

Digital health and the SUS: advances and challenges

The digital transformation of the Unified Health System (SUS) is increasingly becoming consolidated as a strategic driver of equity, efficiency, and quality of care. The articles presented here are clear proof that the incorporation of digital technologies goes beyond the mere computerization of administrative routines. Rather, it represents a structural movement capable of reorganizing care processes, expanding access to and redefining practices in Primary Health Care (PHC), especially in territories historically marked by social and geographic inequalities.

In the Amazon region, for example, the use of convoluted neural networks for the detection of micro-filariae represents a significant advance in diagnostic capacity in remote areas. The introduction of online consultation platforms and digital regulation systems has also resulted in important operational gains. Reductions in absenteeism, the rationalization of care flows, and savings in public resources demonstrate how digitalization can contribute to greater systemic efficiency, while also improving the user experience within the care network.

Within the PHC, the incorporation of predictive models and machine learning techniques introduces a more anticipatory approach to care. The use of algorithms to estimate quality scores, such as the PCA-Tool¹, enhances the capacity of teams to identify risks, prioritize interventions, and organize actions in a more personalized and territorially grounded manner. This represents a significant advance, directly aligned with the core attributes of PHC, by enhancing the analytical capacity of the teams in the field.

The penetration of telehealth—particularly in large urban centers such as the city of Rio de Janeiro and in states such as Maranhão—illustrates another strategic axis, namely the expansion of access to specialists and enhancement of the capacity of Family Health teams. By reducing unnecessary travel and integrating different branches of knowledge, telehealth contributes to improving the problem-solving capacity of PHC.

Geoprocessing tools and situational diagnostics backed up by the SUS Digital Program² further reinforce this perspective by providing input for regional planning and more equitable allocation of resources. Spatial analysis of health indicators, integrated with interoperable databases, enables more precise, evidence-based interventions that are responsive to territorial specificities.

However, the advances presented here also highlight persistent challenges. The consolidation of a digitally strengthened PHC requires sustained investment in technological infrastructure, connectivity, data governance, information security, user privacy protection, and the ongoing training of health workers.

The experiences reported point toward a promising horizon: a SUS in which continuing education mediated by digital technologies, the integration of data systems, and a culture of evidence use contribute to a stronger, more connected, responsive and resolute PHC.

The future that emerges is not merely that of a more technological system, but of a more equitable one. When guided by the principles of the SUS and the attributes of PHC, digital innovation becomes a tool for social justice by expanding rights, strengthening citizenship, and enabling every territory, from urban centers to riverside communities, to access quality care.

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