

The Climate Tragedy in Rio Grande do Sul and the National Force of the SUS: resilience-centered public policy in the face of new health crises

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FEATURED ARTICLE

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Abstract *The effects of climate change, such as the record floods in Rio Grande do Sul in 2024, highlight the need for resilience in health systems to cope with health crises. The National Force of the Unified Health System (FN-SUS), established in 2011, operates in prevention, assistance, and response to disasters and epidemiological emergencies. During the 2024 floods, FN-SUS mobilized quickly, setting up field hospitals and providing medical care, managing chronic conditions, preventing infectious diseases, and offering mental health support. This study suggests that FN-SUS, by strengthening the SUS's capacity to respond to disasters, can also develop resilience to less intense events. It proposes that FN-SUS should be a continuous and proactive program with multisectoral coordination and adequate funding to ensure the maintenance of essential public health functions and the SUS's readiness for future crises.*

Key words: Health systems resilience; Disasters; Emergency Watch; Disaster Recovery

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Introduction

The effects of climate change are increasingly apparent, as tragically exemplified by the record floods in Rio Grande do Sul (RS), Brazil, in 2024. Events of this type are expected to become increasingly frequent around the world, testing the ability of health systems to address sudden increases in demand but also challenging the guarantee of universal, comprehensive, and equitable access in the long term, given that climate change effects permanently shape social logic.

These effects will be even more devastating in poorer countries due to new disasters, the emergence of epidemics, and the chronic crises faced by national health systems. Resilience, therefore, emerges as an essential attribute to ensure the maintenance of Essential Public Health Functions (EPHF) in unexpected episodic or routine situations, which allows for addressing the mismatch between population demands and service capacity resulting from any volatility in the functioning of systems¹.

Several initiatives to strengthen the Unified Health System (SUS) capacity to address demand bottlenecks have been implemented, such as resuming the *Mais Médicos* (More Doctors) Program and the National Waiting List Reduction Program²⁻³, but developing sustainable and long-lasting actions that positively and permanently transform SUS resilience continues to be a significant challenge for public policymakers.

In the wake of major public health emergencies, however, properties such as preparedness, anticipation, responsiveness, and recovery have been developed in the literature, generating recommendations from health organizations, especially when addressing the capacity of national health systems to respond to unusual events⁴. Governments have echoed these recommendations through structures to address crises and disasters, such as establishing the National SUS Force (FN-SUS)⁵.

The FN-SUS is “a cooperation program aimed at implementing measures to prevent, assist, and suppress epidemiological situations, disasters or lack of assistance to the population when the state or municipality’s response capacity is exhausted, created in November 2011”⁶. Given the prospect of a climate emergency resurgence, local and federal governments should work together to maintain Essential Public Health Services and Functions for longer,

with fewer resources and under harsher conditions. In this sense, the FN-SUS role becomes increasingly relevant.

This commentary provides an overview of the FN-SUS creation and performance, highlighting its actions in the recent disaster caused by heavy rains in Rio Grande do Sul. It underscores the importance of the FN-SUS for immediate response in sudden crises and its potential for improving the SUS preventive, absorptive, and adaptive capacities, ensuring the functioning of Essential Public Health Functions (EPHF) during crises and, thus, strengthening its resilience.

The FN-SUS and its role in the floods in RS

The definition of resilience of health systems from the Health Sciences Descriptors (DECS/BVS/PAHO) indicates innovative ways to manage SUS services based on new attributes⁷. It defines resilience as the:

adaptation capacity that health systems must develop and maintain to adequately meet the sudden increase in demand caused by extraordinary events that directly or indirectly affect the population’s health while maintaining their functioning, safety, quality, and availability of services⁷.

The quality and availability of services depend on the adequate functioning of essential public health functions, which should not be paralyzed, even during a highly relevant public health event⁸⁻⁹.

By ensuring that health services reach even the most affected areas and aiming at equity and accessibility in health amid the mismatch between demand for services and existing capacity during emergencies, the FN-SUS is a structure aimed at rapidly increasing the SUS ability to relieve pressure on care, responding to several events¹⁰⁻¹². Thus, it is understood that the FN-SUS is conceptually adherent to what is expected of SUS components that strengthen its resilience.

In its recent actions, the FN-SUS has shown its ability of strengthening the capacity of essential public health functions during crises, providing swift, coordinated, and comprehensive responses to mitigate the impact of emergencies and ensure care continuity for those affected.

Since its creation, the FN-SUS has carried out at least four missions to support natural disaster situations (floods and landslides), supporting the management of significant events (Rio+20, Círio de Nazaré, 2014 World Cup,

and 2016 Olympic Games), lack of assistance (support for the reorganization of Health Care Networks in the migration of Haitians and Venezuelans), humanitarian crises (assistance to the Yanomami Indigenous people), and tragedies (fire at the Kiss nightclub), besides the recent floods of May 2024 in Rio Grande do Sul.

During the recent floods in RS, the FN-SUS was mobilized 48 hours after the initial alerts. Pre-established protocols and coordination with the Civil Defense facilitated the rapid mobilization. The task force included medical teams, logistics teams, and public health specialists equipped to address the emergency's dynamics.

Upon arrival, the FN-SUS strategically established field hospitals, collaborating with other sectors, such as the Armed Forces and Civil Defense, to provide immediate medical care to flood victims. Four field hospitals were established in the most affected areas, offering comprehensive medical services, including surgery, intensive care, and maternity care.

The allocation of resources, including medical supplies, vaccines, and water purification systems, was prioritized based on the severity of the impact in different areas. The focus was mainly on treating injuries, managing chronic conditions exacerbated by the disaster, and preventing the spread of infectious diseases. Mobile medical units were deployed to reach remote areas, ensuring all affected populations received basic care, including in shelters. Following deployment, the FNS established several triage centers to prioritize medical needs based on severity.

More than 15,000 people received emergency medical care in the first week, allowing immediate treatment of the most common injuries. Approximately 8,000 minor and 1,200 severe injuries were treated in the initial phase. Special units were also set up, and actions were taken to manage chronic conditions such as diabetes, hypertension, and asthma, aggravated by the interruption of regular health services, to maintain essential services. More than 3,500 chronic patients received medical care and necessary medication.

Given that flooding increases the risk of waterborne diseases such as leptospirosis and dengue fever, the FN-SUS implemented disease surveillance and prevention programs, including vaccination campaigns and distribution of hygiene kits. Public health education initiatives were also performed to inform residents about

measures to prevent disease transmission. In this way, the FN-SUS administered more than 50,000 vaccines, including tetanus, hepatitis A, and influenza, to prevent potential outbreaks and distributed more than 40,000 hygiene kits containing soap, hand sanitizer, water purification tablets, and mosquito repellent, which were distributed to affected families.

The challenges of access to SUS health services are highlighted, which become even more explicit in emergencies, such as access by vulnerable groups such as older adults and children, especially those with mental and physical disabilities. Moreover, the contribution that maintaining an FN-SUS can also raise issues related to equity in access to health regarding race and gender.

Regarding health education, also an essential function, community health workers mobilized by the FN-SUS held educational sessions, reaching approximately 60,000 residents with information on preventing waterborne diseases and maintaining hygiene.

Furthermore, recognizing the psychological impact of the disaster, the FN-SUS provided mental health support to flood victims and shelter volunteers and workers, which included counseling services and psychosocial support programs to help individuals cope with trauma and loss. Over 5,000 people received individual or group counseling sessions to address trauma and emotional distress. Community psychosocial support programs were also established, benefiting more than 10,000 residents. These programs included activities for children and adolescents and support groups for adults.

The floods caused significant damage to health infrastructure, disrupting services across the region. The FN-SUS played a crucial role in restoring these facilities, working with local authorities to repair damaged hospitals and clinics. In addition to field hospitals, the FN-SUS worked with local authorities to repair and restore five major hospitals and twenty local clinics, ensuring regular health services resumed within two months.

Ensuring a constant supply of medical resources was fundamental to maintaining the performance of essential health functions, which is crucial for SUS resilience. In this sense, the FN-SUS managed the logistics of acquiring and distributing medical supplies, including medicines, vaccines, and equipment. Collaboration with national and international partners helped to streamline these efforts. As a result

of this action, more than 100 tons of medical supplies, including medicines, vaccines, and equipment, were delivered to the affected areas.

For a program to strengthen SUS resilience

A resilient SUS must have preventive, absorptive, and adaptive capacity, ensuring adequate responses in crises while sustaining the efficiency of its essential functions. In this context, the FN-SUS contributes decisively to resilience and should be considered an indispensable public policy. It must have continuous resources and act articulately with several SUS sectors and areas, especially with Primary Care, which can provide continuous, relevant, and reliable information on the dynamics of the territories.

Considering its recent performance, the FN-SUS has been exclusively mobilized to respond to major disasters, followed by demobilization at the end of these public health events. However, developing SUS resilient abilities also occurs when facing extraordinary situations that strain the relationship between demand and capacity during the routine operation of services. In this sense, the FN-SUS must be a public policy that operates continuously, ubiquitously, and transversally, constantly learning from shared information, helping to anticipate extraordinary events, and monitoring short-term threats. In this way, the system's preparedness for significant events is also strengthened.

Making the FN-SUS activation conditional on the declaration of major public health emergencies is a limiting factor that may affect not only its effectiveness but also obscure the need for continued investment in its maintenance, which may create the impression that its capacity is idle in the absence of disasters that directly or indirectly affect the health of populations. Given the trend of new crises – not only climate-related but also wars, mass migrations, the emergence of new diseases, and the like – devices such as the FN-SUS should be increasingly available.

Addressing chronic challenges that create mismatches between capabilities and demands, even in minor events, is essential for developing resilient abilities that can be activated to address escalating disasters. In this sense, the FN-SUS can be an important step towards developing a programmatic resilience agenda in the SUS, which involves everything from creating permanent structures at the ministerial level to

the means for their operation and sustainability, including staff training, knowledge management in resilience, agility in staff mobilization, and intersectoral coordination. This structure would act as a coordinator of actions in disaster situations and maintain essential public health functions at adequate levels – or, at least, their rapid restoration after the disaster.

Conclusion

When any disaster occurs, the need to immediately assist those affected is indisputable. In this sense, the intersectoral action usually taken is essential. However, this commentary aims to highlight another facet, in which the immediate response is a reflection of the continuous development of resilient capabilities based on learning to address disruptions or unexpected events, uninterrupted monitoring of essential health functions, and anticipation of possible threats to the operation of health services – for example, in the case of the oxygen supply collapse during covid-19, where new actions were necessary, even though a public health event of high relevance had already been declared.

Although SUS resilience is related to its ability to address extreme events, the susceptibility of health services to less intense, recurring events that can trigger more severe ones should also not be underestimated. Therefore, a resilient SUS involves enabling this universal, comprehensive, and equitable system to adapt to events of different natures and frequencies, whether they arise from acute crises, such as natural disasters, accidents, and epidemics, or events resulting from chronic crises, such as low vaccination uptake over long periods, prolonged droughts or underfunding. These situations affect essential public health functions, and a resilient system must maintain these functions permanently stable at good service levels.

Based on the work of the FN-SUS in Rio Grande do Sul, we argued in this article that the FN-SUS could be the embryo of a program to improve resilience in the health system that provides prompt response and support to local units to address events of any intensity. To this end, it would be important to strengthen the FN-SUS multisectoral coordination, including sharing actions at different care levels, ensuring adequate funding and accountability, allowing its proactive activation in different situations, even outside the scope of public health events

of high relevance, facilitating its performance in coordinating health actions, when pertinent.

As a result, the FN-SUS would become a program that strengthens SUS response capacity to major catastrophes and a device that guarantees the functioning of SUS essential functions in times of crisis, ensuring care continuity when the system faces demand bottlenecks, regardless of the triggering event.

In short, the creation and maintenance of a continuous and proactive FN-SUS is essential to strengthen SUS resilience in the face of several acute or chronic crises that may arise. A strategic approach based on a state program for SUS resilience involving continuous training, intersectoral coordination, and more robust structures for workforce movement, logistics, and financing is necessary for the SUS to respond efficiently to emergencies and sustain and quickly restore its essential functions. Investing in resilience is, therefore, investing in the population's safety and well-being, ensuring that the health system is always prepared to face future challenges efficiently and swiftly.

Collaborators

The authors were responsible for the conception of the original idea and design of the study, evaluation, analysis of the bases of data, for writing, reviewing and interpretation of the text. They also reviewed and approved the final version of the text.

References

1. Jatoba A, Carvalho PVR. The resilience of the Brazilian Unified Health System is not (only) in responding to disasters. *Rev Saude Publica* 2024; 58(22):1-6.
2. Pinto HA, Côrtes SMV. O que fez com que o Programa Mais Médicos fosse possível? *Ciênc saúde coletiva* 2022; 27(7):2543-2552.
3. Brasil. Ministério da Saúde(MS). Portaria GM/MS nº 90, de 3 de fevereiro de 2023. [acessado 2024 fev. 20] Disponível em: <https://www.gov.br/saude/pt-br/composicao/saes/legislacao/portaria-gm-ms-no-90-de-3-de-fevereiro-de-2023/view>
4. World Health Organization (WHO). *Regional Office for South-East Asia. Framework for action in building health systems resilience to climate change in South-East Asia Region, 2017-2022* [Internet]. 2017 [cited 2022 Jun 20];[about 39p.]Available from: <https://apps.who.int/iris/handle/10665/258953>
5. Brasil. Ministério da Saúde (MS). Força Nacional do SUS [Internet]. 2011[acessado 2024 Jun 10]. Disponível em: <https://www.gov.br/saude/pt-br/composicao/saes/fn-sus/forca-nacional-do-sus>
6. Brasil. Decreto nº 7616 [Internet]. 2011.[acessado 2024 Jun 09] Disponível em: https://www.planalto.gov.br/ccivil_03/_ato2011-2014/2011/decreto/d7616.htm
7. BIREME / OPAS / OMS. *Descritores em Ciências da Saúde: DeCS* [Internet]. 2024 [acessado 2024 May 16]. Disponível em: <http://decs.bvsalud.org>
8. World Health Organization (WHO). *Essential public health functions, health systems and health security: developing conceptual clarity and a WHO roadmap for action*. 2018. [cited 2024 Jun 9]; [cerca de 67 p.]. Disponível em: <https://www.who.int/publications/i/item/9789241514088>
9. Organização Panamericana de Saúde (OPAS). *The Essential Public Health Functions in the Americas: A Renewal for the 21st Century. Conceptual Framework and Description*. Washington: D.C.; 2020.
10. Lobo MSDC, Cardoso MLDM. Lições de tempos urgentes: a experiência da atenção à saúde Yanomami ontem e hoje. *Cad Saúde Pública* 2023; 39(4): e00065623.
11. Wagner C, Soares MP, Skrebsky B, Unfer B, Ferreira TG. O processo de trabalho dos serviços de saúde frente a desastre de incêndio em casa noturna. *Saúde debate* 2017; 41(11):1224-1232.
12. Lopes LT, Barros FPCD. Gestão de recursos humanos do SUS na pandemia: fragilidades nas iniciativas do Ministério da Saúde. *Saúde debate* 2022; 46(133): 89-77.

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