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.

Managing Food Allergy in Schools During the COVID-19 Pandemic

Matthew Greenhawt, MD, MBA, MSc[a], Marcus Shaker, MD, MSc[b,c], David R. Stukus, MD[d], David M. Fleischer, MD[a], Jonathan Hourihane, MD[e], Mimi L.K. Tang, MBBS, PhD[f], Elissa M. Abrams, MD[g], Julie Wang, MD[h], Theresa A. Bingemann, MD[i], Edmond S. Chan, MD[j], Jay Lieberman, MD[k], Hugh A. Sampson, MD[h,l], S. Allan Bock, MD[m], Michael C. Young, MD[n], Susan Waserman, MSc, MD[o], and Douglas P. Mack, MD, MSc[o,p] *Aurora, Colo; Hanover, Lebano, NH; Columbus, Ohio; Dublin, Ireland; Parkville, VIC; Winnipeg, MB, Canada; New York, Rochester, NY; Vancouver, BC, Canada; Montrouge, France; Boston, Mass; and Hamilton, Burlington, ON, Canada*

[a]Department of Pediatrics, Section of Allergy/Immunology, Children's Hospital Colorado, University of Colorado School of Medicine, Aurora, Colo
[b]Dartmouth-Hitchcock Medical Center, Section of Allergy and Immunology, Lebanon, NH
[c]Department of Pediatrics, Dartmouth Children's Hospital, Dartmouth Geisel School of Medicine, Hanover, NH
[d]Department of Pediatrics, Division of Allergy and Immunology, Nationwide Children's Hospital, The Ohio State University College of Medicine, Columbus, Ohio
[e]Department of Paediatrics, Royal College of Surgeons, Dublin, Ireland
[f]Department of Allergy and Immunology, The Royal Children's Hospital Melbourne, Murdoch Children's Research Institute, University of Melbourne, Parkville, Victoria, Australia
[g]Section of Allergy and Clinical Immunology, Department of Pediatrics and Child Health, The University of Manitoba, Winnipeg, Manitoba, Canada
[h]Department of Pediatrics, Division of Allergy and Immunology, Icahn School of Medicine at Mount Sinai, New York, NY
[i]University of Rochester Division of Allergy, Immunology and Rheumatology, Rochester, NY
[j]BC Children's Hospital, Division of Allergy & Immunology, The University of British Columbia, Vancouver, British Columbia, Canada
[k]Division of Allergy and Immunology, The University of Tennessee, Memphis, TN
[l]DBV Technologies, Montrouge, France
[m]Deptartment of Pediatrics, University of Colorado School of Medicine (Emeritus), Aurora, Colo
[n]Division of Allergy & Immunology, Children's Hospital Boston, Harvard Medical School, Boston, Mass
[o]Department of Medicine, Clinical Immunology and Allergy, McMaster University, Hamilton, Ontario, Canada
[p]Halton Pediatric Allergy, Burlington, Ontario, Canada

No funding was received for this work.

Conflicts of interest: M. Greenhawt receives support from grant #5K08HS024599-02 from the Agency for Healthcare Research and Quality; is an expert panel and coordinating committee member of the National Institute of Allergy and Infectious Diseases (NIAID)-sponsored Guidelines for Peanut Allergy Prevention; has served as a consultant for the Canadian Transportation Agency, Thermo Fisher, Intrommune, and Aimmune Therapeutics; is a member of physician/medical advisory boards for Aimmune Therapeutics, DBV Technologies, Sanofi/Genzyme, Genentech, GlaxoSmith Kline, Merck, Nutricia, Kaleo Pharmaceutical, Nestle, Aquestive, Allergy Therapeutics, AllerGenis, Aravax, and Monsanto; is a member of the scientific advisory council for the National Peanut Board; has received honorarium for lectures from Thermo Fisher, Aimmune Therapeutics, DBV Technologies, Before Brands, multiple state allergy societies, the American College of Allergy Asthma and Immunology, the European Academy of Allergy and Clinical Immunology; is an associate editor for the *Annals of Allergy, Asthma, and Immunology*; and is a member of the Joint Taskforce on Allergy Practice Parameters. M. Shaker is a member of the Joint Taskforce on Allergy Practice Parameters; has a family member who is CEO of Altrix Medical; and serves on the editorial board of the *Journal of Food Allergy* and the *Annals of Allergy, Asthma, and Immunology*. D. R. Stukus is a consultant for DBV Therapeutics, Before Brands, and Abbott Nutrition; and is the member of the American Academy of Allergy, Asthma, and Immunology COVID-19 Task Force. D. M. Fleischer received institutional research funding from DBV Technologies; institutional research funding from Aimmune Therapeutics; has served as a consultant and received personal fees from DBV Technologies, AllerGenis, Aquestive, Aravax, DOTS Technology, Intrommune, Genentech, and Nasus; and is a non-paid member of the scientific advisory council for the National Peanut Board and a non-paid member of clinical advisory boards for Food Allergy Research & Education and Food Allergy and Anaphylaxis Connectivity Team. J. Hourihane received research funding and consultancy fees from Aimmune Corporation, and research funding from Johnson & Johnson. M. L. K. Tang has received speaker fees from Nestle Health Science, Abbot Nutrition; is a consultant to Bayer Pharmaceuticals and Abbot Nutrition; received research grants from NHMRC, Bayer Pharmaceuticals, and Abbott Nutrition; is an inventor on patents related to food allergy treatments; and is an employee at Prota Therapeutics. E. M. Abrams is a collaborator with the Institute for Health Metrics and Evaluation, is on the National Advisory Board for Food Allergy Canada; and is on the National Food Allergy Action Plan Action Steering Team for Food Allergy Canada. J. Wang received institutional research funding from Regeneron, DBV, and Aimmune; consultancy fees from DBV and ALK Abello; is an UpToDate author; serves on the Executive Committee of the American Academy of Pediatrics Section on Allergy and Immunology; and serves as Vice Chair of the AAAAI Anaphylaxis, Dermatitis, Drug Allergy Interest Section. T. A. Bingemann has no relevant conflicts of interest. E. S. Chan received research support from DBV Technologies; has been a member of advisory boards for Pfizer, Pediapharm, Leo Pharma, Kaleo, DBV, AllerGenis, and Sanofi Genzyme; is a member of the health care advisory board for Food Allergy Canada; was an expert panel and coordinating committee member of the NIAID-sponsored Guidelines for Peanut Allergy Prevention; and was co-lead of the CSACI oral immunotherapy guidelines. J. Lieberman received research support (money to institution) from DBV, Aimmune, and Regeneron; is on the advisory board of DBV, Genentech, and Covis; and is the consultant for Kaleo. H. A. Sampson is a part-time employee of DBV Technologies; receiving consultant fees from N-Fold Therapeutics; and receiving grants from the National Institutes of Health, National Institute of Allergy and Infectious Diseases. S. A. Bock receives royalties from Up to Date. M. C. Young has consulted for Aimmune Therapeuutics. S. Waserman is the medical advisor for Food Allergy Canada and past chairperson of Anaphylaxis Committee AAAAI. D. P. Mack is the member of the Board of Directors for the Canadian Society of Allergy and Clinical Immunology; and serves on the Editorial Board of the *Journal of Food Allergy*. He has provided consultation and speaker services for Pfizer, Aimmune, Merck, Covis, and Pediapharm and has been part of an advisory board for Pfizer and Bausch Health.

Received for publication June 3, 2020; revised July 14, 2020; accepted for publication July 16, 2020.
Available online July 23, 2020.
Corresponding author: Matthew Greenhawt, MD, MBA, MSc, Section of Allergy and Immunology, Food Challenge and Research Unit, Children's Hospital Colorado, University of Colorado School of Medicine, 13123 E. 16th Ave, Aurora, CO 80045. E-mail: Matthew.Greenhawt@childrenscolorado.org.
2213-2198

https://doi.org/10.1016/j.jaip.2020.07.016

Abbreviations used
CDC- Centers for Disease Control

In the wake of the COVID-19 pandemic and massive disruptions to daily life in the spring of 2020, in May 2020, the Centers for Disease Control (CDC) released guidance recommendations for schools regarding how to have students attend while adhering to principles of how to reduce the risk of contracting SARS-CoV-2. As part of physical distancing measures, the CDC is recommending that schools who traditionally have had students eat in a cafeteria or common large space instead have children eat their lunch or other meals in the classroom at already physically distanced desks. This has sparked concern for the safety of food-allergic children attending school, and some question of how the new CDC recommendations can coexist with recommendations in the 2013 CDC Voluntary Guidelines on Managing Food Allergy in Schools as well as accommodations that students may be afforded through disability law that may have previously prohibited eating in the classroom. This expert consensus explores the issues related to evidence-based management of food allergy at school, the issues of managing the health of children attending school that are acutely posed by the constraints of an infectious pandemic, and how to harmonize these needs so that all children can attend school with minimal risk from both an infectious and allergic standpoint. **(J Allergy Clin Immunol Pract 2020;8:2845-50)**

Key words: *Food allergy; Anaphylaxis; Epinephrine; Hand washing; Allergen bans; Social distancing; CDC; Schools; Stock epinephrine; COVID-19; SARS-CoV-2; Americans with Disabilities Act; Rehabilitation Act of 1973*

The COVID-19 pandemic has required policymakers and clinicians to make difficult decisions regarding the health of our nation, relating to how to contain and control the spread of a pandemic, protect individuals, and now how to return to a changed sense of normalcy in resuming daily life.[1,2] In the early stages of the pandemic, schools were recognized as a potential venue for propagating viral transmission given the close proximity of children in classrooms and concern that children may act as "super spreaders," a theory that has since been de-emphasized. However, given concern for the potential of spread among and from children, in-class learning was halted, schools (from elementary to universities) were closed, and most learning was shifted to online and virtual classes.[3-5] Now that infection rate/spread is declining, most states are evaluating how to best resume in-person learning in the fall. To help achieve this, the Centers for Disease Control (CDC) has recently released guidelines delineating how to safely resume school, with a heavy focus on physical distancing measures and avoidance of large crowd gatherings, such as in a cafeteria or sporting events. These guidelines, released in mid-May 2020, recommend that children eat lunch in the classroom.[6] It is important to recognize the impact these recommendations may have on food-allergic children and that these recommendations may cause concern for families of children with food allergy. Therefore, this rostrum attempts to provide a balanced view to support families and schools.

An estimated 8% to 9% of US children under the age of 18 have a food allergy.[7] This implies that, in all likelihood, most classrooms have at least 1 and possibly several children in each classroom who have a food allergy. Having an accurate understanding of the risk associated with the implementation of CDC recommendations will better support schools and families in the current context of returning to school amidst ongoing concerns around viral transmission in these settings.[3,5,8]

It is necessary for children to eat lunch and possibly other meals in school. The United States Department of Agriculture also provides multiple subsidized meals for low-income children attending school, which often include allergens such as milk. School lunch programs are a crucial source of nutrition for many students.[9] Both Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act have been used to provide accommodations for optimizing the education of children with special health care needs.[10-12] The context of these acts has been expanded to protect food-allergic children at school. Section 504 plans are commonly implemented, allowing the family and the school to mutually decide on requested accommodations to best help protect the child. These plans are legal but not medical documents, and the physician often does not have a formal role in the development of the plan. The development of the plans is typically between the parent and the school.[10] Not all food-allergic children have such plans in place. Common accommodations might include providing an allergic child a separate area to eat, creating a separate table that restricts a particular allergen from being eaten (while allowing other children to join them), mandating strict hand/surface washing after food contact, and prohibiting food sharing. In some cases, schools have elected to ban a particular allergen either from the class, the school, or both.[13] There is no substantive evidence that allergen bans in schools or classrooms reduce allergic reactions or rates of epinephrine use.[14] In contrast, strong evidence exists to show that strict handwashing, wiping, and washing down surfaces, and not sharing food do decrease risk.[15,16] Nonetheless, many schools have still enacted food bans either voluntarily or as part of federal disability law accommodation as requested by parents of food-allergic children.[13]

Although the CDC recommendations for reactivating schools link to their 2013 "Voluntary Guidelines for Managing Food Allergy in Schools" document,[17] these do not explicitly mention how to manage accommodations for food allergy or potential conflicts between this policy and disability law accommodations.[6] Therefore, we wish to provide some evidence-based recommendations for all stakeholders—the children, the schools, the families, and the food allergy advocacy community—regarding how to navigate these difficult issues, with the aim of promoting harmony between accommodations for food-allergic children and the CDC guidelines on safely resuming school during a pandemic, to achieve a shared aim where all children can safely attend school.

RECOMMENDATION 1: SCHOOLS SHOULD ALWAYS PROMOTE STRICT HANDWASHING BEFORE/AFTER MEALS WITH SOAP AND WATER (NOT GEL SANITIZER, SINCE GEL SANITIZERS HAVE NOT BEEN SHOWN TO REMOVE ALLERGEN); CLEANING SURFACES WITH A DETERGENT AGENT BEFORE/AFTER MEALS; AND AVOIDING SHARING FOOD AS COMMON POLICY

These recommendations are part of the 2013 Voluntary Guidelines on Managing Food Allergy in Schools[17] and have

TABLE I. Considerations regarding policies that ban specific foods from schools

Intent	Potential consequence
Can provide support to families of food-allergic children	Enforcement is impossible; every child's snacks and meals would need to be checked every school day
Policies bring food allergy awareness to the forefront	Peanut or tree nut bans do not help children with other food allergies; banning milk, egg, wheat, or other foods from the school is not feasible
May assist schools with low staff to student ratios	Evidence demonstrates potential for increased risk of reactions in schools with peanut/tree nut bans
May be useful in settings with predominance of very young children, eg, daycare or preschool settings, or with mentally challenged children	Trust in a ban may lead school personnel and students to have less vigilance regarding food allergy reactions
	Some families may rely on peanut/tree nuts as an affordable and nutritious option for meals
	May lead to animosity toward (and isolation of) a small number of students with food allergies preventing the ability of food to be brought in for all students

been shown in controlled studies to be effective at abating allergen from hands and surfaces after food contact to help prevent accidental allergen exposure.[15,16] Although these are general recommendations that are applicable to all children, they are particularly important in classrooms where there are food-allergic children and the children may consume any food. Moreover, these hygienic measures also directly help prevent the spread of infectious diseases, including SARS-CoV-2, in a classroom setting, which is the CDC's primary aim at present.[18-20] Oral allergen exposure is considered the highest risk for a potential food-allergic reaction[21]; the new CDC recommendation also specifies that children wear cloth facial coverings[6] is a measure that will further limit any incidental hand-to-mouth contact after touching a potentially allergen-contaminated surface that was not washed.

RECOMMENDATION 2: FOOD BANS SHOULD NOT BE INCLUDED IN ACCOMMODATION PLANS OR STRATEGIES USED AS PART OF SECTION 504 PLANS

There are no data supporting the efficacy of allergen bans in decreasing the risk of an accidental reaction occurring at school. Such accommodations were somewhat controversial before the pandemic, and of questionable necessity given no supporting evidence that such policy is associated with a reduction in reaction frequency or epinephrine use.[14] Furthermore, there is no evidence that inhalation of protein or skin contact from casual environmental contact is associated with a risk of a systemic reaction.[21] Table I outlines important points of consideration regarding blanket food allergen bans for schools. Neither the allergy community nor state school food allergy guidelines endorse food bans as a recommendation.[13,17] However, despite the lack of evidence or broad support from the medical community, some schools have still instituted allergen bans. The start of any new school year is an opportunity to revise and re-evaluate removing pre-existing food ban policy in schools given lack of medical necessity for such measures. In light of the CDC recommendations to have all meals eaten in the classroom as a means of reducing pandemic risk, we specifically recommend against instituting any new food allergen bans for specific allergen or common allergens as a means of managing food-allergic students in this updated setting. Given the urgent need to restrict large gatherings of children sitting in close proximity to one another, such as in a cafeteria, children will consume food (including allergens) in classrooms during this pandemic.[6] Unconditional empiric allergen bans or restrictions may have been policy for some schools pre-COVID-19, but in light of the adjustments to accommodate physical distancing in the pandemic, instituting any new allergen restrictions as a management strategy to balance the presence of eating in the classroom is unlikely to be feasible.

Moreover, any sudden requirement for bans is not equitable for the other children, who face reduced choice in what can be eaten under such newly instituted bans, and may actually affect food-allergic children themselves if some of their already limited choices are even further limited. Lastly, this issue of reduced equity is particularly germane for students who rely on reduced or free meals being served at school, which commonly contain certain major allergens. The potential for food supply chain issues and economic hardships during this pandemic may increase food insecurity, adding another dimension of challenge and imbalance in all children, food allergic or not.

RECOMMENDATION 3: INCORPORATE REASONABLE, EVIDENCE-BASED, AND MUTUALLY BENEFICIAL ACCOMMODATIONS INTO 504 PLANS GIVEN THE UNUSUAL RESTRICTIONS POSED BY ALSO MINIMIZING INFECTION RISK OF CONTRACTING COVID-19 AT SCHOOL

Accommodations that are part of a child's 504 plan should be made with mutual understanding among all stakeholders involved in developing the accommodation strategy that in a pandemic setting there are additional constraints that must be considered to foster a shared mutual goal of protecting and accommodating all students given concern that attending school has risk for contracting SARS-CoV-2.[10] For example, although an allergen-free table or restricting snacks/treats with particular allergens in a classroom may have been considered a reasonable accommodation before the pandemic in certain highly contextualized settings, in these new settings, such restrictions would not be possible or necessary under the new recommendations. Although there is evidence that food-allergic reactions can occur at school, evidence strongly suggests that such risks are minimal from classmates eating their lunches at a separate desk, in

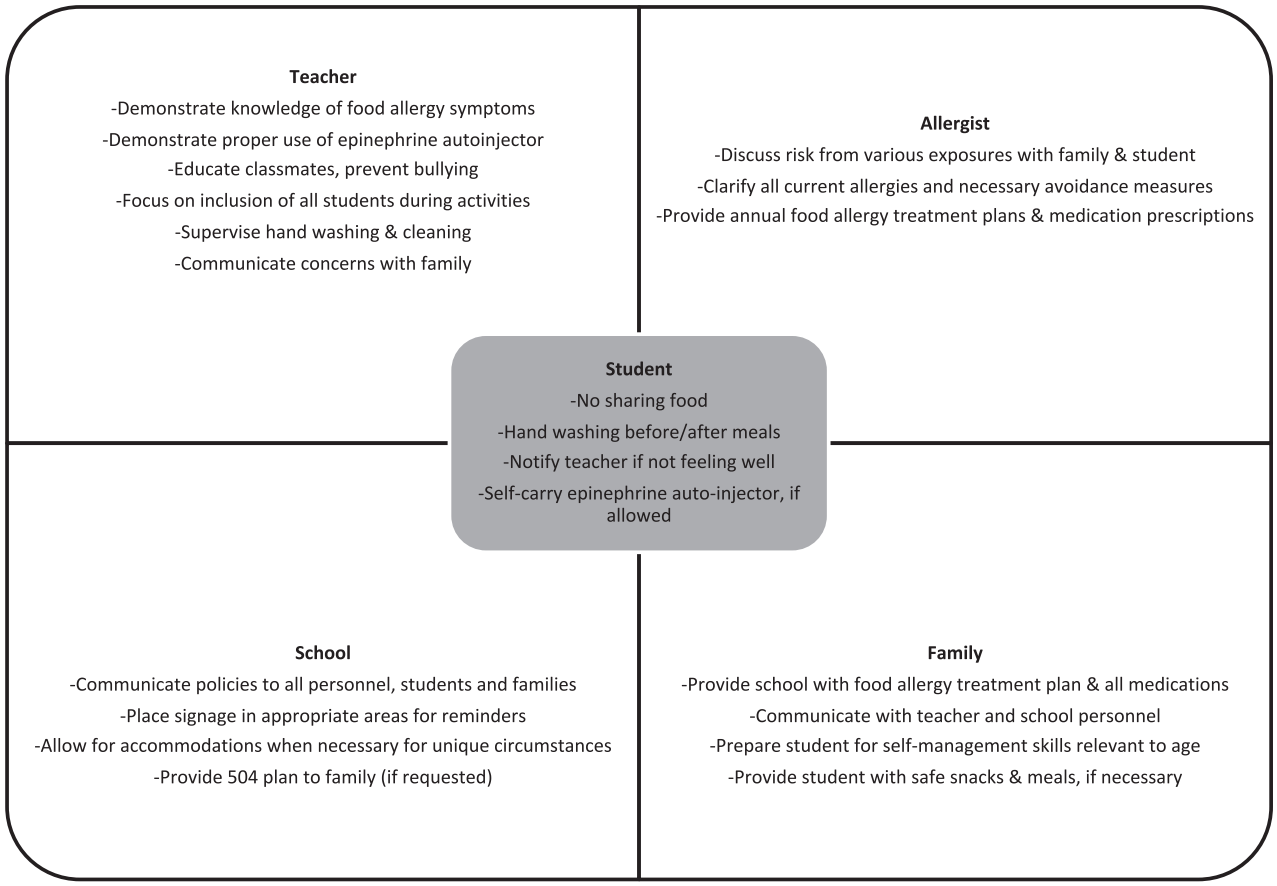

FIGURE 1. Shared responsibility to accommodate food-allergic students in the classroom during the COVID-19 pandemic.

particular, when the points outlined in recommendation 1 are followed, even if there is the presence of an allergic child's allergen in the classroom.[13,21] One potentially pragmatic recommendation that could be universally applied at the school level would be to recommend allergen labeling (if not already done) on any prepackaged food provided by the school as part of the aforementioned meal service. As well, schools should strongly consider making ingredient lists for all meals available (including providing this list to all teachers with known food-allergic children in their class), and requesting that the teachers help food-allergic students navigate the selection of prepackaged food items that the school is providing.

RECOMMENDATION 4: SCHOOLS THAT DO NOT ALREADY STOCK UNASSIGNED EPINEPHRINE SHOULD BE STRONGLY ENCOURAGED TO IMMEDIATELY ADOPT THIS POLICY

To best help provide protection under the new recommendations, schools must strongly be encouraged to stock unassigned epinephrine if they have not already done so,[22] and it is imperative for teachers to know where epinephrine is stored. Although the undesignated, non—student-specific stock supply should remain in a central location, schools should consider adapting policies to permit student-provided epinephrine devices to be stored in the classroom or with the student (if age appropriate) as opposed to in a central office. Schools should also consider making a copy of the student's food allergy action plan to be kept in the classroom. This would facilitate more timely potential treatment with lunches now being eaten in the classroom, given that a food-allergic child could have an unintended reaction despite evidence-based strategies and health care plans already in place to try to minimize such risks from the presence of their allergen.[23]

RECOMMENDATION 5: TRAIN (OR RENEW TRAINING) FOR ALL TEACHERS, STAFF, AND VOLUNTEERS AT THE SCHOOL IN THE RECOGNITION OF THE SIGNS AND SYMPTOMS OF FOOD-ALLERGIC REACTIONS INCLUDING ANAPHYLAXIS, AND HOW TO PROMPTLY TREAT REACTION SYMPTOMS WITH EMERGENCY MEDICATION

Before the start of the academic year, provide/renew training on how to use all varieties of epinephrine autoinjectors kept at the school or provided by students. Education of all students regarding signs and symptoms of food-allergic reactions and the need for everyone to contribute to a safe environment would be beneficial as well.[23] Although the overall risk of a student reacting at school would not be expected to change, a spreading of students across more classrooms as well as a shift of eating location may mean that the primary teacher becomes more immediately responsible for treating a reaction in his or her

FIGURE 2. Areas of focus to maintain safety and inclusion for food-allergic children in the classroom during the COVID-19 pandemic.

classroom, whereas before the pandemic, reactions were more likely to happen outside the classroom where the teacher was not providing the primary supervision. Therefore, training as many staff as possible is highly recommended.

RECOMMENDATION 6: INSTITUTE A ZERO-TOLERANCE POLICY FOR FOOD ALLERGY–RELATED BULLYING

There is increased potential for bullying against food-allergic students in these new situations where students have to eat their lunch in the classroom. This policy may be difficult to enforce at some ages and in some contexts, but this is important to reduce any perceived vulnerability related to food allergy. Alternatively, having a teacher or other adult staff member present in the class during lunch could potentially decrease bullying. Before the academic year begins, schools are highly recommended to develop clear antibullying policy outlining what is considered as bullying behavior and how such incidents will be handled. These expectations should be openly communicated to all staff, students, and parents.[24-26]

RECOMMENDATION 7: CONSIDER ADOPTING UNIQUE APPROACHES OR MODIFYING CURRENT SCHOOL DISTRICT OR CDC POLICIES OR RECOMMENDATIONS, AS INDICATED BY SPECIAL CIRCUMSTANCES

Certain classroom sizes, physical layouts, and number of children with food allergies may require adoption of unique approaches. There are multiple factors that each classroom, school, student, and family must consider in adoption of safe practices. If there are numerous students with food allergies at a certain grade level, for example, there could be consideration for having a separate dedicated classroom for them to eat in where more intensive food allergy prevention efforts could be applied. Younger children and children with developmental challenges are more at risk of spreading food to areas outside of their personal seating area, potentially share food, or take food from other children.[25,27] As such, seating arrangements or additional supervision may be necessary for younger children, such as in preschools. Fortunately, the benefits of physical distancing and hygiene practices to prevent both allergen and SARS-CoV-2 transmission align.

RECOMMENDATION 8: SCHOOLS SHOULD DEVELOP VERY CLEAR COMMUNICATIONS STRATEGIES AND CHANNELS TO HELP PROMOTE OPEN DIALOGUE AND ENGAGEMENT, FOR FOSTERING TRUST WITH FAMILIES OF FOOD-ALLERGIC CHILDREN

As updated food allergy policy evolves and communicated to school personnel and families of food-allergic children, it is important to consider the context in which these discussions occur. The COVID-19 pandemic has created unprecedented disruptions to our normal lives. All families, students, and school personnel will experience some degree of anxiety regarding a return to school and to the "new normal."[28,29] Some families of food-allergic children will have higher baseline anxiety, particularly surrounding school attendance and the risk of allergic reactions while under the supervision of other caregivers. Conversations and communication of the new approaches to eating inside the classroom may heighten anxiety and additional concerns regarding the child's safety. These discussions are opportunities to help foster inclusion of food-allergic children,

reinforce what factors they can control (washing hands, no sharing, eating in their lunch space, etc.), build recognition amongst all school children of the unique challenges of having a food allergy, and re-evaluate/modify traditional policies of protection for food-allergic children, including policies that may decrease a child's quality of life. Figure 1 outlines areas of consideration to help involve the community in an effort to support children with food allergies. Figure 2 summarizes the recommendations in this rostrum.

The new CDC recommendations can harmonize with prior recommendations or personal advice from allergists to their patients.[6,17] Schools that previously banned certain foods will need to communicate why those bans are no longer required (should they choose to alter their policies). Changing recommendations can create concern, possible anger, and confusion for families. As discussed above, the COVID-19 pandemic will force re-evaluation of prior experiences, adoption of new practices, and requires a more universal approach to school-based policy given that preventing infectious spread at school is the CDC's highest priority. Importantly, this should not be viewed as prioritizing the health care concerns of one population over any other, but rather as a way to align and focus practices on evidence-proven strategies that have proven effective in protecting students, while de-emphasizing past policies that have not.[14,21]

The recommendations contained herein can be applied in the United States as well as other countries and jurisdictions because they are based on the available evidence regarding allergen avoidance in any school setting. There is a common need to provide a safe educational experience for all our children despite a stressful, challenging, and fluid pandemic setting. At present, priorities for managing infectious risk must be balanced with other medical concerns.[5,19,20,30,31] This unique situation provides an opportunity for all stakeholders to review and understand the quality and level of evidence for food allergy management at school.[21,25] Infection control and food allergen avoidance are not mutually exclusive and can be complementary. As such, both risks can be safely mitigated (although not completely eliminated) with the outlined measures for optimizing both goals.

REFERENCES

1. Haffajee RL, Mello MM. Thinking globally, acting locally—the U.S. response to Covid-19. N Engl J Med 2020;382:e75.
2. Larochelle MR. "Is it safe for me to go to work?" Risk stratification for workers during the Covid-19 pandemic. N Engl J Med 2020;383:e28.
3. Starr M. Back to school: safe for children with underlying medical conditions [published online ahead of print May 19, 2020]. Aust J Gen Pract. https://doi.org/10.31128/ajgp-covid-21.
4. The Lancet Child Adolescent Health. Pandemic school closures: risks and opportunities. Lancet Child Adolesc Health 2020;4:341.
5. Viner RM, Russell SJ, Croker H, Packer J, Ward J, Stansfield C, et al. School closure and management practices during coronavirus outbreaks including COVID-19: a rapid systematic review. Lancet Child Adolesc Health 2020;4:397-404.
6. Centers for Disease Control. Considerations for Schools: Operating Schools During COVID-19. Available from: https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/schools.html. Accessed June 1, 2020.
7. Gupta RS, Warren CM, Smith BM, Blumenstock JA, Jiang J, Davis MM, et al. The public health impact of parent-reported childhood food allergies in the United States. Pediatrics 2018;142:e20181235.
8. Shaker M, Hsu-Blatman K, Abrams EM. Engaging patient partners in state of the art allergy care: finding balance when discussing risk. Ann Allergy Asthma Immunol 2020;125:252-61.
9. US Department of Agriculture. Child Nutrition Programs. Available from: https://www.fns.usda.gov/cn. Accessed June 1, 2020.
10. Section 504 Federal Regulations, 34 C.F.R. Part 104. Available from: https://www2.ed.gov/policy/rights/reg/ocr/edlite-34cfr104.html. Accessed March 23, 2018.
11. Rehabilitation Act of 1973. Available from: https://www2.ed.gov/policy/speced/leg/rehab/rehabilitation-act-of-1973-amended-by-wioa.pdf. Accessed June 1, 2020.
12. Americans With Disabilities Act of 1990. Pub. L. 101-336; July 26, 1990. 104 Stat. 328. Accessed June 1, 2020.
13. Abrams EM, Greenhawt M. The role of peanut-free school policies in the protection of children with peanut allergy. J Public Health Policy 2020;41:206-13.
14. Bartnikas LM, Huffaker MF, Sheehan WJ, Kanchongkittiphon W, Petty CR, Leibowitz R, et al. Impact of school peanut-free policies on epinephrine administration. J Allergy Clin Immunol 2017;140:465-73.
15. Perry TT, Conover-Walker MK, Pomes A, Chapman MD, Wood RA. Distribution of peanut allergen in the environment. J Allergy Clin Immunol 2004;113:973-6.
16. Brough HA, Makinson K, Penagos M, Maleki SJ, Cheng H, Douiri A, et al. Distribution of peanut protein in the home environment. J Allergy Clin Immunol 2013;132:623-9.
17. Centers for Disease Control. Voluntary Guidelines for Managing Food Allergies in Schools and Early Care and Education Programs. Available from: https://www.cdc.gov/healthyschools/foodallergies/pdf/20_316712-A_FA_guide_508tag.pdf. Accessed May 20, 2020.
18. Nickbakhsh S, Ho A, Marques DFP, McMenamin J, Gunson RN, Murcia PR. Epidemiology of seasonal coronaviruses: establishing the context for COVID-19 emergence. J Infect Dis 2020;222:17-25.
19. Kratzel A, Todt D, V'kovski P, Steiner S, Gultom M, Thao TTN, et al. Inactivation of severe acute respiratory syndrome coronavirus 2 by WHO-recommended hand rub formulations and alcohols. Emerg Infect Dis 2020;26:1592-5.
20. Dhama K, Patel SK, Pathak M, Yatoo MI, Tiwari R, Malik YS, et al. An update on SARS-CoV-2/COVID-19 with particular reference to its clinical pathology, pathogenesis, immunopathology and mitigation strategies [published online ahead of print May 30, 2020]. Travel Med Infect Dis. https://doi.org/10.1016/j.tmaid.2020.101755.
21. Greenhawt M. Environmental exposure to peanut and the risk of an allergic reaction. Ann Allergy Asthma Immunol 2018;120:476-481.e3.
22. PUBLIC LAW 113-48, November 13. School Access to Emergency Epiephrine Act; 2013.
23. Greenhawt M, Wallace D, Sublett JW, Maughan E, Tanner A, Kelley KJ, et al. Current trends in food allergy-induced anaphylaxis management at school. Ann Allergy Asthma Immunol 2018;121:174-8.
24. Bingemann T, Herbert LJ, Young MC, Sicherer SH, Petty CR, Phipatanakul W, et al. Deficits and opportunities in allergists' approaches to food allergy-related bullying. J Allergy Clin Immunol Pract 2020;8:343-345.e2.
25. Wang J, Bingemann T, Russell AF, Young MC, Sicherer SH. The allergist's role in anaphylaxis and food allergy management in the school and childcare setting. J Allergy Clin Immunol Pract 2018;6:427-35.
26. Fong AT, Katelaris CH, Wainstein B. Bullying and quality of life in children and adolescents with food allergy. J Paediatr Child Health 2017;53:630-5.
27. Sicherer SH, Mahr T. American Academy of Pediatrics Section on Allergy and Immunology. Management of food allergy in the school setting. Pediatrics 2010;126:1232-9.
28. Estes KD, Thompson RR. Preparing for the aftermath of COVID-19: shifting risk and downstream health consequences. Psychol Trauma 2020;12(S1):S31-2.
29. Vindegaard N, Benros ME. COVID-19 pandemic and mental health consequences: systematic review of the current evidence. Brain Behav Immun 2020;89C:531-42.
30. Leung NHL, Chu DKW, Shiu EYC, Chan K-H, McDevitt JJ, Hau BJP, et al. Respiratory virus shedding in exhaled breath and efficacy of face masks. Nat Med 2020;26:676-80.
31. Arons MM, Hatfield KM, Reddy SC, Kimball A, James A, Jacobs JR, et al. Presymptomatic SARS-CoV-2 infections and transmission in a skilled nursing facility. N Engl J Med 2020;382:2081-90.