

COVID-19 and Allergy: Allergists' Workload During the Pandemic

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To the Editor:

The COVID-19 pandemic has had a profound impact on clinical practice, and the work of health care professionals, including that of allergists, has been deeply altered.

The need for an alternative to in-person visits was compelling. Telemedicine is defined as the use of information and communication technologies for the management of diseases and medical education [1].

We aimed to understand the situation and role of allergists during the COVID-19 pandemic, as well as to convey our experience with the subsequent implementation of telemedicine as physicians.

Allergists were encouraged to participate anonymously in an online survey (created with Typeform) shared via social media and e-mail and sent by the Spanish Society of Allergology and Clinical Immunology (SEAIC). It consisted of 17 questions formulated as multiple-choice, yes/no, rating scale, and open questions in 3 sections, namely, demographic data (age, sex, and workplace), role of allergists in the pandemic, and allergists' experience with telemedicine.

The results of the survey were analyzed using Microsoft Excel (pivot tables). Data were collected from May 9 to June 3, 2020.

Out of the 275 allergists surveyed (72% women, 28% men), 92.7% worked in Spain. The survey was completed mainly using mobile phones (235 answers vs 54 from computers; none from tablets) and took a mean of 2.08 minutes. Most interviewees were aged 50 to 60 years (n=31, 12.2%). Additionally, the age group comprising allergists aged under 30 years was almost as large as that comprising allergists aged over 60 years (n=7 and n=8, respectively).

During the pandemic, 85 allergists (40.5%) took part in COVID-19 teams, mainly for 1-4 weeks (n=42, 49.4%). The allergists worked mostly in internal medicine (n=60,

Table. Summary of Study Data

Participants recruited	255					
Demographic data						
Age group, y	<30	30-40	40-50	50-60	>60	Not specified
	7 (2.7%)	24 (9.4%)	23 (9%)	31 (12.2%)	8 (3.1%)	162 (63.5%)
Sex	Women	Men				Not specified
	67 (26.3%)	26 (10.2%)				162 (63.5%)
Health care system	Public	Private	Both			Not specified
	125 (49%)	52 (20.4%)	36 (14.1%)			42 (16.5%)
Specialty	Allergists	Allergy residents				Not specified
	210 (82.4%)	42 (16.5%)				3 (1.2%)
Role of allergists in COVID-19 pandemic						
Total no. of respondents	255 (100%)					
Allergy specialist who cared for COVID-19 patients	Yes	No				Total
	85 (40.5%)	125 (59.5%)				210

Duration of care provided to COVID-19 patients by allergy specialists	>4 wk	1-4 wk	<1 wk	Total
Number of allergy specialists who participated in COVID-19 teams	33 (38.8%) Internal medicine	42 (49.4%) Emergency department	10 (11.8%) Other	85
Allergy residents who cared for COVID-19 patients	60 (71%) Yes	18 (21%) No	3 (3.5%)	85
Duration of care provided to COVID-19 patients by allergy residents	39 (92.9%) >4 wk	3 (7.1%) 1-4 wk	<1 wk	42
Number of allergy residents who participated in COVID-19 teams	32 (82.1%) Internal medicine	6 (15.4%) Emergency department	1 (2.5%) Other	39
Allergy consultations while caring for COVID-19 patients	23 (59%)	14 (35.9%)	2 (5.1%)	39
Allergy specialists who conducted consultations during this period	Yes	No		Total
Allergy specialists who worked with COVID-19 patients	149 (71%)	61 (29%)		210
Allergy specialists who did not work with COVID-19 patients	47 (55.3%)	38 (44.7%)		85
Allergy residents	102 (81.6%)	23 (18.4%)		125
Telemedicine	14 (33.3%)	27 (64.3%)	Not specified = 1 (2.4%)	42
Global perception score	6.98			
Perception by sex	Women	Men		
Score given depending on health care system of workplace	7.02 Public health system 6.92	6.81 Private health system 6.96		
Tools of telemedicine used	Telephone calls 102 (40%) Yes	On-site consultation 40 (15.7%) No	Telephone and video calls 20 (7.8%) Not sure	Total 255
Implementation	111 (43.5%)	13 (5.1%)	Video calls 3 (1.2%) Not specified 90 (35.3%)	Total 255

71%), followed by the emergency department (n=18, 21.2%), COVID-19 temporary patient care centers (eg, field hospital), nursing homes (n=3, 3.6%), and telephone follow-up (n=4, 4.7 %).

Allergists who worked in both public and private health care were involved in COVID-19 teams. Nevertheless, only specialists who worked exclusively in public health care (n=60, 48%) led COVID-19 teams, compared with those who worked exclusively in private health care (n=11, 8.8%).

The proportion of allergy residents (n=42) who took part in the active care of COVID-19 patients was very high (n=39, 92.9%), as was the number of weeks involved: 82.1% worked more than 4 weeks (n=32).

Regarding specific allergy activity, 81.6% of allergy specialists who did not enrol in COVID-19 teams (n=125) maintained their activity as allergists (n=102). Therefore, of the allergy specialists working on COVID-19 teams (n=84), 55.3% coworked in their allergy practice (n=47).

Allergy residents also worked in COVID-19 teams (n=38), and it is remarkable that 31.6% (n=12) worked in allergy units concurrently.

Most allergy specialists held allergy consultations (n=149, 71%), mainly by telephone (n=102; 40%), followed by on-site consultations (n=40, 15.7%). Lastly, phone and video consultations were combined by 7.8% of the allergists surveyed. The least used option was video calls only (n=3). Some of the respondents combined telephone interviews and on-site visits. Phone applications for instant messages and e-mails were also used. Video calls were used more in private health care (19.2% [n=10 from 52 allergists with private activity] vs 4% from all allergists working in the public system, n=125) (Table).

Regarding the perception of telemedicine as a tool for clinical practice, the global perception score of 6.9 is remarkable (taking 0 as “totally negative” and 10 as “completely positive”). There was no notable difference between public health care (6.92) and private health care (6.96). The maximum score was from specialists aged 30-40 years (n=33) (7.6), compared with other groups, and was slightly higher among women than among men (7.02 vs 6.81). Allergy residents (mainly aged <30 years) scored telemedicine at 7, whereas specialists (mostly aged 50-60) scored it at 6.81.

When respondents were asked about whether they favored the implementation of telemedicine, 43.5% gave an affirmative answer, 16.1% were uncertain, and 5.1% were opposed. Finally, the respondents were able to judge the use of technology during an allergy consultation. Even though advantages were recognized, many disadvantages were highlighted, namely, no option for complementary tests, legal concerns, and the extra time sometimes needed to make phone calls. Allergists stated that telemedicine will remain after the pandemic and that more tools are needed for implementation (Graphic Abstract, Supplementary Material).

Our findings are limited in that not all questions were answered (they were not mandatory). In addition, multiple-choice answers have limitations, thus potentially generating bias. One strength of our initiative is that there are no previous, similar surveys on the specialty of allergy to compare with. Telemedicine in the allergy department during the pandemic

was recently assessed in the Canary Islands, Spain. The authors considered this approach to be an additional tool for daily practice in the future [2].

Hence, between March and April 2020, the transformation has been faster and deeper than in the last 15 years [3]. This online-survey helped us to understand the role of allergy specialists during the COVID-19 pandemic and how they managed changes associated with new health care routines [4-6] while providing medical care to COVID-19 patients.

This application of telemedicine has changed allergists' perception from one of rejection to one of acceptance [6]. Telemedicine has the “potential to cause a transformational change in the way care is delivered by altering the process of interaction between patient and provider” [7]. It is crucial to reinvent our existing systems and find one that satisfies both patients and physicians [8]. The speed of implementation of telemedicine during the pandemic has revealed key barriers [9]. Finally, telemedicine will no longer be considered a secondary option [10].

The COVID-19 pandemic led to a sudden and challenging transformation of our workload. More than half of allergists worked on COVID-19 teams, and practically all allergy residents played a key role. While the need for telemedicine led allergists to accept this approach, the survey did reveal its disadvantages and showed that telemedicine did not necessarily improve the quality of care. Surveys are needed to collect professionals' opinions in order to better understand the role of new technologies in our daily allergy practice in the postpandemic future (see Supplementary Figure).

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Conflicts of Interest

The authors declare that they have no conflicts of interest.

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SUPPLEMENTARY MATERIAL

Figure. Spanish Allergists & Covid-19: Use of Telemedicine.

