/2016	Establishes the e-Health Strategy Management Committee.
2017	CIT Resolution 19/2017	Approves the e-Health Strategy for Brazil.
	Consolidation Ordinance 1/2017	Consolidation of norms on the rights and duties of health users, the organization and functioning of the Unified Health System.
2019	Decree 9,795/2020	Approves the Regimental Structure and the Demonstrative Table of Commission Positions and Functions of Trust of the Ministry of Health, creating the Department of Digital Health
	CIT Resolution 46/2019	Establishes the Digital Health Strategy Management Committee and defines its composition, competencies and operational units within the structure of the Ministry of Health, replacing the e-Health Strategy Management Committee in Brazil.
2020	Decree 10,230/2020	Provides for the Information Technology Resources Administration System (SISP), of the Federal Executive Branch.
	Decree 10,332/2020	Establishes the Digital Government Strategy for the period from 2020 to 2022.
	Ordinance GM/MS 1,434/2020	Establishes the Connect SUS Program and amends Consolidation Ordinance GM/MS 1/2017, to establish the National Health Data Network (RNDS).
	Digital Health Strategy Action, Monitoring and Evaluation Plan for Brazil 2019-2023	Its main objective is to identify, prioritize and integrate, in a coordinated manner, health programs, projects and actions, information and communication services and systems, financing mechanisms, infrastructure, governance, technologies and human resources, in order to achieve the vision of ESD, of which it is an integral part.
	Ordinance GM/MS 3.632/2020	Establishes the Digital Health Strategy for Brazil 2020-2028 (ESD28).
	Digital Health Strategy for Brazil 2020-2028	Published in 2020, it presents the Digital Health Strategy for Brazil with an eight-year vision, that is, until the end of 2028
	Technical Note No. 7/2020	The ANS establishes that the service provided through distance communication is a mandatory coverage procedure that is already contemplated in the List of Health Procedures and Events, since it does not correspond to a new procedure, but to the modality of non-face-to-face medical consultation
	Technical Note No. 3/2020	The ANS establishes that, in order for care to be provided by telehealth for the duration of the Covid-19 crisis, health operators and service providers must mutually and previously agree, through any instrument (e.g., email), that allows, at least: Identification of the services that can be provided through telehealth; Mention of the amounts as remuneration for the services provided in this type of service; Mention of the rites to be observed for billing and payment of these services; and mention of the procedures that will require prior authorization to carry out this type of service.
2021	Ordinance GM/MS 1.046/2021	Establishes the rules for the integration of the results of tests carried out for the detection of COVID-19 by laboratories of the public network, private network,

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		university and any others, throughout the national territory in the National Health Data Network (RNDS).
	Ordinance GM/MS 1,068/2021	Establishes the COVID-19 Laboratory Test Result Information Model at RNDS, a data platform of the Ministry of Health that aims to exchange care information between the various health care points.
	Ordinance GM/MS 1,768/2021	Approves the National Policy on Health Information and Informatics (PNIIS).
2022	Law No. 14,510 - Telemedicine Law	Law that authorizes and conceptualizes the practice of telehealth throughout the national territory
2023	Decree No. 11,391	Approves the Regimental Structure and the Demonstrative Table of Commission Positions and Functions of Trust of the Ministry of Health. Article 53. The Secretariat of Information and Digital Health is responsible for: I - supporting the Secretariats of the Ministry of Health, managers, workers and users in the planning, use and incorporation of information and information and communication technology (ICT) products and services; included telehealth, ICT infrastructure, software development, interoperability, data integration and protection, and information dissemination;
	CNS Resolution No. 719	The incorporation of care technologies necessary for problem-solving capacity in each care network, including matrix support and continuing education actions in health between services, as well as digital inclusion and telehealth actions;
	Decree 11,358	Creates the Secretariat of Information and Digital Health - SEIDIGI, responsible for formulating public policies guiding the management of digital health.
2024	ORDINANCE GM/MS No. 3,232	GM/MS Consolidation Ordinance No. 5, of September 28, 2017, to establish the SUS Digital Program.

Source: prepared by the authors, 2024.