

COVID-19 Vaccination in the Portuguese Medical Community: An Unprecedented Campaign Coordinated by the Portuguese Medical Association

Vacinação COVID-19 na Comunidade Médica Portuguesa: Uma Campanha sem Precedentes Coordenada pela Ordem dos Médicos

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INTRODUCTION

The COVID-19 pandemic is an ongoing global public health emergency caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).¹ The World Health Organization (WHO) declared the outbreak a pandemic on the 11th March 2020, after three months of viral spreading from China to all continents.²

The pandemic management was a worldwide effort with the involvement of governments, academia, industry, and citizens. Infrastructural, medical, pharmaceutical, and public health measures were adopted worldwide to control viral spreading. In the context of medical and pharmaceutical advances, the development of SARS-CoV-2 vaccines has been a priority since the early days of the outbreak. As such, several pharmaceutical companies worked intensively on new vaccines aiming to provide effective and safe products as soon as possible. The development of effective vaccines proved to be a relevant turning point for managing this unprecedented threat by reducing COVID-19-related morbidity and mortality, protecting healthcare systems, and resuming social-economic activities.³

SARS-CoV-2 pandemic and the global vaccination campaign

As with other widespread diseases, COVID-19 confirmed the existing deep healthcare inequalities in both developed and developing countries. Even though the management of vaccine distribution around the world has been debated based on ethical and global health concerns, COVID-19 vaccines were first distributed and commercialized in Western Europe and in the United States of America.⁴

After several months of intense research and development efforts, COVID-19 vaccination campaigns began to be structured by the end of 2020 all around the globe. The first SARS-CoV-2 vaccine was administered in the United Kingdom on the 8th December 2020, nine months after WHO

declared the novel coronavirus outbreak as a global pandemic.

In general, the campaigns were designed and implemented by governments worldwide to guarantee preferential immunization of the populations with higher morbidity and mortality risks – including the elderly and patients with chronic and autoimmune diseases – along with healthcare providers, to keep health and social care systems operational, in terms of human resources.³

As of December 2022, a total of 13 073 712 554 vaccine doses have been administered worldwide, and as of June 2022, 68 WHO Member States had vaccinated more than 80% of their healthcare workers.^{3,5}

The Portuguese vaccination campaign

In Portugal, the vaccination schedule was presented by the Vaccination Coordinating Team and the Portuguese government on the 3rd December 2020, with the identification of priority groups and an estimation of 300 000 administrations per week.⁶ The process began on the 27th December 2020, with the symbolic administration of the first COVID-19 vaccine to a physician – the Head of the Infectious Diseases Department of a major hospital of the Portuguese National Health Service (in Portuguese, “Serviço Nacional de Saúde”). This symbolic act intended to send to the Portuguese population a message of trust in the effectiveness and safety of vaccines and reinforced the commitment of healthcare professionals with the most extensive vaccination campaign in history.

As of January 2023, more than 27 million vaccine doses have been administered, and the vaccination plan was on the phase of: i) seasonal booster dose administration for healthcare providers and people over 50 years of age; ii) booster dose administration for those between 18 and 49 years of age; and iii) primary vaccination of all those above 12 years of age.

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Vaccination of Portuguese physicians: the role of the Portuguese Medical Association

The priority groups, defined at the launch of the campaign, included all the physicians in accordance with international and national guidance.^{6,7} However, physicians without working contracts with the public healthcare system and those who had already retired, but were still professionally active, were not contemplated.

Since the presentation of the vaccination schedule, the Portuguese Medical Association (in Portuguese, "Ordem dos Médicos") assumed the intention to cooperate with the Portuguese government in all aspects related to the management of the pandemic by medical professionals and to the vaccination of the medical community. The exclusion of retired and private practice professionals was a concern for the association that manifested its positioning by means of public statements through its website and communication platforms. On the 2nd February 2021, the Portuguese Medical Association expressed its availability to coordinate the vaccination of the medical professionals that remained unvaccinated and launched a petition to be signed by all medical doctors in solidarity with all those who were not in-

cluded in the priority groups. At the same time, the association released a questionnaire to be filled out by all medical doctors, with the objective of assessing the extent of the unvaccinated group. Along with these initiatives, the Portuguese Medical Association kept permanent communication with the Portuguese government and with the Portuguese COVID-19 Task Force to firmly state its commitment to the vaccination campaign. By the end of February 2021, the coordination of the Task Force was restructured, and Vice-Admiral Henrique Gouveia e Melo assumed the executive management of the national vaccination campaign. This change became the turning point of the Portuguese vaccination process, including that of the medical community.

By the 4th March 2021, the Portuguese Medical Association announced that the government and the Task Force had transferred the operationalization of the vaccination of all medical professionals that remained unvaccinated to the association.

In this context, the Portuguese Medical Association assembled and managed a nationwide vaccination campaign between the 27th February and the 15th July 2021, directed to the medical community that remained unvaccinated until

Table 1 – Distribution of vaccine administration per region, date and trademark

Local/date	AstraZeneca	Moderna	Pfizer	Total
Algarve	208	31	168	407
March 2021	110		168	278
May 2021		17		17
June 2021	98	14		112
Coimbra	428		783	1211
March 2021	242		342	584
April 2021			339	339
May 2021	6		32	38
June 2021	180		70	250
Lisboa	839		2711	3550
March 2021	778		1422	2200
April 2021			893	893
May 2021	36		156	192
June 2021	2		240	242
July 2021	23			23
Porto	1176		1486	2662
February 2021			630	630
March 2021	587		630	1217
April 2021			17	17
May 2021	541		125	666
June 2021	25		83	108
July 2021	23		1	24
Total	2651	31	5148	7830

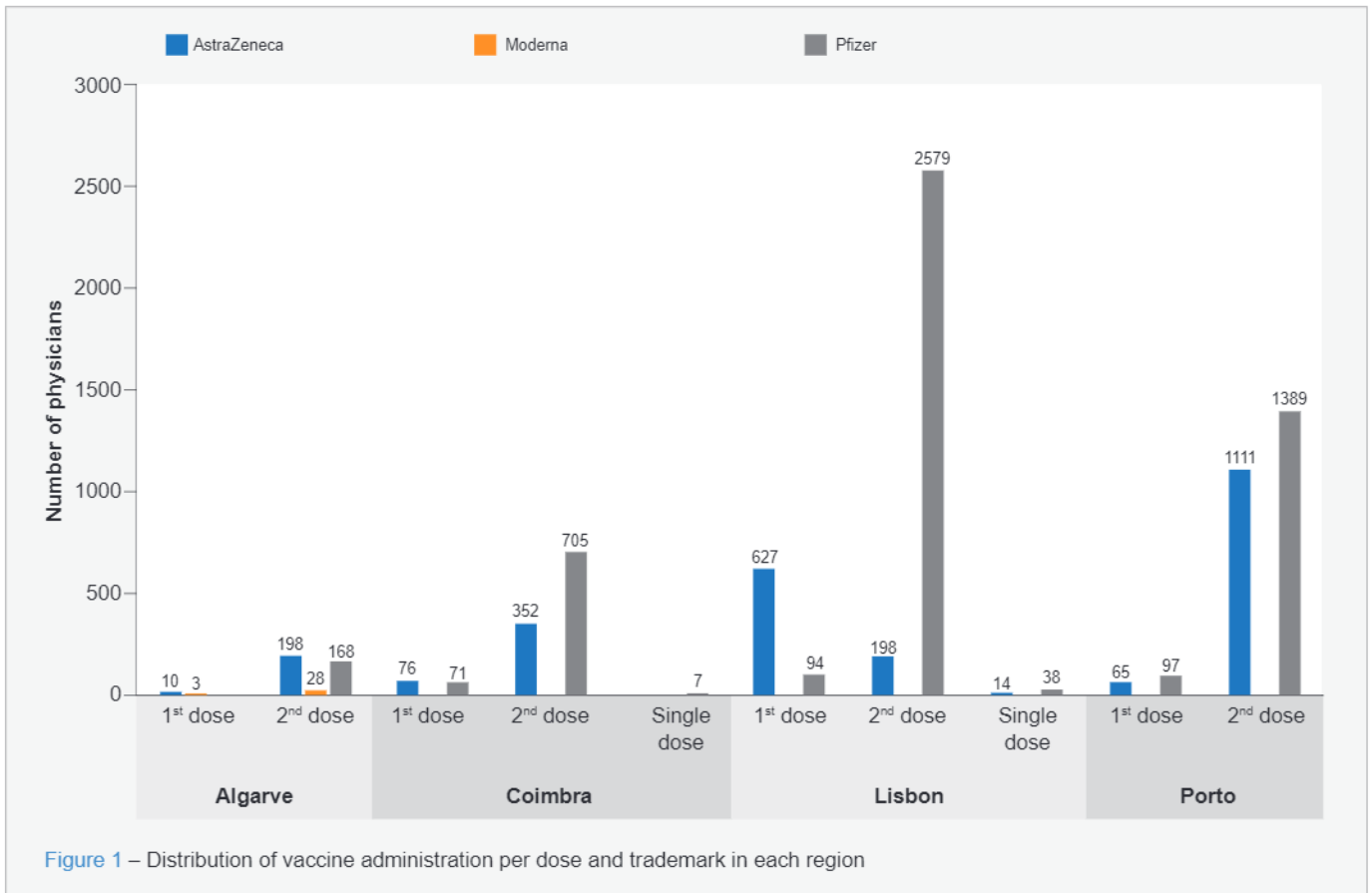


Figure 1 – Distribution of vaccine administration per dose and trademark in each region

that date. All the association's human resources were allocated to this endeavor, which also benefited from cooperation with the national armed forces (in Portuguese, "Forças Armadas Portuguesas"). Regarding logistics, the medical community was vaccinated at both military and civilian hospital facilities in Lisbon, Porto, Coimbra, and Faro.

Overall, 6171 physicians were notified by the Portuguese Medical Association to be present at a specific vaccination spot on a specific date. Of all the notified physicians, 4466 were effectively vaccinated. This difference was due to either ongoing SARS-CoV-2 infection⁷ or previous vaccination of the physician in the scope of another campaign.

The physicians were immunized with vaccines produced with three different technologies. From the 7830 administered doses (Table 1, Fig. 1), 65.7% were BNT162b2 (BioNTech/Pfizer), 33.9% were ChAdOx1-S (AstraZeneca/University of Oxford), and 0.4% were mRNA-1273 (Moderna). The vaccines were supplied by the Portuguese COVID-19 Task Force, thus ensuring the strategic planning of the immunization campaign without availability constraints.

The mean age of the vaccinated physicians was 60 years (min: 24, max: 91), and the subgroup of physicians

above 65 years received, mainly, the Pfizer vaccine. No adverse events were registered, including hypersensitivity reactions in the 30 minutes after administration. During the whole period, the Portuguese Medical Association did not receive any safety notification, and no vaccine dose was wasted or left unadministered. This illustrates the strict planning of the campaign and the commitment of all the involved healthcare professionals to the sustainability of the process at a critical time in terms of resources.

To the best of our knowledge, the Portuguese Medical Association was the only non-governmental and non-healthcare institution worldwide to have been given access to COVID-19 vaccines in the initial phase of the vaccination campaign. For this and for its results, the operation was unprecedented on a global scale. Moreover, it conveyed a powerful pro-vaccine example to the general population, which may have contributed to the high vaccination rates among the Portuguese population.

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AUTHOR CONTRIBUTIONS

MG: Conceptualization, resources, writing, review, editing.

RC: Project administration, writing, review, editing.

SV: Conceptualization, resources.

FF: Writing, original draft, writing, review, editing.

PROTECTION OF HUMANS AND ANIMALS

The authors declare that the procedures were followed according to the regulations established by the Clinical Research and Ethics Committee and to the Helsinki Declaration of the World Medical Association updated in 2013.

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DATA CONFIDENTIALITY

The authors declare having followed the protocols in use at their working center regarding patients' data publication.

COMPETING INTERESTS

FF is the Principal Investigator of “SPHERE Study – Burden of Invasive Pneumococcal Disease in Adults hospitalized in 2017 and 2018” and has received payment from MSD; received honoraria from Pfizer, Bial, AstraZeneca, GSK, Gilead, MSD and Sanofi for lectures and presentations; participated in advisory boards for AstraZeneca, MSD and Sanofi.

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