

Resilience of health systems

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The COVID-19 epidemic taught us about the unexpected and prompted us to create mechanisms to prepare for it. Whether in private or public life, we had to learn almost daily how to deal with shocks over which we had no control. The capacity to face such shocks is no trivial thing and even when they are controlled, there are sometimes long-lasting consequences in the lives of individuals and society. However, the literature has shown that given the recent examples of the H1N1, H3N2, H2N2, Zika and Ebola pandemics, such events will be more and more common rather than necessarily unexpected and unpredictable¹. In this sense, science is increasingly concerned about how to deal with these events, especially in the case of health systems. The subject has been addressed as resilience of health systems, and, given its recent nature, a most welcome contribution is the article *The Resilience of Brazilian Unified National Health System in the context of the COVID-19 Pandemic: How to Strengthen*, by José Patrício Bispo Júnior², published in this issue and which inspired this editorial.

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Resilience has many meanings and today it can be considered an umbrella term to cover several elements that were previously addressed as sustainability, to which were added the elements of adaptability and transformation³. Studies on resilience originated from analysis of the strength of engineering structures and are already traditional in the field of climatic hazards, such as extreme events, and extend to the individual's ability to deal with adversity or adapt to stressful circumstances, such as resistance to pain. There are many definitions for resilience, ranging from concepts that focus on unique aspects of trauma recovery to resilience not only as reaction, but also as learning and proactivity⁴.

In public health, the term gained visibility due to its connection with disasters⁵ and its application was extended from ecology to health systems, expanding mainly with the Ebola epidemic, which stimulated the growth of scientific research on the resilience of health systems⁶. In Brazil, however, the subject is quite new. A brief search in the Capes Periódicos database (<https://www.periodicos.capes.gov.br>) turns up only six Brazilian peer-reviewed articles on resilience in health systems, while more than 300 are found in the international literature and in the analysis of other countries.

For Biddle et al.⁶, the concept of health systems resilience has undergone significant changes. Formerly limited to the mere capacity of the systems, it evolved both to include



the contribution of individuals and to recognize the broader social, economic and political contexts where responses occur. Even so, the concept is fairly wide-ranging and takes on different definitions depending on the focus of the analyses. What is relatively common in the literature is to address resilience as related to the capacity to absorb, adapt and transform. For health systems, Blanchet et al. ⁷ (p. 433-4) define resilience as the “*capacity of a health system to absorb, adapt and transform when exposed to a shock and still retain control over its structure and functions*”. The authors summarize the conditions addressed in the literature, describing absorption capacity as a system’s capacity to continue delivering the same level of care, in quantity, quality and equity, despite the shock suffered; adaptive capacity as the capacity of actors to ensure the same care with fewer or changed resources, which implies organizational adaptations; and transformative capacity as the capacity of actors to transform the system’s functions and structures in response to a changing environment.

It should be noted that these elements are normative and make it possible to identify the conditions and coping capacity of the systems, but they say little about whether the systems are prepared to deal with crisis events. For this reason, Blanchet et al. ⁷ propose four interdependent analytical dimensions that help analyze the systems’ resilience. They are knowledge, which relates to the capacity to collect, integrate and analyze different forms of knowledge and information; uncertainty, which relates to the capacity to anticipate and face uncertainties and surprises; interdependence, which is the capacity to consider and deal with dynamics and feedbacks on multiple scales; and legitimacy, which relates to the capacity to build socially accepted and contextualized institutions. The dimension of legitimacy stands out for including political and institutional aspects that are not usually addressed by studies on resilience of health systems. In fact, in a broad review of empirical studies, Biddle et al. ⁶ identified a significant number of studies on resilience in the provision of health services, but where institutions were largely absent.

The literature has also emphasized other relevant aspects of resilience. One of them is the role of society, generally left out in studies that are specific to health systems, but essential when it comes to extreme weather events. In the case of pandemics, the population’s response is key to both dealing with and recovering from them, which would shape societal resilience ³. The positive response to vaccination against COVID-19 in Brazil makes it possible to associate the dimension of legitimacy, resulting from the Information System of the National Immunization Program (SIPNI – <http://pni.datasus.gov.br/>), with the population’s adherence, despite the contrary initiatives of the Federal Government. Also noteworthy is the role of solidarity networks in slums and poor communities in facing loss of work and income and, consequently, of staple food.

Another aspect is the participation of healthcare staff in the resilience of health systems. Bureau et al. ⁸, when analyzing the resilience of systems in different countries during the COVID-19 pandemic, found a low influence of staff. The authors stress the need to reconceptualize institutional requirements in the analysis of resilience to properly account for the role of healthcare staff, as they are an integral part of health governance.

A third aspect is intersectorality, which is relevant for dealing with crises and adverse events, especially pandemics. The need for integration between different health-related areas, such as social work, education, employment, migration and the environment, became evident during the pandemic in all countries, and in many resulted in significant government investment ⁹. This reinforces the role of the state in designing, implement-

ing and upholding resilient social policy and health systems. Contrary to the neoliberal view of reducing the state, restricting public funding and privatizing health care, dealing with adverse events depends more, not less, on the active participation of the state. Integrated, universal and public systems are validated not only by the recognized greater equality and the better health outcomes, but also by the development of societies' capacities to deal with uncertainties.

In the analysis of the Brazilian case, Massuda et al.¹⁰ argue that austerity policies were precisely the elements that weakened the response of Brazilian Unified National Health System (SUS) to the pandemic, which could have been more effective given the broad and comprehensive structure built over the years. The authors highlight the context resulting from the disastrous role of the government and the Brazilian Ministry of Health, but also the chronic problems of SUS already described in the literature as its weaknesses, such as underfunding, growing national technological dependence on inputs, insufficient and poorly distributed and trained staff, deficiencies and local gaps in information systems, care gaps, among others. In addition to the solution of such bottlenecks, institutional aspects are highlighted, such as the need for regional governance of the system to unify the regulation of specialized services in municipalities and states.

Of the many weaknesses, underfunding is possibly the most serious. If the Brazilian health system has a very solid framework of progressive policies that are comprehensive enough to uphold the right to health, based on an expanded concept of universality, instability is due precisely to the poor effectiveness of this framework, which restricts its ability for reaction, adaptation and transformation. Since its creation, SUS has resisted various austerity measures, such as the Fiscal Responsibility Law, Federal Revenue Unearmarking, and obstacles to the regulation of earmarked resources, but the severest blow comes from the federal spending cap (created in 2016), whose effects on health and equity are dramatic, as it does not consider future needs related to population growth and aging, changes in the epidemiological profile and health demands, and incorporation of technology, research and innovation. Under the new regime, there has already been a drop in health spending between 2017 and 2019. The COVID-19 pandemic put pressure on this new regime, requiring increased spending for health. However, if specific expenses related to the pandemic are excluded, there was a drop in resources allocated to SUS¹¹. Lack of funding is part of a process to favor the private sector, an evident recommodification of access to healthcare that combines subsidies, low regulation and, more recently, expansion of the private sector in the direct offer of SUS services.

The Brazilian case shows the relevance of political and institutional contexts in the analysis of the resilience of health systems. Unlike core countries, where austerity met with consolidated health systems, in Brazil the implementation of the health system occurred hand-in-hand with austerity policies. However, while this process restricted the expansion of the right to health, what we see currently are clear dismantling strategies. In most countries, the construction of universal and public systems coexists with this contradiction. Thus, their resilience must consider the capacity to belong to national projects that defend the right to health as an inalienable element of life in society. The greatest resilience of all is having health.

"It is not the strongest of the species that survives, nor the most intelligent, but the one that is most adaptable to change" (Charles Darwin).

Additional information

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