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EDITORIAL

The path of humanity in the pandemic of COVID-19: the choice of the realistic, optimist or pessimist scenario

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Coronavirus Disease 2019 (COVID-19), characterized as a pandemic, has been causing a global recession in the economic and health systems[1-3]. Brazil faces the biggest health and hospital crisis in its history. On the night of 26/03/2021, 3,158 lives were lost in just twenty-four hours. The gloomy record reflects the country's lack of control of the pandemic, with almost 300,000 fatalities from Covid-19. Nineteen states and the Federal District are high in lethality and mortality indicators.

The moving average of deaths reached 2,349, with 12,136,615 confirmed cases of Brazilians who have had or have the coronavirus confirmed cases. Brazil currently accounts for about 35% of deaths from COVID-19 worldwide.

At the Covid-19 Observatory, of the Oswaldo Cruz Foundation, in Rio de Janeiro, Brazil, the researchers identified and detailed the severity of the pandemic situation and suggested/requested more rigorous non-pharmacological measures throughout Brazil and for 14 consecutive days, as unique pandemic curve decline strategy in Brazil.

And as a new concern, over a year of persistent circulation of SARS-CoV-2 in our environment, the genetic change of the virus is observed. In genomic epidemiology findings, the SARS-CoV-2 lineage was disseminated (The technical note also notes the detection of two replacement events for the main circulating lineages in Amazonas: B.1.195 to B.1.1.28 and then to P.1.).

The FIOCRUZ4 researchers point out that the first phase / first wave was of exponential growth and was mainly driven by the spread of the B.1.195 strain, which was gradually replaced by the B.1.1.28 strain. The second wave coincides with the emergence of the variant of concern (VOC) P.1, which evolved from a group of species with a unique common ancestor (with a technical name) B.1.1.28 local in late November and quickly replaced the lineage in less than two months[4].

Successive lineage replacements in Amazonas were driven by a complex combination of varying levels of social distance measures and the emergence of a more transmissible VOC P.1 virus[4]. These data provide unique insights into the mechanisms behind the epidemic waves of COVID-19 and the risk of spreading SARS-CoV-2 VOC P.1 in Brazil and potentially worldwide[4].

Thus, we are left with the immediate and unrestricted implementation of social distance and the use of easy masking as non-pharmacological measures to combat COVID-19. The lack of efficient social distance and other mitigation measures probably accelerated the early transmission of VOC P.1 At the same time,the high transmissibility of this VOC further fueled the rapid increase in SARS-CoV-2 cases and hospitalizations observed in Manaus after its emergence.

The weak adoption of non-pharmaceutical interventions, as occurred in Amazonas and other Brazilian states, represents a significant risk to the continued emergence and dissemination of new variants. The implementation of non-pharmacological measures is urgent. Valenti *et al.*,[5] demonstrated that social distance is an effective measure to control the extensive dissemination of COVID-19.

On the other hand, there are epidemiological projections based on mathematical models, which make it possible to infer a future scenario of the pandemic's consequences. The group by Valenti *et al.*,[5] provided the classification of the pandemic scenario of COVID-19 in three ways: realistic, optimistic, and pessimistic.

The realistic model estimates the potential for deaths that will occur at a given moment in the pandemic, based on the assumptions of efforts by society and governments to maintain social distance and reduce economic activities. The pessimistic model, on the other hand, considers the full opening of the economy and the potential immunity of the community's herd, with twice the deaths from COVID-19 in the same period. Finally, the optimistic model allows the association of non-pharmacological measures associated with vaccination (already present in our country, although quiescent) and allows to project the reduction of deaths due to COVID-19.

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Furthermore, robust evidence has recently been obtained in the literature[6-10] that reduced community mobility has decreased the estimated total number of COVID-19-related deaths in Brazil and worldwide. These measures associated with vaccination appear to be the only path for humanity in the current scenario.

As a set of these scientific evidences[1-10], the United States Center for Disease Prevention and Control (CDC) 11 promoted the recommendation for the use of easy masking as a non-pharmacological measure to combat the COVID-19 pandemic. It involves the use of surgical masks with triple protection and cloth (made of cotton). Thus, it is highlighted that the use of facial masking is a non-pharmacological procedure that will improve the performance of this facial accessory and with the potential to reduce the chance of transmission and exposure to SARS-CoV-2.

Figure 1: Tested masks, including A, knotless medical procedure mask; B, double mask (tissue mask covering the medical procedure mask); and C, knotted / folded medical procedure mask. Figure extracted from the original article of the Center for Disease Prevention and Control in the United States[11].

The use of the masking procedure as a non-pharmacological measure of universal use and recommended delaying the spread of COVID-19, cloth masks, and medical procedure masks reduce infected users' exposure (source control) and reduce the exposure of uninfected users (user exposure).

It is worth mentioning that researchers Ueki, Furusawa, Iwatsuki-Horimoto *et al.,*[10] carried out experiments with dolls similar to the human face and, after testing different types of masks, concluded that medical masks (surgical masks and even N95 masks) were not able to block the transmission of virus droplets/aerosols completely, even when completely sealed. In 95% of cases, they were effective as a protective barrier to the virus-like corpuscle.

Thus, based on scientific evidence[6-10], the Center for Disease Control and Prevention in the United States promoted the recommendation of adjusting medical procedure masks with the overlay of a cloth mask over a medical procedure mask and with the need to tie the ear loops of a procedure mask. They also highlight[11] that the adjustment between the masks is fundamental to obtain the best results of non-contact and exposure to SARS-COv2 and improve the masking procedure's effectiveness with the use of a double mask. However, it is necessary to guarantee the face's adjustment to prevent air leakage around the edges of the masks.

The guidelines of the CDC[11] and the World Health Organization (WHO)12 recommend the use of facial masks to prevent the spread of the disease by a coronavirus (CoV) in 2019 (COVID-19), with guidance that there is an efficient protector of such masks against the airborne transmission of infectious droplets/aerosols from severe acute respiratory syndrome (SARS-CoV-2). The cotton masks, surgical masks, and N95 masks have a protective effect concerning the transmission of infectious droplets/aerosols from SARS-CoV-2. The protective efficiency was greater when the masks were used by a virus spreader.

As a consequence of the persistence of the COVID-19 pandemic in Brazil, the genetic mutation of the SARS-CoV-2 virus is observed, especially for its P.1 variant. It has shown itself to be more lethal, and because it found a population already tired of the virus and devoid of minimal measures of education and health, it found means conducive to its spread. Thus, non-pharmacological measures for the use of double facial masking appear to be an adequate and urgent measure to control the viral spread of SARS-CoV-2.

In this understanding, it is important to follow new recommendations regarding the use of facial masks and other non-pharmacological procedures. According to the current scientific evidence and recommendations from the CDC[11], double-maskingis 95% effective. It is recommended that other non-pharmacological measures continue to be implemented, but they are to prevent viral spread by the vector and contagion by the subject, such as:

- Wash your hands frequently with soap and water for at least 20 seconds;
- Wash your hands, especially before eating and after coughing or sneezing;
- Avoid touching the eyes, nose, and mouth;
- Use disposable tissue for nasal hygiene;
- Cover your nose and mouth when sneezing or coughing with disposable tissue or the inside of your elbow;
- Do not share objects for personal use, such as cutlery, plates, glasses, or bottles;
- Keep the rooms well ventilated;
- Clean and disinfect frequently touched objects and surfaces, such as cell phones and computer keyboards;
- Avoid contact with people who are not close to you;

- Wear a surgical mask (triple protection) and cloth (cotton) as a collective protection measure, as well as avoiding crowding places.

Thus, the use of facial masking and the arrival of the vaccine in different corners of the world allow us to infer that we are going to live and immediately, an optimistic scenario in the course of the pandemic of COVID-19. It is current and urgent the importance of spreading the information to the population in order to provide educational actions that can contribute to the dissemination of these guidelines, providing the population with empowerment and who are responsible for their health.

Educational actions promote the health of the population and are important instruments in care and, at this moment when everyone must come together to prevent and control the pandemic, the triad management, health workers, and the community must each time strengthen the bonds so that these actions be effective and promote behavior change and are not just information transfer actions.

It is considered, therefore, that the editorial line of JHGD is of an optimistic model and that each life matters, and no one will be left behind. The optimistic model is the one advocated by everyone who works in the field of Public Health in its various scenarios.

In this way, the JHGD, as it does throughout its 31 years of uninterrupted publication, contributes to this debate, and in this issue 30.1 brings good and fruitful discussions about Public Health and the pandemic of COVID-19[14-28], with emphasis on the use of fear scale for COVD-19[13].

The place of residence, socioeconomic status, discrimination, and inequalities within and between countries contribute to early mortality and significant morbidities, particularly in environments with limited resources, with many children, adolescents, and their families at risk. In the previous period of the COVID-19 pandemic, many children and adolescents were neglected[29].

During the COVID-19 pandemic, it remains for us to make efforts to avoid losing opportunities to fill the inequality gap. Immediate decision-making is essential to ensure that no one is left behind.

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