


**THE BRAZILIAN UNIFIED HEALTH SYSTEM AS A NETWORK-BASED HEALTH CARE MODEL: INTEGRATION, GOVERNANCE, AND QUALITY OF CARE**

 <https://doi.org/10.63330/aurumpub.044-022>

**Jane Alves Lopes de Oliveira Cruz<sup>1</sup>, Elane Cristina Mello Amorim<sup>2</sup>, Keylla Gomes dos Santos<sup>3</sup>, Kelvía Guedes Alves<sup>4</sup>, Claudia Medeiros Lopes Freire<sup>5</sup>, Júlia Rodrigues da Silva<sup>6</sup>, Stefanie Silva Vieira<sup>7</sup> and Jéssica Emanuela da Silva<sup>8</sup>**

**Abstract**

The Unified Health System (SUS) is established as a network-based health system model grounded in the principles of universality, comprehensiveness, and equity, and structured through the integration of different levels of care. This study aimed to analyze SUS from the perspective of service integration,

---

<sup>1</sup> Master's Student in Collective Health  
Universidade Federal de Mato Grosso - UFMT, Cuiabá MT  
E-mail: janealvescomercial@gmail.com  
Lattes: <http://lattes.cnpq.br/1091053395806824>  
ORCID: <https://orcid.org/0009-0009-2473-4563>

<sup>2</sup> Nursing Graduate  
Centro Universitário Planalto do Distrito Federal - UNIPLAN, Macapá AP  
E-mail: melelane743@gmail.com  
Lattes: <http://lattes.cnpq.br/1479045107765431>  
ORCID: <https://orcid.org/0009-0004-3307-0790>

<sup>3</sup> Pharmacy Graduate  
Universidade Federal do Vale do São Francisco - UNIVASF, Petrolina PE  
E-mail: keyllagsfarm@gmail.com  
Lattes: <https://lattes.cnpq.br/5233907660986334>

<sup>4</sup> Nursing Graduate  
Universidade Regional do Cariri - URCA, Crato CE  
E-mail: kelvia.ga@outlook.com  
Lattes: <https://lattes.cnpq.br/2692636203739196>  
ORCID: <https://orcid.org/0009-0004-8273-520X>

<sup>5</sup> Psychology Graduate  
Centro Universitário Estácio - ESTÁCIO, Recife PE  
E-mail: claudia.sarah@hotmail.com  
Lattes: <http://lattes.cnpq.br/4968666101058499>

<sup>6</sup> Physical Therapy Graduate  
Universidade de Itauna - UIT, Nova Serrana MG  
E-mail: juliaarodriguesdasilva@gma  
Lattes: <https://lattes.cnpq.br/7503768430671894>  
ORCID: <https://orcid.org/0009-0009-3385-3695>

<sup>7</sup> Psychology Graduate  
Faculdade Pio Décimo - FAPIDE, Aracaju SE  
E-mail: stefanie.vieira@hotmail.com

<sup>8</sup> Nutrition Graduate  
Faculdade de Saúde Ibituruna - FASI, Várzea da Palma MG  
E-mail: jesnutri15@gmail.com  
Lattes: <https://lattes.cnpq.br/0330880373467581>

governance, and quality of care, based on a qualitative, descriptive-exploratory literature review. The research was conducted using the SciELO, Latindex, and BDENF databases, in addition to official documents from the Ministry of Health and relevant legislation, considering the time frame from 2022 to 2026. The results highlighted advances in the organization of Health Care Networks, particularly the coordinating role of Primary Health Care and the incorporation of digital technologies as strategies to enhance integration. However, persistent challenges were identified, including fragmentation of care, regional inequalities, the complexity of intergovernmental governance, and difficulties in consolidating quality practices. It was observed that the effectiveness of SUS as a network-based system depends on the articulation of public policies, workforce qualification, and the strengthening of evaluation and social participation mechanisms. It is concluded that, although SUS demonstrates significant potential to ensure comprehensive health care, its consolidation requires continuous investment, innovative management approaches, and the strengthening of integration, governance, and quality of care strategies.

**Keywords:** Health Care Networks, Health Governance, Health Care Quality, Health Services Integration, Unified Health System.

## INTRODUCTION

The consolidation of the Unified Health System (SUS) as a network-based health system model represents one of the most significant milestones of Brazilian public policies, grounded in the principles of universality, comprehensiveness, and equity. Established by the Federal Constitution of 1988, which recognizes health as a right of all and a duty of the State (Brazil, 1988), the SUS was regulated by Laws No. 8,080/1990 and No. 8,142/1990, which established its organizational, operational, and participatory foundations (Brazil, 1990a; Brazil, 1990b). In this context, the system evolved from a fragmented and hospital-centered logic toward a model structured in Health Care Networks (HCNs), guided by service integration and care coordination, according to the guidelines established by Ordinance No. 4,279/2010 (Brazil, 2010).

The organization of the SUS as a network seeks to respond to the complexity of the population's health demands, promoting articulation among different levels of care and ensuring continuity of care. Such a model presupposes the existence of well-defined care flows, effective communication among points of care, and regulatory and governance mechanisms capable of ensuring the comprehensiveness of actions (Conass, 2015). Primary Health Care (PHC), especially since the National Primary Care Policy (PNAB), assumes a central role as the organizer of the network and coordinator of care, being responsible for users' longitudinal follow-up (Brazil, 2017). Complementarily, policies such as the National Health Surveillance Policy (PNVS) expand integration between care and surveillance actions, strengthening the territorial and preventive approach (Brazil, 2018).

However, despite institutional advances, challenges persist regarding the effective integration of services, interfederative governance, and the guarantee of the quality of care provided. Care fragmentation, regional inequality, and limitations in the management of human and technological resources constitute significant obstacles to the consolidation of health care networks (Melo; Silva, 2025; Campos, 2023). Furthermore, the complexity of shared management among the Union, states, and municipalities requires robust coordination and agreement mechanisms capable of aligning interests and promoting system efficiency (Carvalho et al., 2024).

In view of this scenario, the following question is defined as the research problem: in what way has the SUS, structured as a network-based health system, managed to promote service integration, strengthen governance, and ensure the quality of care for the population? This question is fundamental for understanding the advances and limitations of the model, as well as for supporting strategies to improve health management and care.

Thus, the present study aims to analyze the SUS as a network-based health system model, with emphasis on aspects of integration, governance, and quality of care. Specifically, it seeks to discuss the normative and conceptual frameworks that support network organization, identify the main challenges

faced in implementing this model, and reflect on the strategies adopted to qualify health care within the Brazilian public system.

The relevance of this study is justified by the centrality of the SUS in guaranteeing the right to health in Brazil and by the need to strengthen its capacity to respond to the growing and complex demands of the population. In addition, the discussion on integration, governance, and quality of care becomes even more pertinent in a context of technological transformations, such as the incorporation of digital health, which broadens the possibilities of articulation among services and monitoring of health indicators (Haddad; Lima, 2026). In this sense, understanding the functioning of the SUS as a network contributes to the improvement of public policies and to the promotion of a more efficient, problem-solving, and user-centered system.

From a theoretical point of view, the SUS may be understood as a complex system, whose network organization requires the articulation of multiple actors, institutions, and levels of care. The literature indicates that service integration is a key element for the effectiveness of health care networks, as it enables continuity of care and reduces care fragmentation (Melo; Silva, 2025). In this context, care coordination by PHC is fundamental to ensuring orderly access and the problem-solving capacity of health actions.

Governance, in turn, constitutes a structuring axis of the SUS, involving decision-making processes, definition of responsibilities, and control and evaluation mechanisms. Studies emphasize that health governance should be guided by principles of transparency, social participation, and interfederative cooperation, essential elements for the sustainability of the system (Gusmão et al., 2025; Machado, 2024). Community participation, guaranteed by Law No. 8,142/1990, reinforces the democratic character of the SUS and contributes to the construction of policies more aligned with the needs of the population (Brazil, 1990b).

Regarding quality of care, there is growing concern with the implementation of strategies for evaluating and monitoring health services. The National Patient Safety Program (PNSP) and the National

Humanization Policy (PNH) stand out as initiatives aimed at improving the quality of care, promoting safe, humanized, and user-centered practices (Brazil, 2013a; Brazil, 2013b). In addition, the use of performance indicators has been widely discussed as a tool to evaluate the efficiency and effectiveness of services, contributing to evidence-based decision-making (Correa et al., 2025).

Quality management in the SUS is also directly related to institutional capacity and workforce qualification. In this sense, policies aimed at training and valuing health professionals are fundamental to ensuring the effectiveness of actions and the sustainability of the system (Junior; Porto; Silva, 2025). Teaching-service integration, for example, has been identified as a relevant strategy for training professionals aligned with the needs of the SUS and the demands of the population (Rodrigues; Dalbello-Araújo; Lazarini, 2026).

Additionally, health planning constitutes an essential tool for organizing networks and defining priorities, allowing the appropriate allocation of resources and the implementation of more efficient actions (Brazil, 2016). The strengthening of municipal management, as emphasized by Conasems (2023), also plays a crucial role in the operationalization of the SUS, especially in articulating the different points of care and guaranteeing access to services.

Finally, it is emphasized that, despite the advances achieved over more than three decades, the SUS still faces significant challenges to fully consolidate itself as an integrated system, with effective governance and high-quality care. Overcoming these challenges requires the strengthening of public policies, the expansion of health investments, and continued commitment to the principles that guide the system. In this sense, the analysis of the SUS as a network-based health system model contributes to understanding its potentialities and limitations, offering support for the improvement of management and care practices in the context of Brazilian public health.

## **METHODOLOGY**

The present research is characterized as a literature review study, qualitative in nature, with a descriptive-exploratory approach, whose objective consists of analyzing the Unified Health System (SUS) as a network-based health system model, with emphasis on aspects of integration, governance, and quality of care. The choice of this methodological design is justified by the need to gather, systematize, and critically interpret recent scientific and normative production on the topic, enabling a broader understanding of the transformations and challenges of the SUS in the contemporary context.

The investigation was guided by the following guiding question: how has the Unified Health System, structured as a network-based health system, promoted service integration, strengthened governance, and ensured quality of care? This question directed all stages of the methodological path, from the definition of search strategies to the analysis of the selected studies.

Data collection was carried out through a systematized search in the Scientific Electronic Library Online (SciELO), Latindex, and Nursing Database (BDENF), recognized for their relevance in the health field and for indexing national and international scientific productions. Additionally, official documents published by the Ministry of Health were consulted, as well as legislation relevant to the SUS, in order to incorporate into the study updated normative guidelines and legal frameworks that underpin the organization of the Brazilian health system.

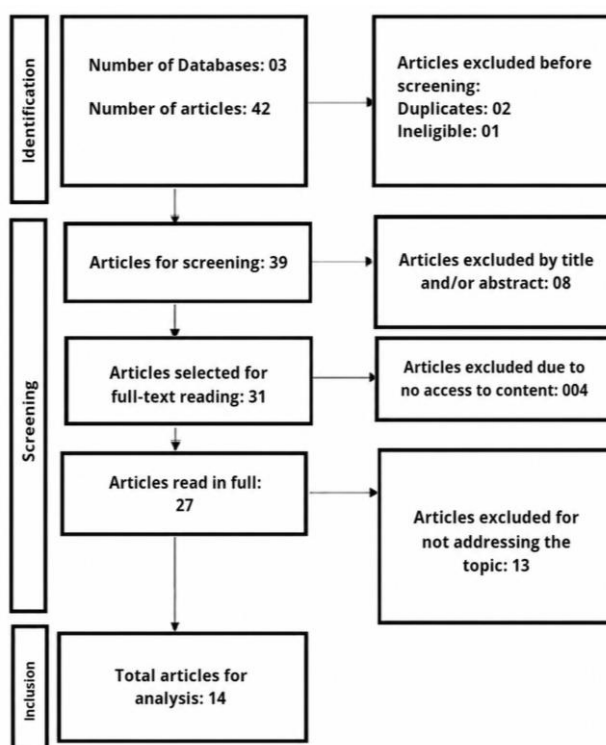
As a time frame, studies published between 2022 and 2026 were considered, with the aim of including recent evidence aligned with current discussions on network organization, governance, and quality of care in the SUS. For the search, controlled and uncontrolled descriptors were used, extracted from the Health Sciences Descriptors (DeCS), combined through Boolean operators (AND and OR), among which the following stand out: “Unified Health System,” “health care networks,” “health governance,” “quality of care,” “health services integration,” “primary health care,” and “public health management.”

The established inclusion criteria were: scientific articles available in full, published in Portuguese, English, or Spanish, between 2022 and 2026, that directly addressed the SUS as a network-based health system or discussed aspects related to integration, governance, and quality of health care. Official documents and current legislation that contributed to understanding the structure and functioning of the SUS were also included. On the other hand, duplicate studies, publications that did not present a direct relationship with the proposed topic, incomplete articles, simple abstracts, editorials, letters to the editor, and productions outside the defined time frame were excluded.

The study selection process occurred in sequential stages, comprising identification, screening, eligibility, and inclusion. Initially, titles and abstracts were read to verify the relevance of the studies, followed by a full reading of those considered potentially relevant. This process enabled the construction of a consistent analytical corpus aligned with the research objectives. The systematization of these stages is represented in Figure 1, which illustrates the flowchart of the study selection process.

**Figure 1**

*Flowchart of the study selection process*



Source: Authors (2026)

After selection, the data were organized through study records and thematic analysis, enabling the identification of analytical categories related to the central axes of the research: integration of health care networks, governance mechanisms, and strategies for qualifying care in the SUS. Data analysis was conducted in a critical and interpretive manner, seeking to identify convergences, gaps, and challenges pointed out in the literature, as well as their implications for health management and care.

Thus, the adopted methodology ensures scientific rigor, transparency, and reproducibility for the study, allowing an in-depth and grounded analysis of the SUS as a network-based health system, contributing to the advancement of knowledge in the field of public health and to the improvement of management and care practices in the Brazilian context.

## **RESULTS AND DISCUSSION**

The results of this review demonstrate that the Unified Health System (SUS), as a network-based health system model, presents significant advances with regard to service integration, the consolidation of governance mechanisms, and the qualification of care, although it still faces structural and operational challenges that limit the full effectiveness of these guidelines. The analysis of the selected studies made it possible to identify three central axes of discussion: integration of health care networks, governance and interfederative management, and quality of care.

With regard to service integration, it is observed that the organization of the SUS into Health Care Networks (HCNs) has contributed to overcoming the fragmented model historically present in the system. The articulation among the different levels of care, with emphasis on the coordinating role of Primary Health Care (PHC), has favored continuity of care and expanded access to services (Melo; Silva, 2025). PHC, in this context, assumes a strategic function in organizing the care flow, acting as the preferred gateway and being responsible for users' longitudinal follow-up. However, studies indicate that difficulties still persist in communication among points of care, as well as in the definition of effective care flows, which compromises the comprehensiveness of care (Oliveira et al., 2025).

Additionally, the integration between care actions and health surveillance has been highlighted as an essential element for strengthening HCNs, especially in addressing health problems and promoting health at the territorial level (Brazil, 2018). However, fragmentation between these sectors still represents a challenge, evidencing the need for more robust strategies of intersectoral articulation and information sharing. The incorporation of digital technologies into the SUS emerges as a potential facilitator of this process, by enabling greater integration among services and better management of health data (Haddad; Lima, 2026).

In the governance axis, the results show that the SUS has a consistent normative framework that guides the organization of the system and establishes guidelines for shared management among federative entities. Decentralization, combined with social participation, constitutes one of the pillars of SUS governance, allowing greater adaptation of policies to local needs (Machado, 2024). However, the complexity of interfederative management imposes challenges related to coordination among the Union, states, and municipalities, especially concerning resource allocation, definition of responsibilities, and implementation of public policies (Carvalho et al., 2024).

The literature also highlights that governance in the SUS should be understood as a dynamic process involving not only administrative aspects but also political and social dimensions. In this sense, transparency, accountability, and social participation are fundamental elements for strengthening the system (Gusmão et al., 2025). Nevertheless, it is observed that the effectiveness of these mechanisms remains heterogeneous across the national territory, reflecting regional inequalities and limitations in the institutional capacity of local managers.

Another relevant aspect concerns the management of the health workforce, considered a central element for the consolidation of governance and the quality of care. The shortage of professionals in certain regions, combined with the precariousness of working conditions, directly affects the system's response capacity (Campos, 2023). In addition, the need for continuous training aligned with SUS

guidelines has been identified as a challenge, reinforcing the importance of strategies such as teaching-service integration (Rodrigues; Dalbello-Araújo; Lazarini, 2026).

Regarding the quality of care, the results indicate advances in the implementation of policies and programs aimed at patient safety and the humanization of care. Initiatives such as the National Patient Safety Program and the National Humanization Policy have contributed to the promotion of safer and user-centered practices (Brazil, 2013a; Brazil, 2013b). In addition, the use of quality indicators has been consolidated as an important tool for evaluating the performance of health services, enabling continuous monitoring and the identification of priority areas for intervention (Correa et al., 2025).

However, the literature points out that the implementation of these strategies still faces challenges, such as insufficient resources, resistance to change on the part of professionals and managers, and the absence of an institutional culture focused on evaluation and continuous improvement (Ridolfi et al., 2026). The heterogeneity in the quality of services provided, especially among different regions of the country, evidences the need for more equitable policies and investments directed toward reducing inequalities.

The analysis of the studies also evidences that health planning plays a fundamental role in organizing networks and promoting quality of care. Instruments such as health plans, annual programming, and management reports allow the definition of priorities and rational allocation of resources, contributing to the efficiency of the system (Brazil, 2016). However, the effectiveness of these instruments depends on the technical capacity of managers and the availability of reliable and updated information.

Furthermore, the articulation between public policies and the SUS has been identified as a determining factor for the effectiveness of health actions. Integration with other areas, such as education, social assistance, and sanitation, expands the scope of interventions and contributes to addressing the social determinants of health (Carvalho et al., 2024). In this sense, the SUS reaffirms its intersectoral character, essential for health promotion and the reduction of inequities.

The main findings of this review are summarized in Chart 1, which presents a systematization of the studies analyzed, highlighting authors, objectives, main results, and contributions to the understanding of the SUS as a network-based health system.

**Table 1**

*Summary of the studies included in the review*

<b>Author/Year</b>	<b>Objective of the Study</b>	<b>Main Results</b>	<b>Contributions to the Topic</b>
Campos, 2023	To propose guidelines for an integrated national policy for labor management in the SUS	Evidences the need for strategic workforce planning, with emphasis on professional valuation, continuing qualification, and reduction of regional inequalities	Reinforces the centrality of human resources management for the sustainability, governance, and effectiveness of health care networks
Ferreira; Ferreira, 2023	To analyze the historical trajectory and perspectives of the SUS in the context of Brazilian public policies	Identifies relevant institutional advances, but highlights structural obstacles, such as underfunding and inequalities in access to services	Contributes to understanding the SUS as a dynamic system, in a constant process of consolidation and network reorganization
Carvalho <i>et al.</i> , 2024	To examine the intersection between public policies and the SUS in the management and provision of health services	Points to the need for greater intersectoral articulation and integration among social policies to ensure greater effectiveness of health actions	Evidences the importance of intersectorality as a structuring element for the consolidation of health care networks
Machado, 2024	To discuss the foundations of democracy and citizenship in strengthening the SUS	Highlights social participation as an essential component of governance, contributing to greater legitimacy and social control of health policies	Reaffirms the democratic character of the SUS and its relevance for building an equitable and participatory system
Correa <i>et al.</i> , 2025	To analyze the use of indicators in evaluating the quality of health services in the SUS	Evidences the relevance of performance indicators for measuring efficiency, effectiveness, and quality of care, supporting decision-making	Contributes to strengthening the culture of evaluation and continuous monitoring within the SUS
Gusmão <i>et al.</i> , 2025	To discuss the structuring axes of governance, management, and comprehensiveness in the SUS	Identifies governance as a central element in the articulation between management and care, highlighting the importance of interfederative	Integrates the concepts of governance, health care networks, and comprehensiveness as pillars of the health system

		coordination	
Junior; Porto; Silva, 2025	To evaluate the impacts of management models on the health workforce	Evidences weaknesses in labor management, including precariousness and unequal distribution of professionals	Directly relates governance and management models to the quality of care provided
Melo; Silva, 2025	To analyze care coordination, integration, and continuity in the Family Health Strategy	Points to limitations in integration among levels of care, compromising continuity of care and the network's problem-solving capacity	Reinforces the strategic role of Primary Health Care as the organizer of health care networks
Oliveira <i>et al.</i> , 2025	To evaluate pathways toward universality and comprehensiveness of services in the SUS	Evidences the persistence of regional inequalities and difficulties in guaranteeing comprehensive care	Contributes to the critical analysis of the challenges in implementing the doctrinal principles of the SUS
Haddad; Lima, 2026	To discuss the incorporation of digital health into the SUS	Points to digital transformation as a strategy for expanding service integration, improving information management, and strengthening decision-making	Highlights the role of digital technologies in the modernization and integration of health care networks
Ridolfi <i>et al.</i> , 2026	To analyze the institutional determinants of quality management in the SUS	Evidences challenges related to the implementation of quality practices, including structural and cultural limitations in health institutions	Contributes to the debate on governance and quality of care in the context of health care networks
Rodrigues; Dalbello-Araújo; Lazarini, 2026	To analyze teaching-service integration as a formative strategy in health	Evidences the relevance of training aligned with SUS needs for qualifying care and strengthening the system	Highlights health education as an essential component for the sustainability and effectiveness of networks

Source: Authors (2026)

Finally, the results evidence that, although the SUS has advanced significantly in consolidating a network-based health system model, there are still important challenges to be overcome, especially regarding the effective integration of services, the strengthening of governance, and the guarantee of quality of care. Overcoming these challenges requires the strengthening of public policies, investment in infrastructure and human resources, as well as the promotion of an institutional culture focused on cooperation, innovation, and continuous improvement of health services.

The discussion of the findings of this review allows for a deeper understanding of the Unified Health System (SUS) as a network-based health system model, evidencing both its advances and the persistent challenges concerning service integration, governance, and quality of care. By analyzing recent scientific production, it is observed that the consolidation of Health Care Networks (HCNs) represents a fundamental strategy for organizing the system; however, its effectiveness still depends on multiple structural, organizational, and political factors.

With regard to service integration, Melo and Silva (2025) emphasize that, although the Family Health Strategy has expanded access and strengthened Primary Health Care (PHC) as the coordinator of care, significant weaknesses still exist in the articulation among the different levels of care. This limitation compromises continuity of care and evidences the persistence of fragmented practices. In line with this, Oliveira et al. (2025) argue that comprehensiveness, as a doctrinal principle of the SUS, has still not been achieved homogeneously across the national territory, especially in regions with less infrastructure and management capacity.

This reality reinforces the analysis by Ferreira and Ferreira (2023), who understand the SUS as a system in a constant process of construction, marked by institutional advances, but also by historical challenges, such as underfunding and regional inequalities. In this sense, network organization emerges as a response to the need to overcome fragmentation, requiring not only the definition of care flows but also the strengthening of communication among points of care and the adoption of effective regulatory mechanisms.

The incorporation of digital technologies, as discussed by Haddad and Lima (2026), presents itself as a promising element for service integration, by enabling greater interoperability of information systems and improving care management. However, the authors emphasize that the implementation of these technologies still faces barriers related to infrastructure, professional training, and inequality in access to digital resources, which may expand already existing inequities in the system.

In the field of governance, Gusmão et al. (2025) emphasize that the articulation among management, care, and comprehensiveness constitutes a structuring axis of the SUS, with governance being a central element for the effectiveness of health care networks. The authors highlight that governance should be understood as a process involving interfederative coordination, shared decision-making, and social participation, fundamental aspects to ensure the coherence and sustainability of health policies.

However, Carvalho et al. (2024) point out that the complexity of interfederative management in the SUS still represents a significant challenge, especially regarding the articulation among public policies and the definition of responsibilities among federative entities. This difficulty may compromise the implementation of integrated actions and reduce the efficiency of the system. In this context, decentralization, although a fundamental principle of the SUS, requires robust coordination and cooperation mechanisms to prevent the fragmentation of policies and services.

Social participation, as discussed by Machado (2024), constitutes one of the pillars of the democratic governance of the SUS, contributing to the legitimacy of decisions and the social control of public policies. However, the author emphasizes that the effectiveness of these mechanisms remains unequal, being influenced by factors such as the organizational capacity of civil society and the degree of institutionalization of participatory spaces.

Another relevant aspect of governance refers to health workforce management. Campos (2023) argues that the absence of an integrated national human resources policy compromises the sustainability of the SUS, especially in view of inequalities in the distribution of professionals and precarious working conditions in certain regions. Complementary, Junior, Porto, and Silva (2025) evidence that the management models adopted directly affect professionals' motivation and performance, influencing the quality of care provided.

In this sense, teaching-service integration, analyzed by Rodrigues, Dalbello-Araújo, and Lazarini (2026), emerges as a relevant strategy for training professionals aligned with the needs of the SUS,

contributing to the strengthening of health care networks and to the improvement of quality of care. The authors highlight that the articulation between educational institutions and health services favors the construction of more integrated and problem-solving practices.

Regarding quality of care, Correa et al. (2025) emphasize the importance of performance indicators as essential tools for evaluating the efficiency and effectiveness of health services. According to the authors, the systematic use of these indicators makes it possible to identify weaknesses, monitor results, and support evidence-based decision-making. However, the implementation of evaluation systems still faces challenges, such as the absence of an institutional culture focused on continuous improvement and the limitation of technical and financial resources.

This perspective is reinforced by Ridolfi et al. (2026), who highlight the institutional determinants of quality management in the SUS, evidencing that factors such as organizational structure, institutional culture, and management capacity directly influence the effectiveness of quality strategies. The authors point out that the consolidation of continuous improvement practices requires investments in training, strengthening of governance, and adoption of more participatory and integrated management models.

Additionally, intersectorality, discussed by Carvalho et al. (2024), emerges as a fundamental element for health promotion and the reduction of inequalities, by enabling articulation among different public policies and social sectors. This approach broadens the scope of SUS actions and contributes to addressing the social determinants of health, reinforcing the need for integration not only among health services, but also among different areas of State action.

Thus, the analysis of the studies evidences that the SUS, as a network-based health system, presents significant potential to promote comprehensive care, provided that challenges related to service integration, governance, and quality of care are overcome. The consolidation of this model requires the strengthening of PHC as the coordinator of care, the expansion of investments in infrastructure and technology, the valorization of the workforce, and the promotion of democratic and participatory governance.

In summary, the discussion indicates that the advancement of the SUS as a network-based health system depends on a continuous effort to articulate policies, services, and actors involved, as well as the adoption of innovative strategies capable of responding to the growing and complex demands of the population. Understanding these elements is fundamental for improving management and care practices, contributing to the construction of a more equitable, efficient health system centered on users' needs.

## **CONCLUSION**

The analysis of the Unified Health System (SUS) as a network-based health system model made it possible to understand its organizational complexity and the advances achieved in consolidating a system guided by the principles of universality, comprehensiveness, and equity. Returning to the objective of this study, which consisted of analyzing the SUS from the perspective of service integration, governance, and quality of care, it is evident that the health care network model has proven to be a relevant strategy for organizing the system, although permeated by structural and operational challenges that affect its effectiveness.

With regard to the guiding question, the results indicate that important advances have occurred, especially in strengthening Primary Health Care as the coordinator of care, in expanding policies aimed at quality of care, and in incorporating digital technologies. However, such advances still occur unevenly across the national territory, being limited by weaknesses in articulation among levels of care, interfederative coordination, and the management of available resources.

The synthesis of the main results demonstrates that service integration, although recognized as a structuring axis of health care networks, still faces obstacles related to care fragmentation, insufficient communication among points of care, and the difficulty of operationalizing effective care flows. In the field of governance, the existence of a robust normative framework was observed, but with limitations in its practical implementation, especially regarding articulation among federative entities and the effectiveness of social participation. With regard to quality of care, advances stand out in the

implementation of policies and indicators, although institutional and cultural challenges persist that hinder the consolidation of a culture of evaluation and continuous improvement.

The contributions of this research lie in the systematization and critical analysis of recent scientific production on the SUS as a network-based health system, evidencing the interrelationship among integration, governance, and quality of care as inseparable dimensions for the effectiveness of the system. In addition, the study reinforces the importance of innovative strategies, such as digital health, teaching-service integration, and the strengthening of workforce management, as fundamental elements for improving health care networks and qualifying the care provided to the population.

From a theoretical and practical point of view, the findings of this study contribute to deepening discussions on the organization of the SUS, supporting managers, health professionals, and researchers in formulating policies and strategies aimed at strengthening the system. Understanding the challenges identified, especially those related to regional inequality, service fragmentation, and interfederative governance, makes it possible to guide more effective interventions aligned with the needs of the Brazilian context.

Finally, it is suggested that future research should deepen the empirical analysis of the implementation of health care networks in different regions of the country, considering local specificities and the social determinants of health. In addition, studies are recommended to evaluate the impact of digital technologies on service integration and quality of care, as well as investigations into innovative governance and management models that may contribute to the sustainability of the SUS. In this way, it will be possible to expand knowledge about the system and strengthen its response capacity in the face of the population's growing demands.

## REFERENCES

Andrades, Rafaela Maria de; Berwig, Solange Elizabete. Sistema Único de Saúde: uma revisão de literatura sobre a política pública de saúde do Brasil [Unified Health System: a literature review

on Brazil's public health policy]. *Revista Eletrônica Multidisciplinar de Investigação Científica*, Brasil, v. 2, n. 3, 2023.

Brasil. Conselho Nacional de Secretarias Municipais de Saúde (CONASEMS). *Manual do gestor municipal do SUS* [Manual for municipal SUS managers]. Brasília: CONASEMS, 2023.

Brasil. Conselho Nacional de Secretários de Saúde (CONASS). *As redes de atenção à saúde* [Health care networks]. Brasília: CONASS, 2015.

Brasil. Constituição da República Federativa do Brasil, de 05 de outubro de 1988 [Constitution of the Federative Republic of Brazil]. Brasília, DF: Senado Federal, 1988.

Brasil. Lei nº 8.080, de 19 de setembro de 1990 [Law No. 8,080, of September 19, 1990]. Dispõe sobre as condições para a promoção, proteção e recuperação da saúde [Provides for the conditions for health promotion, protection, and recovery]. *Diário Oficial da União*, Brasília, DF, 1990.

Brasil. Lei nº 8.142, de 28 de dezembro de 1990 [Law No. 8,142, of December 28, 1990]. Dispõe sobre a participação da comunidade na gestão do SUS [Provides for community participation in SUS management]. *Diário Oficial da União*, Brasília, DF, 1990.

Brasil. Ministério da Saúde. *HumanizaSUS: Política Nacional de Humanização (PNH)* [HumanizaSUS: National Humanization Policy]. Brasília: Ministério da Saúde, 2013.

Brasil. Ministério da Saúde. *Manual de planejamento no SUS* [SUS planning manual]. Brasília: Ministério da Saúde, 2016.

Brasil. Ministério da Saúde. *Política Nacional de Atenção Básica (PNAB): Portaria nº 2.436, de 21 de setembro de 2017* [National Primary Care Policy: Ordinance No. 2,436, of September 21, 2017]. Brasília: Ministério da Saúde, 2017.

Brasil. Ministério da Saúde. *Política Nacional de Vigilância em Saúde (PNVS)* [National Health Surveillance Policy]. Brasília: Ministério da Saúde, 2018.

Brasil. Ministério da Saúde. *Portaria nº 4.279, de 30 de dezembro de 2010* [Ordinance No. 4,279, of December 30, 2010]. Estabelece diretrizes para a organização das Redes de Atenção à Saúde no

SUS [Establishes guidelines for organizing Health Care Networks in the SUS]. Brasília:

Ministério da Saúde, 2010.

Brasil. Ministério da Saúde. *Programa Nacional de Segurança do Paciente (PNSP): Portaria nº 529, de 1º de abril de 2013* [National Patient Safety Program: Ordinance No. 529, of April 1, 2013].

Brasília: Ministério da Saúde, 2013.

Campos, Gastão Wagner de Souza. Elementos para uma Política Nacional e Integrada de Pessoal para o Sistema Único de Saúde [Elements for a national and integrated personnel policy for the Unified Health System]. *Saúde e Sociedade*, v. 32, supl. 2, p. e220901pt, 2023.

Carvalho, Jadson Antonio Fontes et al. Interseção entre políticas públicas e o Sistema Único de Saúde (SUS): implicações para a gestão em saúde e a prestação dos serviços à população [Intersection between public policies and the Unified Health System (SUS): implications for health management and service delivery to the population]. *Lumen et Virtus*, v. 15, n. 41, p. 5903–5914, 2024.

Correa, João Paulo Cardoso et al. Indicadores de qualidade no Sistema Único de Saúde: abordagens para avaliação da eficiência e eficácia dos serviços prestados [Quality indicators in the Unified Health System: approaches for evaluating the efficiency and effectiveness of services provided]. *Interference: A Journal of Audio Culture*, v. 11, n. 2, p. 2130–2140, 2025.

Ferreira, Gustavo Assed; Ferreira, Carolina Assed. O Sistema Único de Saúde (SUS) brasileiro: trajetória e perspectivas [The Brazilian Unified Health System (SUS): trajectory and perspectives]. *Revista de Direito e Desenvolvimento*, v. 32, n. 59, p. e11861, 2023.

Gusmão, Ana Carolina et al. Governança, gestão e integralidade: eixos estruturantes do SUS em perspectiva [Governance, management, and comprehensiveness: structuring axes of the SUS in perspective]. *Aracê*, v. 7, n. 11, p. e10189, 2025.

- Haddad, Ana Estela; Lima, Nísia Trindade. Saúde digital no Sistema Único de Saúde (SUS) [Digital health in the Unified Health System (SUS)]. *Interface - Comunicação, Saúde, Educação*, v. 28, p. e230597, 2024.
- Junior, Rodrigo Vieira da Costa; Porto, Paulo Roberto da Silva; Silva, Maria Beatriz Santos Silva da. Modelos de gestão em saúde pública: impactos na força de trabalho no Sistema Único de Saúde – uma revisão integrativa [Public health management models: impacts on the workforce in the Unified Health System – an integrative review]. *Revista Foco*, v. 18, n. 4, p. e8162, 2025.
- Machado, Cristiani Vieira. Democracia, cidadania e saúde no Brasil: desafios para o fortalecimento do Sistema Único de Saúde (SUS) [Democracy, citizenship, and health in Brazil: challenges for strengthening the Unified Health System (SUS)]. *Ciência & Saúde Coletiva*, v. 29, n. 7, p. e02192024, 2024.
- Melo, Eliane Alves; Silva, Aline Silva da. Coordenação, integração e continuidade de cuidados: o que precisamos após 30 anos da Estratégia Saúde da Família? [Coordination, integration, and continuity of care: what do we need after 30 years of the Family Health Strategy?]. *Ciência & Saúde Coletiva*, v. 30, n. 12, p. e16232025, 2025.
- Oliveira, Átila José et al. Saúde pública e Sistema Único de Saúde (SUS): caminhos para a universalidade e a integralidade dos serviços [Public health and the Unified Health System (SUS): paths toward universality and comprehensiveness of services]. *Revista DCS*, v. 22, n. 82, p. e3445, 2025.
- Organização Pan-Americana da Saúde (OPAS). *Redes integradas de serviços de saúde: conceitos, opções de política e roteiro para implementação nas Américas* [Integrated health service networks: concepts, policy options, and roadmap for implementation in the Americas]. Brasília: OPAS, 2023.
- Ridolfi, Leticia Fernanda et al. Gestão da qualidade no Sistema Único de Saúde e seus condicionantes institucionais: contribuições e desafios para a governança da saúde pública, uma revisão integrativa da literatura (2018–2023) [Quality management in the Unified Health System and its

institutional conditioning factors: contributions and challenges for public health governance, an integrative literature review (2018–2023)]. *International Journal of Health Management Review*, v. 12, n. 1, p. e434, 2026.

Rodrigues, Alana Pereira; Dalbello-Araújo, Maristela; Lazarini, Welington Serra. Integração ensino-serviço: a experiência como estratégia formativa em saúde [Teaching-service integration: experience as a formative strategy in health]. *Interface - Comunicação, Saúde, Educação*, v. 28, p. e230381, 2024.