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## Correspondence

# An academic allergy unit during COVID-19 pandemic in Italy



To the Editor:

Recently, Codispoti et al<sup>1</sup> delineated the clinical and academic challenges that the coronavirus disease 2019 (COVID-19) pandemic raised at their Division of Allergy and Immunology. They rapidly coordinated a lot of stressful changes in established practices to meet academic and health care needs. Besides congratulating the authors for their promptness, we here share our experience in getting across the COVID-19 pandemic in our Allergy Clinic, at Humanitas Research Hospital in Milan, where the epidemic first started in Italy.

First, programmed checks only for severe and poorly controlled allergic disease were carried out on outpatients, who were instructed to come at a set time and to maintain social distancing. To reduce the risk of in-hospital spread of the infection, COVID-19 and COVID-19–free zones were created. Checkpoints were created at the COVID-19–free-zone entrance to detect patients with fever (>37.5°C) and to screen for symptoms of active infection and/or contact with COVID-19–positive individuals. When the risk was considered low, patients were provided with protective surgical masks and sanitized to access the hospital.

Conversely, mild-to-moderate well-controlled patients were transitioned to a digital medicine service including phone, video, and email consults.

The administration of biologicals was managed as follows. Omalizuamb and benralizumab were self-administered at home. A service for drug home delivery was activated. Conversely, patients not able to self-administrate the drug came to the center. Mepolizumab was diluted and administered by the attending physician on site. When patients lived far from our center, the Severe Asthma Network in Italy<sup>2</sup> was used to identify a local near-home center for in-site administration.

Clinical research has been threatened by the COVID-19 pandemic. New recruitments in ongoing clinical trials have been temporarily suspended. Nonetheless, we are now faced with the need for online trial visits. Sponsors were consulted on a near-daily basis to reassess follow-up visit schedules and amend protocol requirements to facilitate online visits. When possible, the investigation product home delivery service and digital medicine service were used to obtain scheduled questionnaires and monitor drug administration.

Academic activities were rescheduled, and only online interactive platforms were used to keep educational programs ongoing.

Finally, we underline that we preferentially prescribe sublingual immunotherapy (SLIT) for airborne allergens. This allowed us not to suspend SLIT because a very efficient drug home delivery service was used by our pharmacy. This has proved to be a fruitful advantage of SLIT over subcutaneous immunotherapy, in allowing our patients to adhere to allergen immunotherapy. As reported in a recent article, allergen immunotherapy should be temporarily discontinued during an active infection and this further adds value to SLIT because this practice is more malleable than subcutaneous immunotherapy.

In a technology-based society, modern health care systems can raise to the COVID-19 challenge by maximizing the potential of telemedicine to address the clinical needs of patients affected by chronic diseases. The COVID-19 pandemic will have a profound impact on modern medicine and is reshaping the patient-physician relationship. Which long-term effects will this produce on issues such as health care system sustainability, patients' adherence, big-data medicine, other big epidemics of our times, and physician burnout?

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#### **REFERENCES**

- Codispoti CD, Bandi S, Moy J, Mahdavinia M. Running a virtual allergy division and training program in the time of COVID-19 pandemic. J Allergy Clin Immunol 2020;145:1357-9.
- Heffler E, Blasi F, Latorre M, Menzella F, Paggiaro P, Pelaia G, et al. The Severe Asthma Network in Italy: findings and perspectives. J Allergy Clin Immunol Pract 2019;7:1462-8.
- Pitsios C, Tsoumani M, Bilò MB, Sturm GJ, del Río PR, Gawlik R, et al. Contraindications to immunotherapy: a global approach. Clin Transl Allergy 2019;9:45.

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### Reply

To the Editor:

As the coronavirus disease 2019 pandemic is expanding globally, sharing experiences and strategies in different programs is an essential way to communicate and empower the global allergy/immunology community. The correspondence by Malipiero et al<sup>1</sup> on our recent article<sup>2</sup> in the *Journal* is a great example of such communications and is well appreciated.

This commentary shows how telemedicine has helped programs across the world to overcome the otherwise debilitating gap of communication between patients and physicians. In our division, although all faculty and fellows were trained emergently to perform virtual medicine, it took a few weeks to troubleshoot and maximize the potential of these modalities. These experiences suggest that training on the optimal use of virtual visits and telemedicine should be added to the educational curriculum of training programs and annual meetings on a regular basis. In this day and age, technology is an

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inevitable part of our daily lives and we should be able to use it to its maximum potential for the sake of our patients and trainees. We have learnt that in some scenarios, especially for follow-up visits, virtual clinical encounters could be effectively done through telemedicine. Therefore, the use of telemedicine could be expanded beyond the pandemic times for patients who live far away from tertiary clinics to avoid frequent travels while re-enforcing management plans. Furthermore, use of more advanced teleconferencing for departmental educational meetings can be expanded to increase participation of faculty and providers who work from distanced locations.

Another point brought up by Malipiero et al<sup>1</sup> was the broad use of sublingual immunotherapy (SLIT) in their practice, which was not suspended despite the limitation of in-person clinic visits. We acknowledge that their experience proved an advantage of SLIT over subcutaneous immunotherapy in current circumstances. Increasing allergists' experience and comfort in using SLIT seems to be advantageous not only during the pandemics but as a preferred modality of immunotherapy for patients with limited physical access to allergy clinics.

Finally, we would like to echo that the coronavirus disease 2019 pandemic has had a profound impact on modern medicine and the patient-physician relationship. We should learn from these experiences to come out of this pandemic stronger and more resourceful.

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#### REFERENCES

- Malipiero G, Paoletti G, Puggioni F, Racca F, Ferri S, Marsala A, et al. An academic allergy unit during COVID-19 pandemic in Italy. J Allergy Clin Immunol 2020;146: 227.
- Codispoti CD, Bandi S, Moy J, Mahdavinia M. Running a virtual allergy division and training program in the time of COVID-19 pandemic. J Allergy Clin Immunol 2020;145:1357-9.

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## Corrigendum



In regards to the article published in the May 2020 issue entitled, "Food aversion and poor weight gain in food protein-induced enterocolitis syndrome: A retrospective study" (J Allergy Clin Immunol 2020;145:1430-7), it should be amended that Wayne G. Shreffler, MD, PhD, serves as a co-corresponding author. Dr Shreffler's mailing address is 55 Fruit Street, Boston, MA 02114, and his email address is wshreffler@mgh.harvard.edu. The authors regret the omission.