

# The COVID-19 Pandemic: Can it Play a Role in Vaccine Acceptance or Contribute to Vaccine Hesitancy?

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The importance of immunisation in public health has been on the spotlight in the last few months, with the COVID-19 pandemic being the driven force. The message transmitted by the World Health Organization and other health authorities around the world is clear and, in some way, consistent: the discovery of an effective vaccine is one of the key steps for life to be back to normal. This message is of high relevance for the populations that suffered a major impact in all levels of their day to day life. For the medical community it could mean a mild relief of stretched national health service and the ability to return to the routine medical activities without the real threat of a new wave or an uncontrolled increasing number of the cases. Going back to lock down measures and reducing all health care activities to urgent work would lead this humanitarian and health crisis to even more unprecedented level, marking several generations to come.

The race for an effective vaccine is on, involving several academic institutions, the pharmaceutical industry and public institutions around the world, and while some progresses are being made, with phases 2 and 3 trials already recruiting participants and more than 100 vaccines in the pipeline,<sup>1</sup> no final timeline has been established to the release of results on vaccine safety and efficacy, allowing licensing and distribution. The success and length of these trials does not depend only on the experimental product (the vaccine itself), but also on variables that the researchers are not able to control, like recruitment capacity and rates of disease in the country / area of the study, crucial to determine vaccine efficacy. Also, we cannot forget the constraints of manufacturing a product for the masses to be available quickly. As any other aspects of this pandemic, the vaccine development is unprecedented. Although no vaccine is yet been proven to be working effectively, manufacturers are organising facilities to be ready to mass produce.

We could consider that it is clear that with all the constraints in daily life and with a total of 8 457 305 cases and 453 882 deaths until 19 June 2020,<sup>2</sup> that everyone waits with great expectation and enthusiasm the discovery of a new

vaccine and the problem would be who would be eligible to receive it, how to organise risk groups and how to manage the expectation of the population, when it is likely that the vaccine will not be readily available for everyone. But the reality is that vaccine hesitancy and vaccine refusal groups are growing in several countries<sup>3</sup> and with the COVID-19 vaccine, that reality might not be different.

An online survey in France during the lockdown period, showed that 26% of the responders would refuse the new COVID-19 vaccine.<sup>4</sup> Although we can argue about the value of the survey and the meaning of the demographic characteristics of the refusers, this percentage cannot be ignored and should lead to a wider evaluation of this phenomenon.

All type of arguments can be used by vaccine refusal and hesitancy groups but concerns about safety and toxicity are among the most common. It is acknowledged that all records of time have been broken with the COVID-19 vaccine,<sup>5</sup> with safety concerns being even more exacerbated by the general public and medical community.<sup>6</sup> Furthermore, it is acknowledged that this is a new disease and a lot of the uncertainty about this pathogen is being transmitted to the general public.

In a publication from Harrison EA et al, two potential consequences could come from the new COVID-19 vaccine.<sup>7</sup> First scenario is that the vaccine is a massive success leading to a reduction in hesitancy to a COVID-19 vaccine, but not resolving the problem of vaccine hesitancy to other routine immunisations in a short term. Second, in a scenario where the vaccine fails to protect in a wider scale or is associated with increased reactogenicity or any safety concern, there is a real risk of causing a negative impact in the well established national immunisation program acceptance and as a result reduce vaccine coverage.<sup>7</sup> Although these two possibilities seem pessimistic, the authors share the vision that in the case of a successful vaccine, if the health community uses that victory and invests in efficient information campaigns and cooperates with

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other entities, the impact on vaccine confidence can be positive at medium term.<sup>7</sup>

How can we position Portugal in this reality? In 2018 a report from the European Centre for Disease Prevention and Control about the state of vaccine confidence in the European Union (EU)<sup>8</sup> confirmed that Portugal had the highest percentage of individuals in comparison to other EU members that agreed that vaccines are safe (95.1%) and effective (96.6%). Although the high levels of reported vaccine confidence, we are not immune to future increases in the levels of vaccine refusal among the Portuguese population.

In this edition of Portuguese Journal of Pediatrics a report aimed to address the reasons behind vaccination refusal among caregivers in a survey from 2018 in the Baixo Vouga region.<sup>9</sup> The percentage of children from that region with a recorded vaccine refusal was minimal (0.24%), but the factors associated with vaccine refusal should be taken in consideration. In this study the variables associated with vaccine refusal were age (more likely in older parents), nationality (more likely in non-Portuguese citizens) and religion (more likely in families with no religious affiliation). The identified factors are likely to become more frequent with the changes of the Portuguese society, so consistent monitoring of vaccine refusal levels should be considered. Even if the pandemic could have temporarily negatively impacted vaccine coverage and number of individuals seeking immunisation clinics (official data yet to be released), it is likely this was due potentially to a reduction in clinics availability, fear of going to medical facilities during the pandemic or lack of knowledge that immunisation procedures were a priority.

The health authorities (Direção Geral da Saúde) released a communication to health professionals on the 25th of March 2020 considering immunisation from birth up to 12 months of age to be a priority, as well as the bacille Calmette-Guerin (BCG) vaccine for tuberculosis risk

groups, and immunisations for people with underlying chronic conditions and risk groups. This was also advertised to the public through social media and press conference statements.

No predictions can be made about the impact in the national immunisation program after implementing this specific new vaccine, but if the work done so far by the medical community and official public health entities that contributed for high vaccine confidence continues and rather than assumptions we understand the official impact that the pandemic had in vaccine coverage in Portugal and the reasons behind that, we would be in a good position to continue with high vaccine confidence levels. Furthermore, as already concluded by other authors,<sup>6</sup> it is fundamental that the health authorities prepare a well organised educational vaccination campaign. For its success two intervenients should not be forgotten: the social media platforms to provide correct information and fight fake news, and, in my opinion even more relevant, the health professionals that deal directly with the population and play a crucial role on providing evidence based information and building relationships based on trust with their patients and community.

**Keywords:** Coronavirus Infections/prevention & control; COVID-19; Health Knowledge, Attitudes, Practice; Portugal; Public Opinion; Vaccination Refusal; Vaccination/trends

#### Conflicts of Interest

Marta Valente Pinto is a member of the Portuguese National Immunisation Technical Advisory Group (Comissão Técnica de Vacinação da Direção Geral da Saúde). The opinions expressed in the publication are those of the author and not necessarily those of the Immunization Technical Advisory Group.

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#### References

- Mullard A. Covid-19 vaccine development pipeline gears up. *Lancet* 2020;395: 1751-2. doi: 10.1016/S0140-6736(20)31252-6.
- European Centre for Disease Prevention and Control. COVID-19 situation update worldwide [accessed 19 June 2020]. Available at: <https://www.ecdc.europa.eu/en/geographical-distribution-2019-ncov-cases>
- The Lancet Child Adolescent Health. Vaccine hesitancy: A generation at risk. *Lancet Child Adolesc Health* 2019;3:281. doi: 10.1016/S2352-4642(19)30092-6.
- COCONEL Group. A future vaccination campaign against COVID-19 at risk of vaccine hesitancy and politicisation. *Lancet Inf Dis* 2020 (in press). doi: 10.1016/S1473-3099(20)30426-6.
- Kim YC, Dema B, Reyes-Sandoval A. Covid-19 vaccines: Breaking record times to first-in-human trials. *NPJ Vaccines* 2020;5:34 doi: 10.1038/s41541-020-0188-3.
- DeRoo SS, Pudalov NJ, Fu LY. Planning for a COVID-19 vaccination program. *JAMA* (in press). doi: doi:10.1001/jama.2020.8711.
- Harrison EA, Wu JW. Vaccine confidence in the time of Covid-19. *Eur J Epidemiol* 2020;35:325-30. doi: 10.1007/s10654-020-00634-3.
- Larson H, Figueiredo A, Karafillakis H, Rawal M. The state of vaccine confidence in the EU 2018. Luxembourg: Publications Office of the European Union; 2018.
- Silva E, Samorinha C, Silva S. Factors and reasons associated with childhood vaccination refusal. *Port J Pediatr* 2020;51. doi: 10.25754/pjp.2020.18836.