História, Ciências, Saúde-Manguinhos
ISSN: 0104-5970
ISSN: 1678-4758
Casa de Oswaldo Cruz, Fundação Oswaldo Cruz

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Covid-19 e a corrida pela vacina
História, Ciências, Saúde-Manguinhos, vol. 27, núm. 3, 2020, Julho-Setembro, pp. 715-717
Casa de Oswaldo Cruz, Fundação Oswaldo Cruz

DOI: https://doi.org/10.1590/S0104-59702020000400001

Disponível em: https://www.redalyc.org/articulo.oa?id=386164937001

EDITOR'S NOTE

Covid-19 and the race for a vaccine

Tragically, Brazil ranks second in the Americas in terms of the number of covid-19 cases. This tragedy is principally due to national policies that are irresponsible, chaotic and indifferent to suffering. Ironically, the high morbidity and mortality figures in Brazil and Latin America have allowed our scientists and authorities to actively take part in the competition for the first vaccine against the coronavirus. The Brazilian population has advantages for those wanting to test experimental vaccines: it is large, ethnically diverse, geographically spread out and – contrary to many European countries – most people accept immunization (Andrenoti, Londoño, 15 ago. 2020). Of the more than 150 vaccines under development worldwide, about six are in phase three, during which clinical trials must be carried out in different countries (phase three is prior to the final phase, after which – ideally – comes approval). Also ironically, Brazilian material and human resources, which the last few governments wanted to dismantle – such as infrastructure to produce and test vaccines, and a significant number of immunologists and public health specialists working for the Unified Health System (Sistema Único de Saúde, or SUS) who could take part in trials and recruit volunteers – are functioning during this race to develop a vaccine.

In late August, 2020, more than ten experimental vaccines were being tested on humans in Brazil (Lopes, 20 ago. 2020). While it is considered offensive to attribute a nationality to the coronavirus (such as calling it the "Chinese virus"), no one questions attributing nationalities to the vaccines (journalists discuss whether the "English," "Chinese," US" or "Russian" vaccines are the best). There are four best-known attempts in Brazil. The first began in late June 2020, when the Oswaldo Cruz Foundation (Fiocruz) bought the vaccine developed by the University of Oxford with AstraZeneca, a giant pharmaceutical company in the UK, as part of a technology transfer agreement in order to produce it locally (Mahase, 2020). Similar clinical trials have been carried out by this company in the UK, South Africa, United States and other Latin American countries. AstraZeneca negotiated with Argentina and Mexico – countries with notable human resources and biomedical infrastructure – to produce a vaccine for all of Latin America except Brazil (Mexico also contacted other companies – the French company Sanofi, the US company Janseen, and the Chinese companies CanSino and Walvax – to test their vaccines).

The second significant Brazilian experiment was carried out by the Butantan Institute, in São Paulo, together with Inovac Biotech, a private Chinese company. Thanks to this agreement involving six Brazilian states, clinical trials were begun, ensuring future transfer of technology to produce the vaccine. At the same time, another Chinese company, National

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Biotec Group (CNPBG), a division of the state-owned pharmaceutical company National Pharmaceutical Group, known as Sinopharm, is working in Argentina and Peru. The third Brazilian effort is being conducted by the government of the state of Paraná, which signed a memorandum of understanding with Moscow to access the "Sputnik V" vaccine promoted by Vladimir Putin. Some US specialists feel that this vaccine is controversial because the Russians have not provided sufficient proof of its effectiveness. Cuba, however, has no doubts about it and will use the Russian vaccine to develop its own vaccine, the "Soberana 01." And lastly, another project began in late August when the Brazilian Health Oversight Agency (Anvisa) authorized the US company Janssen, a division of Johnson & Johnson, to test its vaccine on seven thousand volunteers in the states of São Paulo, Rio Grande do Sul, Rio de Janeiro, Paraná, Minas Gerais, Bahia and Rio Grande do Norte.

There is a certain degree of disorder in this race, which is why there have been calls for coordination. And there is a fear that the rush in many of these ventures could be sacrificing two fundamental biomedical principles: safety and effectiveness. The Pan American Health Organization asked the governments to work together. In a recent meeting of the presidents and vice-presidents of Chile, Columbia, Guyana, Paraguay, Peru and Ecuador, which included the ministers of External Relations of Brazil and Bolivia and the under secretary of External Relations of Uruguay, these leaders promised to coordinate the purchase of vaccines. Although hundreds of millions of dollars have already been spent on the agreements described above, there is still uncertainty regarding this coordination, and everything points towards a marked difference between the prices of these vaccines in the future. It is estimated that the vaccine from AstraZeneca and Oxford will be sold "at cost" (perhaps three or four dollars), that the US vaccines will have a commercial cost of up to $37 for the two doses, and that China and Russia will enter into bilateral agreements, offer loans or donate their vaccines.

A good deal of hope was invested in these efforts. One or more vaccines are expected to be ready for the general population by the end of 2020 or early 2021. Little attention was paid to the risks of overvaluing a technology or creating what historians call a "magic bullet." When studying the history of prior epidemic outbreaks, technologies often appear to promise that they will solve the problem regardless of the social conditions in which people live (such as DDT against the mosquitoes that transmit malaria) (Cueto, 2014). In general, little attention is paid to the social and institutional factors involved in immunization or in the alliance between a well-structured public health team and residents (which allowed eradication of smallpox in 1980). Nor is the continuity of other vaccination and health care programs being prioritized (Guimarães, 2020). Having a vaccine would be a significant advance, but it should not replace policies regarding prevention and protection of the groups most vulnerable to the coronavirus and measures to ensure the continuity of all health programs. The exaggerated emphasis on a vaccine could cause us to forget the programs needed to reduce the social inequalities that the pandemic multiplied, or obscure the calls for urgent strengthening of the SUS.

This issue of the journal includes studies that demonstrate the importance of history for understanding the present. We are publishing an article in this issue on the history of social

medicine in Chile, the product of an investigation carried out by Eric Carter and Marcelo Sánchez. The text is accompanied by two letters that question, comment on or respond to the criticism in the article; one of them written by important US public health specialist Howard Waitzkin, who has conducted valuable investigations on this topic (Waitzkin et al., 2001). By publishing the text together with the letters, we want to take one more step in the direction of the ideal of open science, taking into account new SciELO (Scientific Electronic Library Online) publication criteria, and providing space for dialog between the authors, for the benefit of readers.

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