

# COVID-19 and hypertensive disease in Brazil: possibility of a perfect storm

## *COVID-19 e doença hipertensiva no Brasil: possibilidade de uma tempestade perfeita*

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## BACKGROUND

Amid the overwhelming amount of information about the pandemic, there has been no emphasis on the need to maintain effective and well-known interventions to control chronic diseases. There was a reduction of approximately 40% in hospital admissions due to acute myocardial infarction with ST-T segment elevation (AMI with STS) and stroke (stroke) in the emergency departments of the United States and Spain during the epidemic period<sup>1,2</sup>. It is estimated that there was a delay in the search for adequate medical care due to factors such as social distance or concerns about the acquisition of COVID-19 in the hospital environment, in addition to a deficit in the diagnosis of cardiovascular disease (CVD) due to the reduction in elective procedures and increased use of pharmacological reperfusion, resulting in lost opportunity for critical early care.

The experience of China, Italy and the United States shows that COVID-19 can lead to chaos in the health system, even in countries with good financial resources. In addition, infection and the measures taken to cope with it have the potential to promote or aggravate unhealthy behaviors that would also impact the development and/or aggravation of CVD — increased consumption of alcohol and tobacco, reduced physical activity and intake of fruits and vegetables. It is imperative to begin reorganizing the health system to meet demands not directly related to COVID-19. Among the short-term actions,

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one can highlight the reinforcement in the orientation that patients with chronic diseases should try to keep their clinical condition under control and that those with symptoms of AMI should seek medical attention as soon as possible, for example.

In several countries, telemedicine has been a widely used alternative for maintaining care provision. In the United States, there was an increase in the offer and regulation of these services, as well as their reimbursement. The American Academy of Family Physicians (AAFP) has published a guideline and maintains an updated website with guidance on telehealth<sup>3</sup>. In Brazil, there are local initiatives and advances, such as the recognition of virtual consultation during the pandemic of COVID-19, by the Federal Council of Medicine, and the publication of Ordinance No. 467/2020, of the Ministry of Health, which provides for telemedicine in exceptional and temporary character. Also, a partnership was announced between the Secretariat of Primary Health Care and the Albert Einstein Hospital to provide medical and nursing consultations in primary health care (PHC) as of May 2020, although the consultation alone is not effective: how is medication adherence promoted and how will it be accessed by patients who participate in teleconsultations?

Pharmacies and drugstores have been kept open as they are considered essential establishments. As a measure to maintain patients' access to medicines through the *Farmácia Popular do Brasil* program, Law No. 928/20 allows a representative with a notarized signature to collect the medicine in the patient's place. There are also programs in the PHC network of the Unified Health System (*Sistema Único de Saúde* – SUS) that promote access to medicines through home delivery. On the other hand, in the United States, there are reports of pharmacies that closed due to the pandemic and there are proposals to expand the delivery systems for medicines purchased by phone or internet (this type of sale today represents less than 10% of all retail sales in the country). In Brazil, it must be taken into account that the launch of the program to authenticate doctors' digital signature is recent and that remote sales are restricted to urban centers. In addition, even though medication is dispensed in SUS, the shortage of pharmaceutical assistance in Brazil is a well-known problem<sup>4,5</sup>, which can be aggravated in the event of a financial recession.

A 2013 review characterized the control of hypertension in Brazil as heterogeneous, with 57.6% being the highest rate described and 10.1% the lowest<sup>6</sup>. In the context of the pandemic, less stable patients would need more attention, but how to access them? The Family Health Strategy (FHS) has a fundamental role: special guidelines were issued by the Ministry of Health in order to guide Community Health Agents (CHA), mentioning that home visits must prioritize “at-risk patients (people aged 60 years old or older) or with chronic non-communicable diseases such as diabetes, hypertension, heart disease, chronic kidney disease, asthma, COPD, heart disease, immunosuppressed, among others)”<sup>7</sup>.

It is well known that social determinants significantly impact the prevalence of cardiovascular diseases and that social inequality tends to be aggravated during and after the COVID-19 pandemic<sup>8</sup>. Strengthening PHC and FHS actions can increase the control of hypertension and other chronic diseases, reducing both the risk for severe acute respiratory infections, such as

COVID-19, and the costs of caring for complications in the future. The SUS underfunding problem is chronic and, in the medium and long term, will worsen due to Constitutional Amendments No.86/2015 and No.95/2016<sup>9,10</sup>.

Considering the Brazilian context, a systematic review of cross-sectional and cohort studies estimated that the prevalence of hypertension in the 2000s was 28.7% (26.2–31.4% – JNC8 criterion)<sup>11</sup>. The costs on hospitalization for hypertension already represented US\$ 15.2 million with public funding in 2012, a figure that does not include the complications of CVDs.

The management of such sensitive issues in the context of an epidemic refers to the metaphor of the inflammatory storm triggered by COVID-19, in which homeostatic systems lose structural control in the fight against infection. This environment is even more complex to improve health indicators, as well as to reduce inequities and eliminate barriers to access health services. Therefore, a perfect storm is being announced, mainly due to the incomplete agenda of the Brazilian health system. To avoid the perfect storm during the pandemic, it is essential to increase adherence to antihypertensive treatment, as hypertension is a modifiable prognostic factor for being infected with COVID-19 and can be promoted in primary care with low cost measures. It is essential to recover the principles that guided the implementation of SUS, with the strengthening of the health care network centered on primary care. Issues related to care, from emergency care to telemedicine consultations and the promotion of access to drugs with the lowest possible risk for patients, should be on the agenda of managers, health professionals, and patients. These reflections subsidize elements for a debate on the complexity of the current circumstances in the health system, which should be guided from the perspective of strengthening the SUS and the right to health, with PHC, which are based on integral, resolute practices and that respond to the needs of the local community.

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