COVID-19 Pandemic–Related Reductions in Pediatric Asthma Exacerbations Corresponded with an Overall Decrease in Respiratory Viral Infections
Sayed et al 91

What is already known about this topic? Although respiratory viruses, air pollutants, and aeroallergens are implicated in worsening pediatric asthma symptoms, the interplay between these factors and asthma exacerbations is not well understood. Asthma exacerbations decreased significantly during the coronavirus disease 2019 pandemic, allowing for the investigation of these asthma triggers relative to asthma activity.

What does this article add to our knowledge? The sustained reductions in viral infections and acute asthma activity we observed during the coronavirus disease 2019 pandemic support a strong link between respiratory virus infections and pediatric asthma exacerbations.

How does this study impact current management guidelines? Our findings suggest that viral respiratory infections are a primary driver of pediatric asthma exacerbations and that preventive measures taken to control exposure to these viruses may help limit exacerbating asthma symptoms.

Prescribing Patterns and Treatment Adherence in Patients with Asthma During the COVID-19 Pandemic
Dhruve et al 100

What is already known about this topic? A reduction in asthma exacerbations has been recorded over the COVID-19 pandemic. It is unknown whether there was a change in medication use over the first year of the pandemic compared with the previous year.

What does this article add to our knowledge? The COVID-19 pandemic has witnessed an improvement in adherence to inhaled corticosteroids (ICS), a reduction in salbutamol use, and an increase in prescription of peak flow meters for home monitoring compared with the previous year.

How does this study impact management guidelines? Ongoing efforts to improve ICS adherence, reduce reliance on salbutamol, and use peak flow meters for remote monitoring and self-management of asthma are needed.

General Stress Among Young Adults with Asthma During the COVID-19 Pandemic
Ekström et al 108

What is already known about this topic? The coronavirus disease 2019 pandemic has profoundly affected the lives of the global population. Little is known on how the pandemic has affected anxiety and stress in young adults, and the influence of asthma and allergic rhinitis.

What does this article add to our knowledge? Young adults with asthma expressed more coronavirus disease 2019–related concern about their own health, reported more contact with online health care, and more perceived stress than did participants without asthma, especially females and young adults with uncontrolled asthma.

How does this study impact current management guidelines? Health caregivers should be aware of the increased levels of stress and health concerns related to the pandemic and offer appropriate support to young individuals with asthma.
Mask Use Experiences, COVID-19, and Adults with Asthma: A Mixed-Methods Approach
Polivka et al

What is already known about this topic? Masks reduce the risk of COVID-19 by providing a barrier between the wearer and others to reduce the spread of respiratory droplets and by reducing the inhalation of these droplets by the wearer themselves.

What does this article add to our knowledge? Most adults with asthma reported wearing a mask in public places. Lower asthma control and longer daily mask wearing were associated with more self-reported problems with wearing masks.

How does this study impact current management guidelines? Participants recommended “Just wear it.” To increase wearability using a comfortable mask that fits, staying calm, breathing slowly and deeply were recommended. Recommendations also included taking safe “mask breaks” when needed.

Impact of Allergic Rhinitis and Asthma on COVID-19 Infection, Hospitalization, and Mortality
Ren et al

What is already known about this topic? In different studies, whether asthma and allergic rhinitis acting as independent risk factors for coronavirus disease 2019 (COVID-19) remains controversial.

What does this article add to our knowledge? AR (all ages) and asthma (aged <65) act as protective factors against COVID-19 infection, whereas asthma increases the risk for hospitalization. None of the long-term medications had a significant association with infection, severity, and mortality of COVID-19 among patients with AR and/or asthma.

How does this study impact current management guidelines? We provided new insights on the association between allergic diseases and COVID-19 prevalence and outcomes. We suggested that more attention should be paid to the education and primary care of elderly asthmatic patients diagnosed with COVID-19, including active treatment of comorbidities.

COVID-19 Symptoms Are Attenuated in Moderate-to-Severe Atopic Dermatitis Patients Treated with Dupilumab
Ungar et al

What is already known about this topic? Preliminary data suggest increased type 2 cytokines during the COVID-19 cytokine storm. However, it remains unclear how COVID-19 outcomes differ between patients with atopic dermatitis (AD) on type 2—targeting agents (dupilumab) and those treated with other systemics or topical treatments.

What does this article add to our knowledge? This is the first study to directly compare the severity of COVID-19 symptoms in patients with moderate-to-severe AD on different treatments, shedding important light on the treatment of patients with AD during the pandemic and beyond.

How does this study impact current management guidelines? Our results suggest that type 2 targeting with dupilumab may attenuate COVID-19 responses, supporting the safety of specific type 2—targeting agents in patients with AD during the COVID-19 pandemic, and potentially extending to other viral infections.

Eosinophilic Esophagitis Patients Are Not at Increased Risk of Severe COVID-19: A Report From a Global Registry
Zevit et al

What is already known about this topic? No data has been published on the outcome of coronavirus disease 2019 (COVID-19) in eosinophilic esophagitis (EoE)/eosinophilic gastrointestinal disease (EGID) patients.

What does this article add to our knowledge? COVID-19 severity in EoE patients appears to be comparable to that of the general population.

How does this study impact current management guidelines? EoE/EGID patients with COVID-19 may be managed following guidelines for the general population.
**Doses of Specific Allergens in Early Introduction Foods for Prevention of Food Allergy**

Filep et al

*What is already known about this topic?* Consumption of food allergens, such as peanut and egg, in infancy can prevent the development of food allergy.

*What does this article add to our knowledge?* The article reports the concentrations and dose of 18 major food allergens in commercial early introduction foods that are promoted as aids to prevent food allergy.

*How does this study impact current management guidelines?* Variability in allergen concentration and dose in early introduction foods highlights the need for improved standardization and quality control of these foods.

**Development of the Child- and Parent-Rated Scales of Food Allergy Anxiety (SOFAA)**

Dahlsgaard et al

*What is already known about this topic?* Anxiety may complicate the clinical presentation of youth with food allergy (FA), increase condition-specific burden, and worsen quality of life. Recent reviews have identified the absence of a validated measure of FA anxiety in this population as an unmet need.

*What does this article add to our knowledge?* A broad measure of condition-specific anxiety for youth with FA has been developed and shows construct, convergent, and divergent validity, internal consistency, and test-retest reliability.

*How does this study impact current management guidelines?* The Scale of Food Allergy Anxiety may be used to screen children at risk for excessive FA anxiety; guide behavioral health interventions in this population; establish a severity threshold for eligibility; and evaluate outcome in a clinical trial.

**Early Discontinuation of Cow’s Milk Protein Ingestion Is Associated with the Development of Cow’s Milk Allergy**

Sakihara et al

*What is already known about this topic?* Supplementing breast-feeding with cow’s milk formula in the first few days of life can increase the risk of cow’s milk allergy, but little is known about the effects of discontinuing cow’s milk formula ingestion.

*What does this article add to our knowledge?* Early discontinuation of cow’s milk formula ingestion, particularly in the first month of life, may increase the risk of cow’s milk allergy in infants who received cow’s milk formula in the first 3 days of life.

*How does this study impact current management guidelines?* Continuous cow’s milk formula ingestion over the first month of life may represent a potential method for preventing cow’s milk allergy development in early-exposed infants.

**Access to Allergen-Free Food Among Black and White Children with Food Allergy in the FORWARD Study**

Coleman et al

*What is already known about this topic?* Previous studies have shown that disproportionate morbidity exists among Black children with food allergies compared with White children with food allergies.

*What does the article add to our knowledge?* Race, socioeconomic status, and access to online food purchasing are identifiable predictors of access to allergen-free foods in children living with food allergies.

*How does this study impact current management guidelines?* Understanding the social determinants of health, such as access to allergen-free foods, should guide clinical practice and management of food avoidance by providing equitable resources for patients to access allergen-free foods.
Combining Allergen Components Improves the Accuracy of Peanut Allergy Diagnosis
Hemmings et al 189

What is already known about this topic? Specific IgE to peanut components, particularly Ara h 2, can be more accurate than specific IgE to peanut extract.

What does this article add to our knowledge? Combining specific IgE to various peanut allergens or combining functional characteristics of IgE can improve the diagnostic accuracy of individual component specific IgE or peanut specific IgE levels, respectively.

How does this study impact current management guidelines? Online calculators available to clinicians to calculate the probability of peanut allergy based on a combination of IgE to peanut allergens or of functional characteristics of peanut specific IgE can aid clinical decision-making.

Increase in Epinephrine Administration for Food-Induced Anaphylaxis in Pediatric Emergency Departments From 2007 to 2015
Kim et al 200

What is already known about this topic? Food-allergic reactions are the leading cause of anaphylaxis seen in the emergency department (ED). Epinephrine is underused in the treatment of anaphylaxis, especially in the pediatric population.

What does this article add to our knowledge? Epinephrine administration for cases of food-induced anaphylaxis in the pediatric emergency department is increasing over time, even after adjusting for demographic factors and severity.

How does this study impact current management guidelines? Clinician awareness of the proper use of epinephrine for anaphylaxis may be increasing, reflecting the importance of continued advocacy for the optimal management of food-induced anaphylaxis. The increase in food-allergic reactions over time highlights the need to further explore strategies for proper recognition and administration of epinephrine for anaphylaxis.

A Prospective Assessment of Clinical Characteristics and Responses to Dietary Elimination in Food Protein–Induced Allergic Proctocolitis
Uncuoğlu et al 206

What is already known about this topic? Diagnosis of food protein–induced allergic proctocolitis is based on symptom responses to sequential elimination/challenge diets.

What does this article add to our knowledge? Prospectively structured diagnostic dietary steps identify a tendency to transient bleeding before 2 months of age, prolonged presence of mucus in stool even if blood disappears, recovery time with elimination for each symptom, and atopic dermatitis as a risk factor for multiple food allergies.

How does this study impact current management guidelines? A 2-week duration of elimination for blood in stool is sufficient to form a judgment of suspected foods. Concurrent atopic dermatitis suggests a high probability of multiple allergies. Mucus in stool is the last symptom to disappear and should not affect diagnostic decisions alone.

Elevated Cow’s Milk–Specific IgE Levels Prior to Oral Immunotherapy Decrease the Likelihood of Reaching the Maintenance Dose
Cohen et al 215

What is already known about this topic? Owing to adverse reactions throughout treatment, the duration of cow’s milk (CM) oral immunotherapy until a maintenance dose is achieved varies considerably across patients. It is unclear what clinical factors affect this variability.

What does this article add to our knowledge? This study assesses what effect sociodemographic factors, comorbidities, clinical characteristics, and biomarkers at study entry may have on the likelihood of reaching maintenance in CM oral immunotherapy.

How does this study impact current management guidelines? The specific IgE profile and cumulative dose of CM tolerated at entry challenge affect the likelihood of reaching maintenance. Assessing these factors before therapy can contribute to counseling families and allocating adequate resources properly.
Omalizumab in Asthma with Fixed Airway Obstruction: Post Hoc Analysis of EXTRA
Hanania et al

What is already known about this topic? Fixed airflow obstruction in patients with asthma has been associated with reduced responsiveness to asthma medications.

What does this article add to our knowledge? Omalizumab reduced exacerbations in patients with high bronchodilator reversibility and fixed airflow obstruction and improved lung function in patients without fixed airflow obstruction and high bronchodilator reversibility.

How does this study impact current management guidelines? Identifying patient characteristics associated with improved outcomes with omalizumab may help to define patient populations that are more likely to derive benefit from omalizumab.

Self-Reported Physical Activity and Asthma Risk in Children
Lu et al

What is already known on this topic? In general, physical activity is important for healthy growth and development for children but is a common trigger for asthma symptoms.

What does this article add to our knowledge? This study shows that different levels of physical activity are associated with asthma risk in children and adolescents.

How does this study impact current management guidelines? These findings emphasize the need to assess physical activity levels in children when considering asthma risk.

The Relationship Between Post-Traumatic Stress Disorder and Self-Management Behaviors in World Trade Center Workers with Asthma
Wisnivesky et al

What is already known about this topic? Posttraumatic stress disorder (PTSD) is associated with increased asthma morbidity in World Trade Center (WTC) workers, but the underlying pathways are unknown.

What does this article add to our knowledge? We found that self-management behaviors are not different in WTC workers with and without PTSD, suggesting that other factors, such as symptom perception or immunological pathways, may explain this relationship.

How does this study impact current management guidelines? This study points to the need for additional research evaluating biological differences in WTC workers with asthma and PTSD.

Residual Volume Responsiveness Testing May Improve the Detection of Reversible Airway Obstruction in Asthma
Vempilly et al

What is already known about this topic? Residual volume responsiveness to albuterol has been observed to be useful in detecting reversible airway obstruction in chronic obstructive pulmonary disease. However, the prevalence and magnitude of residual volume (RV) responsiveness testing has not been formally studied in asthma.

What does this article add to our knowledge? This study showed that bronchodilator responsiveness by RV was present in a sizable proportion of subjects with physician-diagnosed asthma. Whereas the baseline forced expiratory volume in 1 second (FEV1) value influenced the degree of FEV1 responsiveness, the baseline value of RV did not much influence the degree of RV responsiveness. In addition, 36% more subjects were identified to have reversible airway obstruction using RV responsiveness to albuterol administration. Finally, the asthma symptom score had a significant association with the magnitude of RV responsiveness but not with FEV1 responsiveness.

How does this study impact current management guidelines? The addition of RV responsiveness testing can improve the yield of detecting reversible airway obstruction in asthma. Including RV responsiveness testing protocol can reduce the number of subjects referred for bronchial challenge testing. RV responsiveness may be used for monitoring the asthma symptom associated with air trapping.
Atopic Eczema–Associated Fracture Risk and Oral Corticosteroids: A Population-Based Cohort Study
Matthewman et al 257

What is already known about this topic? Adults with atopic eczema, especially those with severe atopic eczema, are at increased risk of major osteoporotic fracture; however, it is unclear what drives this association.

What does this article add to our knowledge? The association between atopic eczema and major osteoporotic fractures cannot be explained by oral corticosteroid use.

How does this study impact current management guidelines? Atopic eczema, especially severe atopic eczema, should be considered for inclusion in fracture-risk screening guidelines.

Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS): Series of 49 French Pediatric Cases
Bedouelle et al 267

What is already known about this topic? Drug reaction with eosinophilia and systemic symptoms (DRESS) is a rare and potentially fatal adverse reaction. It can be difficult to diagnose, even more so among children, because symptoms may mimic other commonly encountered pediatric conditions.

What does this article add to our knowledge? This case series shows that clinical and biological characteristics of DRESS syndrome in the pediatric population are similar to those of adults. The onset of first symptoms can be less than 2 weeks after treatment starts, especially with antibiotics.

How does this study impact current management guidelines? Treatment with topical corticosteroids appears to be sufficient in the least severe cases. Patch tests confirm the imputability of the molecule in most tested cases.

Deep Neural Network for Early Image Diagnosis of Stevens-Johnson Syndrome/Toxic Epidermal Necrolysis
Fujimoto et al 277

What is already known about this topic? Primary care physicians in most medical facilities rely on clinical information when Stevens-Johnson syndrome (SJS/TEN) is suspected. No artificial intelligence tools have been developed to assist in the diagnosis of SJS/TEN.

What does this article add to our knowledge? We have developed the first deep convolutional neural network (DCNN) for the image diagnosis of cutaneous adverse drug reactions. In addition to clinical information, as a diagnostic test, the DCNN may provide useful supportive data for a comprehensive diagnosis.

How does this study impact current management guidelines? The DCNN demonstrated superior performance in screening for SJS/TEN compared with dermatologists. Using the DCNN routinely in the diagnosis of cutaneous adverse drug reactions can reduce the burden on patients and physicians.

Trends in Pediatric Primary Immunodeficiency: Incidence, Utilization, Transplantation, and Mortality
Eddens et al 286

What is already known about this topic? The number of described primary immunodeficiencies is increasing. Incidence of primary immunodeficiency has not yet been studied on a national level. Prior inpatient database studies demonstrated prevalence and stable mortality rates of primary immunodeficiency patients.

What does this article add to our knowledge? The incidence of pediatric primary immunodeficiency is 2.8 per 1,000 hospital discharges. Diagnosis of B-cell disorders increased. T-cell diagnoses had the highest health care utilization. Mortality is decreasing in the primary immunodeficiency population.

How does this study impact current management guidelines? The current study highlights several key trends in the pediatric primary immunodeficiency population, including stable incidence, increasing health care utilization, decreasing complications following hematopoietic stem cell transplantation, and decreasing mortality.
Impact of Pharmacological Treatments for Chronic Spontaneous Urticaria with an Inadequate Response to H1-Antihistamines on Health-Related Quality of Life: A Systematic Review and Network Meta-Analysis
Nochaiwong et al

What is already known about this topic? Several pharmacological treatments for H1-antihistamine—refractory chronic spontaneous urticaria have been available, but their impact on patient-reported outcomes, including health-related quality of life, is unclear.

What does this article add to our knowledge? Based on the best available evidence synthesis, ligelizumab (72 or 240 mg) and 300 mg omalizumab significantly improved health-related quality of life with a moderate beneficial effect.

How does this study impact current management guidelines? To facilitate clinically meaningful improvements in health-related quality of life, biologics ligelizumab (72 or 240 mg) and 300 mg omalizumab appeared to be effective treatments for H1-antihistamine—refractory chronic spontaneous urticaria.