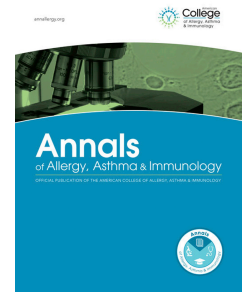


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Opportunities to Support Emotional Health in School-Age Children with Food Allergy

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Conflict of Interest: The Cellie Coping Kit for Children with Food Allergy is one resource (of several) referenced in this commentary as a tool to support pediatric food allergy patients. Dr. Marsac is a co-inventor of the kit. Dr. Marsac, The Children's Hospital of Philadelphia, and The University of Kentucky may benefit financially from the kit in the future.

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Over the last 30 years, the prevalence of food allergy has been significantly increasing with current estimates as high as 10%.¹ While development of immunotherapy, through oral, sublingual, and epicutaneous routes to induce tolerance in food allergic patients is a very active area of study, the mainstay of therapy for most patients remains strict avoidance and immediate access to epinephrine autoinjectors.² Despite these precautions, accidental exposure to food allergen is not uncommon, especially among school-age children.³ A recent study identified an annual incidence of adverse reaction greater than 12%.⁴ The consequences of daily management of pediatric food allergy and accidental exposures in school-age children can be difficult for families.

Food allergy impacts child and family emotional health and social functioning along with the child's physical health. The impact of food allergy varies throughout development, which has implications for management based upon age and social situation.⁵ School-age children with food allergy are at risk for impaired quality of life,^{6,7} elevated symptoms of anxiety, depression⁶ and posttraumatic stress,⁸ and are twice as likely to report bullying than their non-allergic peers.⁷ Family activities are limited due to food allergies: Many caregivers report that they would rather avoid risky places (e.g., school trips, social events, restaurants) than try to manage allergens in outside environments. Parents also frequently worry about their child eating at school. Some parents choose to home-school due to fears of allergen exposure in a school environment.⁶

School-age children with food allergy are at risk for emotional trauma due to fear of life-threatening reactions following exposures to the allergens, observations of parental fear of accidental food exposures, and the social consequences of food allergy (e.g., bullying, exclusion from food-related social events). This can result in avoidance of places or events in which the allergen may be present (sometimes including school), anxiety when eating outside the home,

and hypervigilance about food. On the other hand, some children may minimize the seriousness of the food allergen risk and fail to avoid foods and /or refuse to carry an epinephrine autoinjector to avoid drawing attention from their peers, placing themselves at higher risk for a serious consequence from exposure to the food allergen. Youth entering adolescence and children whose parents do not take the allergen exposure risk seriously may be more likely to minimize food allergy risk.

A trauma-informed medical care approach may be helpful, given the potentially traumatic challenges that many school-age children with food allergy face. In trauma-informed approaches, health care providers realize the prevalence of emotional trauma (in this case, consequences of food allergy such as anaphylaxis or bullying); recognize the impact of emotional trauma exposure on children and families (i.e., anxiety, depression, or trauma symptoms); and integrate trauma knowledge into medical practice to minimize re-traumatization.⁹ The Pediatric Psychosocial Preventive Health Model (PPPHM) offers guidance on the level of intervention (universal, targeted, clinical / treatment) needed based on symptoms and level of distress.¹⁰ See Figure 1.

Universal interventions (i.e., for all school-age children with food allergy): Healthcare providers may want to consider integrating routine emotional health symptoms screening into their practice, or if already screening, consider how results may be related to food allergy. A number of screening tools can be used to assess both child and parent distress such as the Psychosocial Assessment Tool or the Distress Thermometer (see: <https://healthcaretoolbox.org/tools-and-resources/tools-you-can-use-screening.html>). The results of screening can aide providers in tailoring the level of intervention for each child. For all patients and families, providers may want to consider offering education on the challenges of

managing food allergy (physical and emotional) along with anticipatory guidance on how to manage these challenges. Given the time limitations, health care providers may want to consider using evidence-based resources to facilitate this education such as *Living Confidently with Food Allergy: A Guide for Parents and Families* (<https://www.allergyhome.org/handbook/>), *Kids with Food Allergies* website (<https://www.kidswithfoodallergies.org./>), and /or the *Cellie Coping Kit for Food Allergy* (www.celliecopingkit.org),

Targeted interventions (for school-age children with food allergy with some symptoms or risk factors): For those children and families that report some symptoms (e.g., nervousness about attending events where the allergen is present but still able to attend; worries about oral food challenges but able to participate; transient symptoms such as occasional sleep difficulties / nightmares) or risk factors (e.g., pre-existing mental health symptoms, family mental health symptoms, other trauma exposures, strained resources) but are overall doing well, providers may want to take a watchful waiting approach (possibly increasing visit frequency to monitor symptoms and functional impairment), provide additional guidance on specific symptoms or challenges families are facing, or consider a more focused consultation with a mental health provider to manage current challenges or symptoms.

Clinical / treatment interventions (symptoms impairing child or family functioning or interfering with medical care): At this level of need, a referral to a mental health provider is warranted. Common reasons for referral to a mental health provider for school-age children with food allergy include but are not limited to non-compliance with medical plans (e.g., multiple accidental exposures; failure to carry epinephrine auto-injector), inability to complete oral food challenges due to fears or behaviors, refusal to introduce foods post-oral food challenge, parental anxiety about food allergies, bullying, anxiety related to food allergy, avoidance of school or

activities due to allergic fears, and co-morbid anxiety or depression. A mental health provider can partner with the family to create a tailored plan for each individual patient, ideally collaborating with the referring physician.

The impact of food allergies on childhood psychological health and well-being has generally been underappreciated. Raising awareness of the relationship between food allergies, the challenges associated with managing food allergies and emotional health has the potential to improve the management of food allergy and overall child health. Future research to develop brief, validated screening tools as well as preventive and early intervention that can be easily be integrated into primary care and specialty care practice to identify at risk children and ensure appropriate care and support is provided to patients and families is needed.

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Figure Legend 1. Pediatric Psychosocial Preventive Health Model as applied to pediatric food allergy. Adapted with permission from the Center for Health care Delivery Science at Nemours Children's Health System © 2018-2019. All rights reserved.⁹

**Severe,
Escalating or
Persistent Distress**

**Families at Increased Risk
Families with Acute Distress**

All Families of a Child with Food Allergy

**Referral to mental health provider or
partnership with existing mental health
provider to increase or modify services**

**Increase depth and/or frequency of screening
Monitor risk factors
Monitor distress
Consider referral to mental health provider for
interventions around specific challenges**

**Regular screening
Education on emotional impacts of food allergy
Anticipatory guidance on coping**