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LETTER TO THE EDITOR

COVID-19 vaccine booster in healthcare workers - reasons for refusing



World Health Organization declared COVID-19, a disease caused by SARS-CoV-2, a pandemic on March 11, 2020.¹ For this reason, in order to combat the pandemic, vaccines against COVID-19 were developed and administered at an unprecedented speed.²

Although a third of the population of the European Union was still not vaccinated at the beginning of October 2021, the need to administer booster doses of vaccines against COVID-19 was already under public discussion.²

In Portugal, the booster dose started in November 2021; the first phase included health professionals, the population over 80 years old and the population between 50 and 79 years old with an increased risk pathology.³

There is currently some preliminary evidence about the increased effectiveness of the booster dose, concerning protection against severe COVID-19 and the decrease in the risk of transmissibility.⁴ However, the social uncertainty regarding the efficacy and safety of the vaccine, may be associated with a reduction in the 'population's motivation to take the booster dose.

In the first stage of vaccination of the booster dose against COVID-19, a study was conducted at IPO Porto, where healthcare workers (HCW) who refused the booster dose were identified. Then, an inquiry was carried out by telephone to record the reasons for the refusal.

A database was created to keep records of all HCW

The Institution's Ethics Committee approved the study and informed consent was obtained from all participants.

This is a retrospective observational and the data was collected from HCW from November 25 to December 3, 2021.

In this first stage of vaccination, 1376 booster doses of the BNT162b2 vaccine were administered, which 57 HCW refused. Professionals who had SARS-CoV-2 infection or complete vaccination schedule for less than five months were excluded. In Table 1, the reasons for refusal are identified.

Of the 57 HCW included in the study, about 93% were female and 7% male. Regarding the professional category, it was mostly nurses and operational assistants who refused the vaccine administration (54.4% and 28.1%, respectively); however, these are also the most prevalent professional categories

Table 1 – Reasons for refusing the booster dose of the COVID-19 vaccine.

	n (%)
Acute disease	17 (29,8)
Hesitation	15 (26,3)
- Adverse effects in the previous vaccination scheme	10 (31,3)
- Considering the administration of the booster dose premature	5 (15,6)
- Doubts about the increased effectiveness of the booster dose	4 (12,5)
- Fear of short or long term applications to health	4 (12,5)
- Not considering being in a risk group	4 (12,5)
- Doubts about the safety of a new administration	3 (9,4)
- Adverse effects of booster dose on co-workers, friends or family	2 (6,3)
Temporary incapacity due to chronic disease	10 (17,5)
Pregnancy	6 (10,5)
Risk pregnancy	3 (5,2)
Absence due to vacation	2 (3,5)
Recent rubella vaccination	1 (1,8)
Autoimmune disease, therefore under immunosuppressants	1 (1,8)
Recent abortion	1 (1,8)
Breastfeeding period	1 (1,8)

in the institution. 15 HCW reported more than one reason for hesitation. The 31 nurses who refused correspond to 3.3% of all nurses called to get the booster dose. Of the 318 operational assistants called, 16 refused, corresponding to 5%.

Thus, there were a small number of HCW who refused the booster dose. Of the total of 1468 professionals called, 57 refused, corresponding to about 3.9%.

Public trust is a fundamental element of vaccination interventions and policies that achieve high coverage and the most effective way to increase COVID-19 vaccine uptake is to make vaccination straightforward, so that it acts on existing intentions to vaccinate.^{5,6}

Pfizer has reported that a third dose of its vaccine provided levels of neutralizing antibodies against omicron that were similar to those seen after two doses of the vaccine against the original virus (wildtype).⁷

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These results can be explained by the fact that in Portugal, a campaign is being carried out in the media to inform the population about the efficacy and safety of the vaccine. The significant investment in the construction and adaptation of spaces for vaccination centres in all regions of the country is notable, thus contributing to excellent results in the vaccination coverage of the Portuguese population. In addition, the Occupational Medicine service clarified the HCW and monitored the vaccination process in the institution, as had already happened in the previous vaccination process (with 92% of healthcare workers being vaccinated in the institution), ensuring information and safety.

According to data from the general health department in Portugal, it is known that by 7 January 2022, more than 3.2 million people have had the booster dose against COVID-19. There are still insufficient data to assess the prevalence of refusal of this dose in the general population.

This study shows recent data on the booster dose, allowing us to conclude that we are all on the right track to fight the pandemic. However, the sample is small and, therefore, further studies will be needed to obtain more information about the population's behavior regarding booster dose.

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R. Cunha^{a,*}, C. Ochoa-Leite^b, L. Pires^b, M. Morais^b,
R. Costa^b, L. Rocha^b

^a Núcleo de Saúde Ocupacional, Serviço de Saúde da Região Autónoma da Madeira, EPERAM

^b Gabinete de Medicina do Trabalho, Instituto Português de Oncologia do Porto Francisco Gentil, EPE

* Corresponding author.

E-mail address: rui.al.cunha@gmail.com (R. Cunha).

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