
Impact of COVID-19 on Allergy Residency Training in Spain

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The successive waves of the SARS-CoV-2 pandemic necessitated major modifications to the health care system and contingency measures. The first wave of the pandemic caused the collapse of the health system, and a state of alarm was declared in March 2020 (RD 463/2020 and Order SND/232/2020) [1,2]. Subsequently, given the care needs generated, resident rotations were suspended in order to transfer staff to COVID-19 units (Order SND 319/2020 of April 1) [3].

The Commission of Young Allergists and Interns (CAJMIR) of the Spanish Society of Allergy and Clinical Immunology (SEAIC) aimed to assess the impact of the pandemic on the residents' training plan during the first 3 waves.

A descriptive observational study was conducted based on a 14-question survey developed specifically for this purpose using Google forms (see appendix) and sent to allergy residents (all years). In order to avoid more than 1 answer per person, an e-mail address was requested.

The survey was distributed through CAJMIR to residents located in different areas of Spain via email, social networks, and instant messaging platforms. It was completed anonymously and voluntarily. All surveys completed between March 29, 2021 and May 15, 2021 were included.

Descriptive statistics were compiled using IBM SPSS, Version 20 (IBM Corp).

During the pandemic, 204 residents were in allergy training nationwide. A total of 118 completed surveys were analyzed.

Regular allergy care activity was suspended in 77.1% of the departments where the respondents worked.

Of all the participants, 94.9% performed care activities related to a COVID-19 area; 81.4% (n=96), 72% (n=85), and

70.3% (n=83) worked in the first, second, and third waves of the pandemic, respectively.

A total of 66.9% (n=79) were on call in the emergency department, 26.3% (n=31) were on emergency department work shifts, 61% (n=72) were on call in the COVID-19 in-patient area, and 55.9% (n=66) were on COVID-19 in-patient work shifts.

The distribution of residents towards COVID-19 areas was no higher in any specific area or autonomous community than another.

Training activities were affected in 82.2% of cases, 55% were suspended, and 27.2% were postponed. Most of the residents (61.9%) could not complete their rotations, 86.4% considered that the pandemic resulted in less academic training, and 51.7% in fewer research opportunities.

The data were broken down by year of residence (Supplementary Table 1).

Of the fourth-year residents, 67.6% (n=23) missed rotations, and 85.2% were unable to make them up. Of these, 11.7% (n=4) were external rotations, 32% (n=11) were allergy-specific rotations, and 11.7% (n=4) were complementary allergy training rotations. Residency time was shortened in 32.3% (n=11), with a loss of 2 months in 17% (n=6), 3 months in 11.7% (n=4), and 4 months in 2.9% (n=1). At the end of their training, 94.1% (n=32) found employment. This was as an allergist in 64.7% (n=22), with pandemic-specific temporary contracts known as "COVID-19 contracts" in 23.5% (n=8), and working in the emergency department in 23.5% (n=8); of these, 17.6% (n=6) worked simultaneously as allergists and emergency department physicians or in the COVID-19 area.

Of the third-year residents, 94% (n=31) missed rotations. This was related to allergy-specific training in 51.5% (n=17), to external rotations in 21.2% (n=7), and to complementary allergy training rotations in 24.2% (n=8). Rotations were recovered in only 42% (n=14).

All the second-year residents missed their rotations: 11.7% (n=2) were allergy-specific rotations and 70.5% (n=12) were in complementary specialties. About 41% of them were recovered.

Of the first-year residents, 73.5% (n=25) missed rotations: 14.7% (n=5) were from allergy, and 70.5% (n=24) were from complementary specialties. Of these, 50% were unable to make up their rotations.

Forty percent of the residents at all levels made proposals to improve deficits in the training plan, and 78% considered that an extension of the residency period would be necessary to balance the training lost during the pandemic. Furthermore, 17% recommended online training courses through scientific societies, and 5% proposed rotations in different hospitals depending on the area where most learning was lost.

The COVID-19 pandemic had a considerable impact on the daily tasks of residents and medical staff, and a large part of this impact was psychological [4].

In Spain, allergists and residents worked in COVID-19 teams in 40.5% and 92.9% of cases, respectively [5]. In addition, the use of telemedicine in allergy departments has been proposed as a useful tool for medical care [5,6].

The training of allergy residents was affected by the interruption of the training plan in a large percentage of cases to perform COVID-19-related care activities, especially in emergency and on-call shifts. Most residents consider that they have lost training and that the acquisition of specialty-related skills was affected; similar data have been reported in surgical and other medical specialties [7-15]. Not all residents were able to make up for lost training. This seems to have affected final-year residents most.

A significant proportion of the residents who completed residency training during the pandemic went on to work as specialists, although many of them remained on COVID-19 or emergency department contracts. The long-term duration of these contracts is unknown.

Our survey has several limitations. The questionnaire was anonymous and online; therefore, a nonresponse bias was inevitable. Some data were missing, since the questionnaire was designed to be completed quickly. Furthermore, the lack of longitudinal follow-up means that we do not know how suspended rotations were recovered. We recognize the role of response bias and the possibility that residents with strong feelings of being affected by the pandemic are more prone to respond.

To our knowledge, this is the first study to address the impact of the pandemic on allergy resident training. Since the respondents accounted for more than 50% of all residents from throughout Spain, they could be considered highly representative.

In conclusion, the COVID-19 pandemic had a negative impact on the training program of Spanish allergy residents. The future working conditions of young allergists recruited during the pandemic period are unknown. The various proposals made included expanded residency training, specific rotations, and online learning modalities to facilitate interaction between young allergists and their senior opinion leaders.

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Conflicts of Interest

The authors declare that they have no conflicts of interest.

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