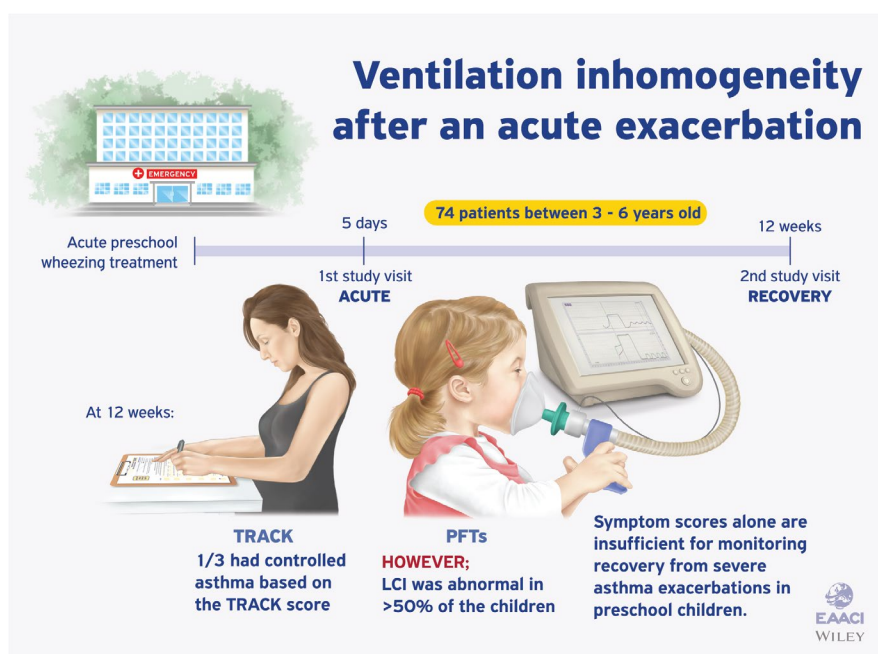


Improving asthma care in preschool children

For most of us working with an adapted clinical setting at the time being, patient care is still impacted by the COVID-19 pandemic. In addition, our continuous education activities are unprecedentedly affected by the suspension of all congresses. While online and streaming sessions are being instituted to partially replace the congresses, at a first look scientific journals seem to be largely unimpacted by the epidemic, as they are still able to deliver science and education with an unchanged format. I was tempted to say without changes, but similar to other journals, the pandemic has had a big impact on *Pediatric Allergy and Immunology*. The impact was mostly on the topics of manuscripts submitted (not surprisingly PAI has received a fair number of COVID papers), and on the manuscript flow, with shorter time constraints. This is the place and the time to thank all who have contributed to the continued efficiency of the flow of the articles: the editorial team, the reviewers, and the production office.

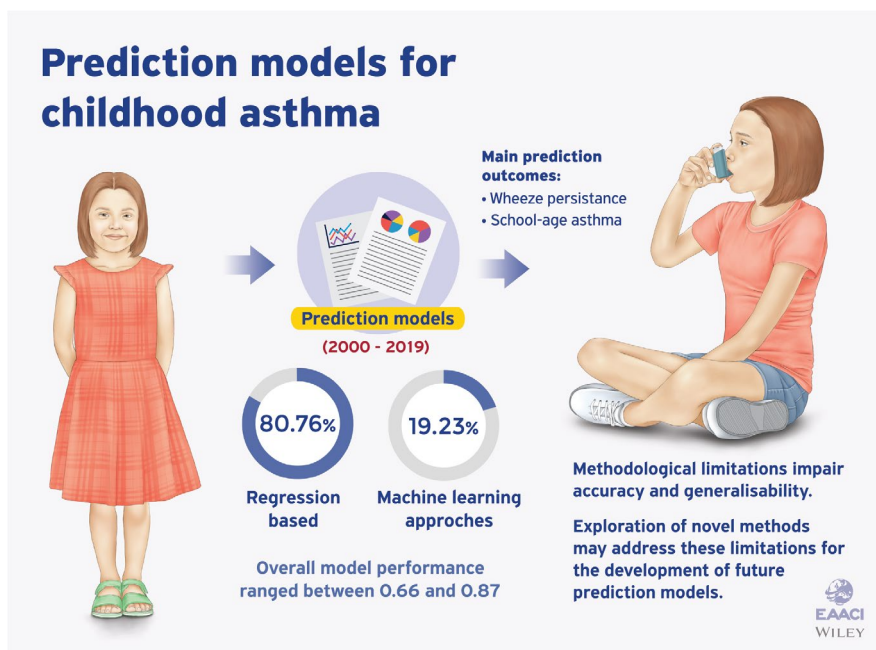
To open this issue of PAI, you will find a rostrum paper addressing a common problem faced by the pediatric allergist, that is, how to advise patients and their families to handle manufactured foods potentially containing traces of allergens.¹ While there is probably no universal solution, Graham et al address the problem with three common clinical vignettes representative of patients with food allergies. The concept of trace management implicates risk management, a theme that has been addressed earlier in this journal by several studies.²⁻⁴



Krzysztof Kowalik

It is a tradition to select three articles in each issue, and the first one I would like to comment on is the publication by Krzysztof Kowalik et al who investigated whether pulmonary function tests (PFTs) may provide additional information to the clinical assessment of preschool children with recurrent wheezing.⁵ They recruited 3- to 6-year-old children treated for acute wheezing exacerbation, with a history of recurrent wheezing in the preceding year. The children underwent standardized symptom score questionnaires, multiple breath washout, spirometry, and clinical assessment during two visits 5 days and 12 weeks after discharge. The investigators found that almost half of preschool children with recurrent wheezing who had parent-reported "well-controlled" asthma symptoms using the symptom score questionnaire demonstrated an abnormal lung clearance index measure. They also observed significant differences in lung clearance index between preschool children with recurrent wheezing and healthy controls. Finally, they found an association between abnormal lung

clearance index and emergency visits for acute wheezing exacerbation in the previous 12 months. They conclude that symptom scores alone are insufficient for monitoring recovery in this cohort of preschoolers with asthma and that pulmonary function test outcomes could provide additional insight into preschool asthma control beyond symptom assessment alone. Definitely, childhood asthma remains a disease with unmet needs for optimal care,⁶ in particular when the impact on long-term evolution of the disease is considered.⁷ Early wheezing and optimal care of this age group of patients will remain a major task for pediatric allergists.^{8,9}



Dilini Kothalawala

The second featured study also addresses asthma, more specifically the difficulty of asthma diagnosis in preschool children, leading to below optimal treatment of asthma in this age group. Dilini Kothalawala et al¹⁰ have performed a systematic review in order to identify and critically evaluate studies that either developed novel or updated existing models for predicting school-age asthma. They identified twenty-four studies describing the development of 26 predictive models published in the last 10 years, either regression-based or with a machine learning approach. They critically discuss potential problems in relation to the applicability of these models, mostly centered around the choice of the population, predictor and outcome definitions, methodologies employed for predictor selection, methods of data collection, study power, and the interpretability of models. They conclude by stressing that the existent prediction models have moderate predictive performances, with moderate generalizability, and that novel machine-based learning approaches may improve these models for better care of wheezing preschoolers. Several challenges remain in this age group; the definition of asthma remains difficult,^{11,12} and sensitization to common allergens may influence the course of asthma over time.¹³ With regard to long-term prognosis, lung function testing may provide additional information.¹⁴ Finally, the metabolic implications on asthma development in this age group remain a fascinating challenge.¹⁵

Anxiety in parents of food-allergic children



Food allergy-associated anxiety (FAAA)
specific measure

VS

State-trait anxiety inventory (STAI)
generalized anxiety measure

Of 548 Canadian parents of food-allergic children who participated in this study:

18% reported high FAAA

37% reported high STAI



Many parents are highly anxious about their child's food allergy & current available tools to measure anxiety may not be suitable to detect FAAA



Liannne Soller

The third study highlighted here relates to food allergy by evaluating current tools to address parental anxiety in families with children suffering from food allergies. Liannne Soller et al¹⁶ started from the postulate that excessive parental anxiety can be maladaptive and lead to unnecessary restriction of social activities. They explored factors associated with parental food allergy-associated anxiety (FAAA) and determined sensitivity and specificity by using generic state anxiety measures—State-Trait Anxiety Inventory (STAI) versus FAAA. They also investigated whether validated tools for generalized anxiety or food allergy-specific quality of life (QoL) could be used as surrogates for FAAA. Among over 500 Canadian parents completing the survey, they found that factors positively associated with FAAA included parental burden, risk perception, state anxiety, intolerance of uncertainty, and perceived severity of the child's food allergy. While factors associated with FAAA could be clearly identified, they also conclude that generic anxiety and QoL tools did not accurately categorize parents with self-reported high FAAA. Parental anxiety has been reported earlier in PAI as an important factor impacting the QoL of families with children suffering from food allergies.^{17,18}

This issue of PAI collects further interesting reports on various topics we hope you will find of interest and will contribute to a high-quality continuous education.

Philippe Eigenmann

Department of Women-Children-Teenagers, University Hospital of Geneva, Geneva, Switzerland

Email: philippe.eigenmann@hcuge.ch

ORCID

Philippe Eigenmann <https://orcid.org/0000-0003-1738-1826>

REFERENCES

1. Graham F, Caubet J-C, Eigenmann PA. Can my child with IgE-mediated peanut allergy introduce foods labeled with "may contain traces"? *Pediatr Allergy Immunol.* 2020;31:e13244.
2. Arkwright PD, MacMahon J, Koplin J, et al. Severity and threshold of peanut reactivity during hospital-based open oral food challenges: an international multicenter survey. *Pediatr Allergy Immunol.* 2018;29:754-761.
3. Remington BC, Krone T, Koppelman SJ. Quantitative risk reduction through peanut immunotherapy: safety benefits of an increased threshold in Europe. *Pediatr Allergy Immunol.* 2018;29:762-772.
4. Stockhammer D, Katelaris CH, Simpson MD, et al. Perception of food allergy symptom severity differs across stakeholders. *Pediatr Allergy Immunol.* 2020;31:321-325.

5. Kowalik K, Dai R, Safavi S, et al. Persistent ventilation inhomogeneity after an acute exacerbation in preschool children with recurrent wheezing. *Pediatr Allergy Immunol.* 2020;31:e13245.
6. Papadopoulos NG, Čustović A, Cabana MD, et al. Pediatric asthma: an unmet need for more effective, focused treatments. *Pediatr Allergy Immunol.* 2019;30:7-16.
7. Melén E, Guerra S, Hallberg J, et al. Linking COPD epidemiology with pediatric asthma care: Implications for the patient and the physician. *Pediatr Allergy Immunol.* 2019;30:589-597.
8. Brick T, Hose A, Wawretzka K, et al. Parents know it best: prediction of asthma and lung function by parental perception of early wheezing episodes. *Pediatr Allergy Immunol.* 2019;30:795-802.
9. Abe N, Yasudo H, Fukano R, et al. Multi-season analyses of causative pathogens in children hospitalized with asthma exacerbation. *Pediatr Allergy Immunol.* 2019;30:724-731.
10. Kothalawala DM, Kadalayil L, Weiss VBN, et al. Prediction models for childhood asthma: a systematic review. *Pediatr Allergy Immunol.* 2020;31:e13247.
11. Silva D, Severo M, Paciência I, et al. Setting definitions of childhood asthma in epidemiologic studies. *Pediatr Allergy Immunol.* 2019;30:708-715.
12. Owora AH, Becker AB, Chan-Yeung M, et al. Wheeze trajectories are modifiable through early-life intervention and predict asthma in adolescence. *Pediatr Allergy Immunol.* 2018;29:612-621.
13. Schoos A-MM, Jelding-Dannemand E, Stokholm J, et al. Single and multiple time-point allergic sensitization during childhood and risk of asthma by age 13. *Pediatr Allergy Immunol.* 2019;30:716-723.
14. Schramm D, Reuter M, Grabenhenrich LB, et al. What does lung function tell us about respiratory multimorbidity in childhood and early adulthood? Results from the MAS birth cohort study. *Pediatr Allergy Immunol.* 2018;29:481-489.
15. Carraro S, Bozzetto S, Giordano G, et al. Wheezing preschool children with early-onset asthma reveal a specific metabolomic profile. *Pediatr Allergy Immunol.* 2018;29:375-382.
16. Soller L, To S, Hsu E, et al. Current tools measuring anxiety in parents of food-allergic children are inadequate. *Pediatr Allergy Immunol.* 2020;31:e13260.
17. Beken B, Celik V, Ozdemir PG, et al. Maternal anxiety and internet-based food elimination in suspected food allergy. *Pediatr Allergy Immunol.* 2019;30:752-759.
18. DunnGalvin A, Treneva M, Pampura A, et al. Quality of life associated with maternal anxiety disorder in Russian children and adolescents with food allergy. *Pediatr Allergy Immunol.* 2020;31:78-84.