

INSTITUTIONAL EXPERIENCE OF THE UERJ PRÓ-SUS NETWORK: A MODEL OF ACADEMIC COLLABORATION AND PUBLIC HEALTH INNOVATION

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Abstract

The UERJ Pró-SUS Network is an institutional initiative coordinated by the Health Vice-Rectorate of the State University of Rio de Janeiro aimed at strengthening the Brazilian Unified Health System (SUS) through the integration of teaching, research, extension, and technological innovation. Designed as a collaborative and interdisciplinary platform, the network connects researchers, students, health professionals, and public managers to address concrete challenges faced by public health services. By 2025, the digital platform of the network had mapped approximately 200 academic projects related to the SUS and involved 39 academic and administrative units of the university, including research institutes and university health services. During the same period, 19 new interdisciplinary projects were structured to respond to strategic priorities such as health promotion in vulnerable territories, transgender health, environmental sustainability and health, digital health innovation, and care strategies for individuals with Autism Spectrum Disorder. The initiative illustrates how collaborative academic networks can strengthen health systems by translating scientific knowledge into applied solutions. The experience reinforces the role of universities as key actors in promoting equitable and sustainable public health policies.

Keywords: *Public health, SUS, health innovation, academic-service integration, interdisciplinary networks.*

1. Introduction

The Brazilian context adds additional layers of complexity to the organization and financing of public health policies. The country has an estimated population of more than 213 million inhabitants distributed across a territory of approximately 8.5 million km², placing it among the five largest countries in the world in terms of geographical extension (IBGE, 2024). This territorial scale translates into profound regional inequalities and significant sociocultural diversity, marked by the coexistence of distinct urban and rural realities, traditional communities, Indigenous territories, and large metropolitan areas. Such territorial multiplicity directly influences health care practices, requiring public policies to consider epidemiological, cultural, and socioeconomic differences among regions and communities.

In this context, the Brazilian Unified Health System (Sistema Único de Saúde – SUS) plays a central role in guaranteeing universal access to health care, providing services to approximately 72% of the Brazilian population—around 164 million people—who depend exclusively on the public system for medical care (IBGE; International Trade Administration, 2024). From a financing perspective, Brazil allocates approximately 9.7% of its Gross Domestic Product to health expenditures, representing hundreds of billions of reais invested annually in the sector and reflecting the magnitude of the effort required to sustain a universal health system in a country of continental dimensions (IBGE, 2024; OECD, 2025).

In this scenario, the combination of vast territorial extension, sociocultural diversity, and high demand for public health services underscores the importance of institutional strategies capable of integrating scientific knowledge, technological innovation, and public management, reinforcing the role of universities in developing solutions to the challenges faced by the SUS.

Universities are increasingly recognized as key actors in strengthening health systems through scientific research, professional training, and technological innovation. International literature highlights the importance of academic–service collaboration in improving health system performance and accelerating the translation of research into practice (Frenk et al., 2010; WHO, 2020). In this context, collaborative academic networks have emerged as strategic mechanisms for connecting universities with health systems and public policy development.

In response to this challenge, the State University of Rio de Janeiro (UERJ) created the UERJ Pró-SUS Network, an institutional initiative designed to connect academic research and innovation with the concrete demands of the public health system. The network promotes interdisciplinary collaboration among researchers, students, and health professionals to develop solutions capable of improving public health services.

2. Design / Objectives

The UERJ Pró-SUS Network was designed as an institutional collaborative platform oriented toward strengthening the Brazilian Unified Health System. Its central objective is to mobilize academic knowledge and technological innovation to develop solutions capable of improving the quality, accessibility, and efficiency of public health services.

More specifically, the initiative seeks to integrate teaching, research, extension, and innovation activities across multiple academic units of the university. By promoting interdisciplinary collaboration, the network encourages researchers from fields such as medicine, engineering, public health, social sciences, and information technology to work together on applied research projects related to public health challenges.

The network also aims to strengthen partnerships between the university and health services linked to the SUS, creating an environment in which knowledge production and practical application occur simultaneously and contribute to improving health system performance.

3. Methods

The implementation of the UERJ Pró-SUS Network followed a structured methodological approach based on the mapping of academic competencies, the organization of interdisciplinary collaboration, and the development of applied research projects.

Initially, a mapping process identified research groups, laboratories, and academic initiatives within the university with potential relevance to the SUS. Researchers were invited to register their projects on a digital platform designed to facilitate communication, visibility, and collaboration among participants.

Based on this mapping, thematic working groups were created around priority areas related to public health challenges. These groups develop interdisciplinary projects aligned with real demands from health services. Periodic meetings and workshops promote knowledge exchange, methodological alignment, and evaluation of project progress.

Monitoring mechanisms and impact indicators were also established to assess the scientific, institutional, and social outcomes of the network's activities.

4. Results

The creation of the UERJ Pró-SUS Network produced significant institutional and academic results. The initiative currently integrates 39 academic and administrative units of the university, including faculties, research institutes, and university health services such as the Hospital Universitário Pedro Ernesto and the Policlínica Piquet Carneiro.

Through its digital platform, the network has mapped approximately 200 academic projects related to the SUS, covering areas such as health promotion, environmental health, digital health technologies, health management innovation, and strategies focused on vulnerable populations.

During 2025, the network supported the development of 19 new interdisciplinary projects aimed at strengthening the SUS. These initiatives addressed strategic themes including: health promotion in vulnerable territories; transgender health; sustainability and the environment–health interface; digital health innovation; care strategies for individuals with Autism Spectrum.

The projects combined academic research with service-based collaboration, promoting territorial engagement and knowledge exchange between researchers and health professionals.

Figure 1. Institutional Indicators of the UERJ Pró-SUS Network.

Indicator	Value
Academic and administrative units involved	39
Projects mapped on the platform	~200
New interdisciplinary projects structured in 2025	19
Main thematic areas	Health promotion, digital health, environmental health, equity
Institutional coordination	Health Vice-Rectorate – UERJ

5. Discussion

The experience of the UERJ Pró-SUS Network highlights the importance of collaborative academic networks in addressing complex public health challenges. Public health problems are inherently multidimensional and require interdisciplinary approaches capable of integrating technological, social, and organizational perspectives.

The network can also be understood within the broader framework of health innovation ecosystems, in which universities, health services, governments, and communities interact to produce knowledge and technological solutions. Institutional environments that facilitate collaboration and co-production of knowledge is essential for transforming academic research into socially relevant innovation.

By connecting academic expertise with the concrete demands of health services, the network contributes to reducing the gap between knowledge production and practical application in public health systems. This model reinforces the strategic role of universities as drivers of social innovation and public policy development.

6. Conclusions

The UERJ Pró-SUS Network represents an innovative institutional model for strengthening collaboration between universities and public health systems. By integrating interdisciplinary research, technological innovation, and direct engagement with health services, the initiative contributes to improving the organization, management, and quality of health care within the Brazilian Unified Health System (SUS).

Since its implementation, the network has demonstrated a significant capacity to mobilize academic knowledge and institutional resources in favor of public health. Currently, the initiative integrates **39 academic and administrative units of the State University of Rio de Janeiro**, including faculties, research institutes, and university health services. This broad institutional participation reflects the interdisciplinary nature of the network and its potential to connect diverse fields of knowledge in the development of solutions for complex health challenges.

Through its digital platform, the network has already mapped **approximately 200 academic projects with direct relevance to the SUS**, covering areas such as health promotion, digital health technologies, environmental health, health management innovation, and strategies aimed at vulnerable populations. In addition to the mapping of existing initiatives, the network actively stimulated the creation of **19 new interdisciplinary projects throughout 2025**, focused on strategic public health priorities including health promotion in vulnerable territories, transgender health, sustainability and the interface between environment and health, technological innovation, and care strategies for individuals with Autism Spectrum Disorder.

The digital platform created to support the network has also played an important role in expanding the visibility and accessibility of academic initiatives related to public health. Since its implementation, the platform has registered **more than 3k views**, reflecting growing institutional and public interest in the articulation between university research and the needs of the public health system.

Beyond quantitative indicators, the initiative has generated important qualitative impacts. The network has strengthened interdisciplinary collaboration within the university, expanded opportunities for student training and professional development in real health system contexts, and increased the visibility of applied research with direct relevance to public policies.

In this sense, the UERJ Pró-SUS Network illustrates how universities can function as **institutional hubs for innovation in public health**, capable of connecting scientific knowledge, technological development, and social needs. The experience reinforces the strategic role of higher education institutions in contributing to the sustainability and continuous improvement of universal health systems, particularly in countries marked by territorial diversity and social inequalities such as Brazil.

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