

## New Wave of Covid-19: Reinfection and Immunization

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### Abstract

This opinion is based on the experience in teleconsultancy of Covid-19, from the month of March until the present, in December of the year 2020. The world highlights the "new wave" of the pandemic caused by SARS-CoV-2 and, at the same time, there are reports of reinfection. With immunization processes being investigated and set in motion, many doubts and questions occur in this period of coexistence; some of those raised here.

**Keywords:** Coronavirus Infection; Mortality; Immunization Schedule

### Opinion

We live an atypical, complex and challenging year; a year of coexistence with the coronavirus disease pandemic (COVID-19) that brings different nuances in each period. We started from a lack of knowledge about the problem, to identify its etiological agent, its pathophysiology, approaches that led to better results.

However, the different cycles of contagion of the disease, the records of reinfection, the lack of scientific evidence of a specific treatment for the various symptoms and individualized responses to the approaches, as well as immunization strategies that lead to an adequate and broad coverage of the population, seem to signal that there is still much to understand about this disease so complex and yet unpredictable. This, even considering advanced mathematical models [1,2].

New wave or increase of reinfection cases?

The coronavirus outbreak in another phase, which is interpreted as a "second wave". It is clear that protection measures in different countries are not effective enough; but in practice, it was impossible to coordinate measures to curb the pandemic of COVID-19 in conditions of high uncertainty. The decision-making system can be modernized to take into account the results of COVID-19 pandemic, taking into account the overall social, medical and administrative resources that can be used to minimize economic and population losses [2].

A dilemma persists as to whether there are new or new waves of contagion, or whether false positive tests have occurred. In addition, if an initially underestimated process of reinfection may be much more extensive. And, in this context, how can immunity or even immunization processes be established with respect to their continuity?

In the majority of individuals infected with SARS-CoV-2, neutralizing immunoglobulin (IgM and IgG) levels rise within days to weeks of symptom onset. These antibodies have reported to produce immunity to reinfection in primates re-challenged with SARS-CoV-2 at 28 days after the initial infection. However, unlike many other respiratory viruses resulting in immunoglobulin concentrations that last for several months, neutralizing immunoglobulins against SARS-CoV-2 persist for about 40 days. On the other hand, positive RNA tests, despite seropositivity for IgG after primary infection, have been reported [3,4].

The genetic characteristics of OVID-19 and its mutations and the obtaining of the sequence of genomes with its variations and repercussions on contagion and the potential harmful to the human organism represent challenges to be overcome, as well as the understanding of the capacity to respond to contagion and the therapeutic resources that are presented as viable.

In relation to the symptoms presented for a treatment direction and based on the experience in teleconsulting at the Public University Nucleus of the Northeast of Brazil; these are very varied. The screening started in a relatively simple list, at the present time covers growing possibilities, in different age groups, affecting people with or without "potential risk" and also who are in physical distance.

Each confrontation, a knowledge acquired. The symptoms are not the same, evolution is not the same, therapies do not work in the same way [5]. Many victories and losses; probably great the clashes to come, but vaccines being tested and starting to be applied [6].

We spent a few months where everything seemed to be moving towards completion. Reduction of hospitalizations, of deaths and regarding teleconsulting, also teleconsulting, with orientation and referrals. But there was no definitive end. And now it seems that there is a worsening. There are many contacts of individuals seeking further clarification, because they find themselves again with symptoms or have tested "positive" again, without understanding the reason.

There is a need to resume activities, safely; a condition that implies many factors. On the other hand, even with technological resources, physical distance brings impacts to mental health, with greater or lesser repercussions, in certain age groups, in certain individuals; contributing to even lower immunity. The damages

of SARS-CoV-2 to human beings are still far from being measured; they need to be accompanied, monitored.

## Conclusion

In this context and with the proximity of a "mass immunization", there is the uncertainty of how much we can have the guarantee and control of this immunity, at a global level. But, living one day at a time and learning from what this experience can bring, to seek a present in balance, with better prospects for the future.

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