

Science during the pandemic

*Marilia Sá Carvalho*¹
*Luciana Dias de Lima*²
*Cláudia Medina Coeli*³

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Scientific journals play a key role in the strategies and actions to control the COVID-19 pandemic. The journals allow disseminating developments on a broad range of science issues.

Given the current situation's gravity, even paid journals are allowing free access to their articles. The Oswaldo Cruz Foundation (Fiocruz) has created a thematic platform to support research and measures related to the new coronavirus¹. Organized with an open-access reference management software – Zotero –, as of March 22 the database contained some 1,600 papers, demonstrating the huge effort by the global scientific community.

All our editorial and publishing activities at CSP are being conducted remotely, and we intend to apply fast-track procedures to the review and publication of articles on COVID-19. But why maintain routine publication of other topics, apparently not as relevant at this stage of the crisis?

We are aware that although scientific studies are essential to back immediate decisions, Science has a significant impact on the future of societies, and that the production of scientific knowledge requires medium- and long-term investment by government and society. It is useless to demand urgency in vaccine development² if the conditions for such development have not been created in timely fashion. Besides, distrust towards vaccines' safety³, fueled by some government officials^{4,5}, creates constraints that have to be dealt with in controlling and mitigating the epidemic's harms.

We are currently facing a long list of problems. The hope for diminishing the epidemic's impact on Brazil is based on accumulated knowledge. Various scientific journals in Brazil have published studies on the impact of primary healthcare (PHC) on the population's health⁶, including scientists' inherent role of identifying the limits and conditions for improvement in the current context⁷. However, rather than improving the PHC proposal, there have been mass layoffs⁸. Scientists have also decried the underfinancing of all dimensions of the Brazilian Unified National Health System (SUS), including the impacts of a fiscal austerity policy that has cut essential budget funding from the social and health areas⁹.

The capacity of countries to respond depends on how their health systems are organized. Even in Italy, with a universal healthcare system (considered one of the best in Europe), hospitals have already reached the limit of their capacity to treat patients that require hospitalization and intensive care¹⁰. While Spain has adopted mechanisms to nationalize

¹ Programa de Computação Científica, Fundação Oswaldo Cruz, Rio de Janeiro, Brasil.

² Escola Nacional de Saúde Pública Sergio Arouca, Fundação Oswaldo Cruz, Rio de Janeiro, Brasil.

³ Instituto de Estudos em Saúde Coletiva, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brasil.



the private healthcare system ¹¹, Brazil is increasing the financing of private health plans ¹². The United Kingdom will maintain workers' salaries in order to avoid layoffs ¹³, while Brazilian companies have been authorized to cut the workday and wages ¹⁴.

The fight against the epidemic must deal with the realities of countries with major socioeconomic inequality and different levels of disease burden. The previous health situation is not going to disappear simply because a new pathogen is spreading. The high prevalence of hypertension (one of the exacerbating factors in COVID-19 ¹⁵), low socioeconomic status, and low schooling heavily influence the control of blood pressure levels and the outcome of the illness ¹⁶. Social distancing is hardly feasible in low-income communities. Thus, besides inequality in care, the spread of COVID-19 will also be unequal.

A vision capable of predicting the directions taken by the coronavirus involves scientific methodology that incorporates information generated by hundreds of studies ¹⁷. Air traffic data and data on movement within Brazil's states allows simulating the epidemic's spread and orienting resource allocation ¹⁸.

Science publishing plays this crucial role, and the peer review system is a basic guarantee of high-quality research. This raises the discussion on "magic solutions", such as a recent article (whose reference we decline to cite) with 26 patients and a study design riddled with gross errors, concluding that hydroxychloroquine was associated with decreased viral load in COVID-19. Leaders of various countries, with no guarantee of efficacy whatsoever, immediately began to ignore basic safety rules and encourage the production and use of hydroxychloroquine for COVID-19. Meanwhile, they portrayed scientific rigor as a barrier to treatment ¹⁹, even though the cure from such treatment is dubious and the adverse effects are severe.

The role of CSP is to publish honest, well-conducted scientific research, as illustrated by an article we published recently on the role of timely and effective health surveillance ²⁰. We intend to accelerate the review and publication of articles addressing various public health aspects to improve our understanding and handling of the current epidemic.

Scientists worldwide will certainly generate the knowledge that will allow us not only to deal with the COVID-19 pandemic, but also to back policies for adequate organization of patient care. We intend to contribute to the mitigation of the pandemic's harms, while looking to the future. After all, treating the infection's severity also involves treating hypertension ²¹.

Contributors

M. S. Carvalho, L. D. Lima, and C. M. Coeli contributed to the writing and approved the final version.

Additional informations

ORCID: Marilia Sá Carvalho (0000-0002-9566-0284); Luciana Dias de Lima (0000-0002-0640-8387); Cláudia Medina Coeli (0000-0003-1757-3940).

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