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Contemporary health challenges in Rio de Janeiro and the Metropolitan Region: territories, inequalities, and innovation in perspective

Desafios contemporâneos da saúde no Rio de Janeiro e Região Metropolitana: territórios, desigualdades e inovação em perspectiva

Desafíos contemporáneos de la salud en Río de Janeiro y Región Metropolitana: territorios, desigualdades e innovación en perspectiva

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The thematic dossier "*Contemporary health challenges in Rio de Janeiro and its Metropolitan Region*", published in volume 14, number 2, of the Coleção Estudos Cariocas, in which I had the honor of acting as guest editor, comprises six original articles and one opinion article. The latter, authored by Behring (2026), presents a critical reflection on the digital transformation processes that have been reshaping the management and provision of health services, warning of the risks of widening inequalities when technological innovation is not accompanied by policies for digital inclusion, social participation, and democratic governance.

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Translations into other languages were reviewed and validated by the authors and the editorial team. Nevertheless, for the most accurate representation of the subject matter, readers are encouraged to consult the article in its original language.



The collection brings together contributions that address different dimensions of contemporary health challenges in Rio de Janeiro and its Metropolitan Region, covering historical, territorial, epidemiological, care-related, and urban analyses. Although distinct in their research objects, the studies converge in showing that the population's health conditions are profoundly influenced by the social, spatial, and political contexts that structure everyday life in metropolitan territories. Health in large cities is produced far beyond the limits of care services. It results from the interaction between living conditions, mobility, access to rights, the organization of urban space, technological development, and persistent socioeconomic inequalities.

The dossier opens with the article "From pain to urban catharsis: pandemics, carnival, and contemporary public health challenges in Rio de Janeiro", which revisits the 1919 Carnival, held after the Spanish Flu pandemic, establishing a historical dialogue with the post-COVID-19 scenario (Ramos; Soriano, 2026). By interpreting Carnival as a space for symbolic reconstruction, occupation of public space, and the resumption of collective life, the study demonstrates that the health challenges associated with mega-events are intrinsically related to social inequalities, mobility conditions, housing, and urban governance. The reading proposed by the authors dialogues with historical interpretations of the city of Rio de Janeiro present in the work of Ruy Castro (Castro, 2020), especially in *O carnaval da guerra e da gripe*, by evoking the 1919 Carnival as a symbol of social recovery after the Spanish flu pandemic and as an expression of Rio's capacity to rebuild collective ties in crisis contexts.

The spatial dimension of access to health services is explored in depth in "Analysis of population travel to Family Clinics (FC) and Municipal Health Centers (CMS) in the Geographic Regions of the City of Rio de Janeiro", by Lima *et al.* (2026). Based on the new analytical possibilities provided by georeferenced data from the 2022 Demographic Census, the authors highlight inequalities in the territorial distribution of primary care facilities, demonstrating that certain regions of the city have greater average travel distances to health services.

Complementing the debate on territorial inequalities in access to health, the article

"Confinement morphology: open-source mapping of vertical accessibility and disability vulnerability in the Rocinha Favela, Rio de Janeiro (RJ)" by Barros *et al.* (2026) presents a methodology based on free geotechnologies to analyze the challenges faced by people with disabilities in urban areas of complex occupation. The study shows how geographic and urban barriers can limit mobility and access to essential services, reinforcing the importance of accessibility as a fundamental component of social justice and health promotion.

Attention to the most vulnerable groups is also addressed by Rodrigues *et al.* (2026) in the article "Interdisciplinary outpatient follow-up of high-risk newborns: experience report of a decade of an extension project at a university hospital in the Metropolitan Region of Rio de Janeiro". By reporting on the experience of the SARAR project at the Pedro Ernesto University Hospital (UERJ), the authors highlight the relevance of interdisciplinary and longitudinal follow-up for high-risk newborns, evidencing the role of specialized outpatient clinics in the early detection of conditions, the promotion of child development, and the integration between care, teaching, and research. Maternal and child health remains in focus in the article "Spatial distribution and maternal-infant epidemiological profile of live births with orofacial clefts in the state of Rio de Janeiro between 2014 and 2023" (Souza *et al.* 2026). Based on the analysis of data from the Live Birth Information System (SINASC), the authors identify regional differences in the prevalence of orofacial clefts and discuss possible limitations of surveillance systems, contributing to the improvement of epidemiological monitoring and the planning of comprehensive care strategies for affected children and their families. The Live Birth Information System (SINASC), the main national system for monitoring births occurring in the country (BRASIL, 2026), constitutes an important data source for epidemiological studies and for the planning of public policies in maternal and child health.

The interface between health, mobility, and quality of life is explored in "Urban mobility in the City of Rio de Janeiro: challenges and proposals to promote safety and the reclamation of urban space by pedestrians and cyclists". The article written by Blandy; Silva (2026) broadens the understanding of urban mobility as a central element of health promotion, advocating for safer, more inclusive, and sustainable cities, in which public space is valued and democratically shared by different modes of transportation.

Closing the dossier, I return to the opinion article "Between the promise of innovation and the abyss of inequality: the digital paradox in Brazil's Unified Health System (SUS) in Rio de Janeiro", written by Behring (2026), which proposes a necessary reflection on the directions of the digitalization of the health system. While recognizing the advances provided by telehealth and digital information systems, the author warns of the persistence of barriers related to connectivity and digital literacy, reaffirming that innovation will only fulfill its transformative potential when guided by the principles of equity and universality that underpin the Unified Health System (SUS).

Together, the articles in this dossier reveal the centrality of territory as an analytical category for understanding contemporary health challenges in Rio de Janeiro. Whether in the organization of services, urban mobility, accessibility for vulnerable populations, epidemiological surveillance, follow-up of high-risk newborns, or the digital transformation of the SUS, the studies show that territorial inequalities remain one of the main determinants of health production and access to care. It is hoped that the studies gathered here will contribute to expanding dialogue among researchers, managers, health professionals, and public policymakers, stimulating new research agendas and strengthening strategies aimed at reducing inequalities and promoting health in the territories. In a context marked by rapid social, technological, and urban transformations, this dossier reaffirms the importance of scientific production committed to the critical understanding of reality and to the construction of more equitable solutions for the population of Rio de Janeiro.

Finally, I thank the authors, reviewers, and the editorial team of the *Coleção Estudos Cariocas* for their commitment to the production and dissemination of scientific knowledge, making possible the realization of this important thematic dossier.

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About the Author

Flavia Martinez de Carvalho is a public health researcher at the Instituto Oswaldo Cruz (Fiocruz), with a solid academic and scientific background in the fields of human and medical genetics, epidemiology, and craniofacial anomalies. She holds a degree in Dentistry and a specialization in Periodontics from UERJ, where she also completed her master's and doctoral degrees, including a sandwich internship at the University of Pittsburgh (USA) with a focus on molecular biology. She is a postdoctoral researcher in Human and Medical Genetics at UFRJ, with research focused on identifying candidate genes for oral clefts in Latin American populations. Since 2014, she has led projects at the Laboratory of Epidemiology of Congenital Malformations (LEMC/IOC/Fiocruz), working on population studies, applied genomics, subphenotypes of oral clefts, dental anomalies, and systemic conditions with an impact on oral health, in addition to innovation in craniofacial photogrammetry. She has been a member of the ECLAMC Network and Association since 2010, is a professor and course coordinator in the graduate program in Genetics at UFRJ, and a member of the Research Ethics Committee of IOC/Fiocruz. She is currently a member of the Collegiate Board of the Latin American Collaborative Study of Congenital Malformations (ECLAMC).

Author Contributions

Conceptualization; methodology; software; validation; formal analysis; investigation; resources; data curation; writing—original draft preparation; writing—review and editing; visualization; supervision; project administration; funding acquisition [F. M. C.].

Conflicts of Interest

The author declares no conflict of interest.

About *Coleção Estudos Cariocas*

Coleção Estudos Cariocas (ISSN 1984-7203) is a publication dedicated to studies and research on the Municipality of Rio de Janeiro, affiliated with the Pereira Passos Institute (IPP) of the Rio de Janeiro City Hall.

Its objective is to disseminate technical and scientific production on topics related to the city of Rio de Janeiro, as well as its metropolitan connections and its role in regional, national, and international contexts. The collection is open to all researchers (whether municipal employees or not) and covers a wide range of fields — provided they partially or fully address the spatial scope of the city of Rio de Janeiro.

Articles must also align with the Institute's objectives, which are:

1. to promote and coordinate public intervention in the city's urban space;
2. to provide and integrate the activities of the city's geographic, cartographic, monographic, and statistical information systems;
3. to support the establishment of basic guidelines for the city's socioeconomic development.

Special emphasis will be given to the articulation of the articles with the city's economic development proposal. Thus, it is expected that the multidisciplinary articles submitted to the journal will address the urban development needs of Rio de Janeiro.