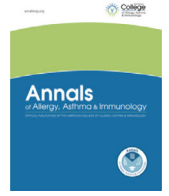




Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



## Perspective

## Have the rules of engagement changed?

## Clinic visits in 2022 and beyond

Paul V. Williams, MD<sup>\*</sup>; David R. Stukus, MD<sup>†</sup>; Frank S. Virant, MD<sup>\*</sup>; Priya Bansal, MD<sup>‡</sup><sup>\*</sup> Division of Allergy/Inflammation, Department of Pediatrics, University of Washington School of Medicine, Northwest Asthma and Allergy Center, Camano Island, Washington<sup>†</sup> Division of Allergy and Immunology, Department of Pediatrics, Nationwide Children's Hospital and The Ohio State University College of Medicine, Columbus, Ohio<sup>‡</sup> Asthma and Allergy Wellness Center, Feinberg School of Medicine of Northwestern University, Saint Charles, Illinois

## ARTICLE INFO

## Article history:

Received for publication July 3, 2021.

Received in revised form August 18, 2021.

Accepted for publication August 30, 2021.

The coronavirus disease 2019 (COVID-19) pandemic has demanded changes in the asthma and allergy practice, including staff administration, office layout, patient interactions, care provision, and procedures.<sup>1,2</sup> Control of viral disease and transmission by vaccination may allow for a return to more normal practice, but in reality, with the emergence of new viral variants, it is unlikely that COVID-19 will entirely disappear. (Authors' note to the reader: This Perspective was written in July 2021, so please forgive any inaccuracies in our predictive capabilities) At the same time, necessary adaptation during the pandemic with telemedicine, in-office infectious disease modifications, and vaccination could facilitate not only a return to pre-COVID-19 patient flow but also even practice expansion. This pandemic has taught us that identifying the viral etiology for acute exacerbations, particularly for our patients with allergic rhinitis and asthma who often have similar symptoms, is important for therapeutic and prognostic reasons. Although offices were forced to adopt rapid mitigation efforts at the start of the pandemic, we now have the benefit of experience and valuable information to make better informed decisions. What office changes will remain in 2022 and what can we eliminate? The discussion which follows assumes that vaccination will be available for all ages in 2022 and that COVID-19 will continue to cause seasonal infections, although it is hoped that they are less prevalent and severe.

## Staff

Liberal sick leave policies that encourage sick employees to remain at home when acutely ill with paid time off should remain a standard

**Reprints:** Paul V. Williams, MD, Division of Allergy/Inflammation, Department of Pediatrics, University of Washington School of Medicine, Northwest Asthma and Allergy Center, 9725 3rd Ave NE, Suite 500, Seattle, WA 98115 E-mail: [pwilliams@nwasthma.com](mailto:pwilliams@nwasthma.com).

**Disclosures:** The authors have no conflicts of interest to report.

**Funding:** The authors have no funding sources to report.

part of practice. Adequate personal protective equipment (PPE) for staff should be readily available, and policies for use should remain. Effective contact tracing procedures should remain intact. Special attention to address staff burnout should remain a priority. Strong encouragement for staff vaccination will remain important in the future.

## Structural Changes

Physical distancing was a major challenge in limiting patient visits and immunotherapy administration. Improvement in ventilation to maximize air exchange, use of high-efficiency particulate air filters, and perhaps separate waiting areas for vaccinated or unvaccinated ill or well patients could be considered to enable a return to more normal patient volume and immunotherapy schedules. Immunotherapy scheduling vs walk-in may also continue to be used to assist with practice flow and distancing.

## Patient Interactions

Screening new and returning patients on the night before their visit for symptoms, personal contacts, and vaccination status will inform staff and improve patient safety. Although governmental ordinances may vary, ongoing use of face masks for patients and staff during sick visit encounters and perhaps routinely during viral seasons may become our new normal. High community viral transmission rate and unvaccinated patients are also considerations for extra precautions. Finally, sensitive point-of-care rapid antigen tests, if available, may help triage patients, inform precautions, and potentially dictate immediate specific viral therapy.

## Care Provision

The ability to provide patient care through telehealth has great potential for practices if adequate reimbursement remains in place

and site restrictions remain relaxed. Telehealth visits can be as effective as in-person visits for many conditions routinely evaluated in the allergy office,<sup>3</sup> especially routine follow-up visits for nonpulmonary disease and as an option for unvaccinated patients during peak viral seasons. This could not only improve patient convenience and satisfaction but also potentially increase practice reach to areas that previously could not be served. Distant satellite offices for new patient visits, with virtual follow-up, for example, could be a practice enhancement. Virtual patient monitoring and teaching, which took the place of in-office procedures during the pandemic, can be continued in some form for better patient management and to facilitate virtual visits.

## Procedures

Spirometry, fractional exhaled nitric oxide measurement, bronchoprovocation, oral challenges, and oral or parenteral immunotherapy can be performed without special considerations in vaccinated patients when viral transmission is low and staff are vaccinated, but some precautions, such as PPE and special ventilation, may be needed during periods of higher transmission. For unvaccinated patients, sensitive rapid antigen tests in asymptomatic patients can provide a measure of safety and affect precautions or procedures. In potentially infectious patients, such procedures should be avoided unless medically necessary for treatment decisions. Provision of subcutaneous immunotherapy should return to a normal schedule as patients are already discouraged from receiving immunotherapy while ill or symptomatic. Bronchoprovocation, which requires nebulized administration of a product, should only be performed in vaccinated patients or those with negative screening test results. Initial dosing and up-dosing visits for oral food immunotherapy carry increased risk for anaphylaxis, and nursing staff should consider the use of PPE when monitoring these patients if either they or the patient is not vaccinated. Oral food challenges in patients in whom the purpose is to rule out a food allergy have a low risk for systemic reactions, but

because these are elective procedures, they could be limited to those who are vaccinated or have a negative test result before the challenge. Ultimately, staff members who are fully immunized can partake in individualized decision making surrounding their personal risk while interacting with patients during various procedures and address any concerns with their office manager to guide office policy.

## Shared Decision Making

Allergists are equipped to assist patient decision making on a variety of chronic medical conditions.<sup>4</sup> This is even more the case with COVID-19, wherein the allergist/immunologist is the best specialist to help patients understand key elements essential to viral transmission, personal risk, and risks/benefits of vaccines and correct dys/misinformation related to the disease and immunization. We can continue to be an important resource for our own patients, the general public, and media moving forward.

## Conclusion

Most allergy practices had substantial financial losses during the pandemic, but the response and adjustments that were made allowed for the introduction of new tools and approaches that will likely improve patient care and physician satisfaction in the future. [Table 1](#) summarizes the key areas of adaptation during the pandemic that will likely continue in some capacity moving forward. Special precautions will need to continue in those who are not vaccinated and in anyone who presents with symptoms consistent with infection. Evolving rapid, sensitive, and specific point-of-care antigen tests can help clarify infectious etiology and guide specific therapies and precautions. We have collectively learned how to provide high-level care to our patients while also decreasing risk for spread of infection within our facilities. None of us know how long we will need to contend with severe acute respiratory syndrome coronavirus 2 or when the next pandemic may occur. Although the rules of engagement may have changed,

**Table 1**  
Contingency Plans Within the Medical Office During and After COVID-19

Area of adaptation	Long-term changes that may remain
Staff	<ul style="list-style-type: none"> <li>• Encouragement for paid sick leave when ill</li> <li>• Routine preparedness meetings and modification of clinic plan</li> <li>• Provision of PPE for all staff</li> <li>• Evaluating and addressing staff burnout</li> </ul>
Structural changes	<ul style="list-style-type: none"> <li>• Physical distancing in waiting areas</li> <li>• Enhanced cleaning protocols for exam rooms</li> <li>• Separate ill vs well waiting room</li> </ul>
Patient interactions	<ul style="list-style-type: none"> <li>• Routine screening before visits</li> <li>• Continued masking during respiratory viral season</li> <li>• Immunotherapy scheduling vs walk-in</li> </ul>
Care provision	<ul style="list-style-type: none"> <li>• Continued use of telehealth based on pay parity, continued relaxed site restrictions and malpractice coverage</li> </ul>
Procedures	<ul style="list-style-type: none"> <li>• Alterations based on patient vaccination status</li> <li>• Sensitive point-of-care rapid antigen testing before aerosol-generating procedures</li> <li>• Alter safety protocols based on community transmission</li> </ul>
Shared decision making	<ul style="list-style-type: none"> <li>• Proactive discussion with patients and the general public regarding risks and benefits of vaccination</li> <li>• Ongoing efforts to acknowledge areas of knowledge gaps</li> <li>• Focus on decision making process rather than outcomes</li> </ul>

we are still here to help patients and will continue to do so regardless of what the future holds.

## References

1. Shaker MS, Oppenheimer J, Grayson M, et al. COVID-19: pandemic contingency planning for the allergy and immunology clinic. *J Allergy Clin Immunol Pract.* 2020;8(5):1477–1488.e5.
2. Searing DA, Dutmer CM, Fleischer DM, et al. A phased approach to resuming suspended allergy/immunology clinical services. *J Allergy Clin Immunol Pract.* 2020;8(7):2125–2134.
3. Mustafa SS, Vadamalai K, Ramsey A. Patient satisfaction with in-person, video, and telephone allergy/immunology evaluations during the COVID-19 pandemic. *J Allergy Clin Immunol Pract.* 2021;9(5):1858–1863.
4. Blaiss MS, Steven GC, Bender B, Bukstein DA, Meltzer EO, Winders T. Shared decision making for the allergist. *Ann Allergy Asthma Immunol.* 2019;122(5):463–470.