

## The COVID-19 pandemic: challenges in assessing the impact of complex and multidimensional problems on the health of populations

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The COVID-19 pandemic caught the Brazilian population in a situation of profound social, economic, and program vulnerability. High unemployment rates combined with the dismantlement of social policies, including acute-on-chronic underfinancing of the Brazilian Unified National Health System (SUS), created a prime situation for a health crisis of unprecedented proportions, fueled by misguided actions and deliberate inaction in confronting the pandemic in the country <sup>1</sup>. The fallacious theory of a “democratic disease”, flaunted at the beginning of the epidemic in Brazil, quickly fell apart. After all, every epidemic is at once a biological, social, and historical phenomenon, expressed unequally in the population, reflecting the inequities in access to healthcare and in the risk of infection, illness, and death <sup>2</sup>. In this context, the burden of COVID-19 morbidity and mortality has fallen mainly on poor Brazilians, black and traditional populations, the socially excluded, unveiling and deepening the country’s already enormous social health inequalities <sup>3,4</sup>.

As highlighted in the article by Horta et al. <sup>5</sup>, in this edition of CSP, pandemics have harmful effects beyond those visible in the COVID-19 morbidity and mortality statistics. Previous experiences show that pandemics have impacts on a wide range of control measures for other diseases <sup>6</sup>. The reorganization of health services and redirecting of financial and human resource to deal with the pandemic cause delays in diagnosis and treatment, difficulties in maintaining control programs, and discontinuity in surveillance and monitoring activities <sup>6,7</sup>. Disruption of tuberculosis operational indicators, reduction in vaccination coverage, and delays in cancer screening are examples that are already evident in Brazil <sup>8,9,10</sup>. Unfortunately, many effects may still not be visible, but they include the risk of reemergence of vaccine-preventable diseases such as measles and polio, an increase in the burden of neglected diseases such as tuberculosis and dengue, and rising cancer mortality. Another rarely remembered but highly relevant effect is the reduction in the capacity for collecting and analyzing epidemiological data for evaluation and planning <sup>7</sup>.

The article by Horta et al. <sup>5</sup> contributes to mapping this problem’s breadth and severity. Based on a population survey in 133 Brazilian cities at the start of the pandemic, the authors state that one-fourth of the interviewees reported not having gone for health care even when they felt sick and/or failed to appear for routine appointments or screening in the first months of the pandemic. The results are alarming, considering that the data were

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collected in a phase of the pandemic in which the reported number of cases and deaths in Brazil corresponded to fewer than 20% of the total accumulated as of March 2022. It is thus reasonable to assume that the problem was exacerbated, perhaps less in terms of its relative frequency, but possibly in relation to the time between the date of the need for care (or scheduling the medical appointment) and the actual consultation.

Another aspect that merits attention among the study's results are the principal reasons listed for not appearing at healthcare services: fear of SARS-CoV-2 infection (46%) and closing of health services (21%). Both reflect dramatic aspects of the Brazilian government's catastrophic response to the pandemic: lack of mobilization of the primary health-care (PHC) network in opposition to hospital care <sup>11</sup>. It is possible that part of the lack of a central focus on PHC in the pandemic's context was due to fear that an increase in demand on primary care units could lead to increased risk of infection both for users and health workers, given the high capacity for spread of SARS-CoV-2 (which is consistent with the interviewees' perception). This concern has some basis, considering the limited access to personal protective equipment at the start of the pandemic and the need for reorganization and structural adaptations and the flow of care in a context in which the health workforce was already overburdened. However, strong, comprehensive PHC with case-resolution capacity is more essential than ever for confronting the pandemic adequately <sup>11</sup>. Operational and structural difficulties to adjust PHC to the biosafety needs created by the pandemic would have to be addressed as a priority, according to the basic principles of handling public health emergencies <sup>12</sup>.

Finally, the article by Horta et al. <sup>5</sup> skillfully reveals the inequity in the pandemic's impacts on the population. The data presented by the authors show that it was precisely the poorest Brazilians, black and indigenous, residents of the North and Northeast regions, and with the most preexisting conditions that tended not to seek healthcare and/or failed to appear for routine appointments.

Inspired by the article by Horta et al. <sup>5</sup>, we issue a challenge and invitation for the collective health field, and in particular for epidemiology: to incorporate "syndemic" theories and concepts and intersectionality in their analyses to better understand the structural basis involved in the disproportionate impact of complex and multidimensional problems such as pandemics and other emergencies and disasters on the health of populations <sup>13,14</sup>.

## Additional information

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