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Childhood food allergy and anaphylaxis: an educational priority

The challenge of higher rates of food allergy must be met through development of better models of care and education

IgE-mediated food allergy (FA) and anaphylaxis have become an increasing public and personal health burden in developed countries over the past decade, contributing to increased demand for specialty services, significant economic cost of care, and reduced quality of life for children with FA and their families.¹ In the most accurate estimate in Australia to date, the Victorian HealthNuts study found the prevalence of challenge-proven FA at age 12 months to be 10% overall.² Effective strategies for primary prevention of FA are lacking, and secondary prevention is limited to strategies to reduce the risk of unintentional exposure. Although food-specific immunotherapy appears promising, it remains at the investigational stage because of the infrastructure required, high rates of adverse reactions and lack of persistent tolerance when treatment ceases.³ While several risk factors for childhood FA have been proposed — such as early-onset atopic eczema, timing of solids introduction, vitamin D status and intestinal bacterial load³ — this area remains an active area of research.

Although other triggers for anaphylaxis exist (insect venom, medication or latex), the major strategies for avoidance focus on FA, due to its relatively high prevalence in childhood and higher rates of accidental exposure, particularly in school and childcare settings.⁴ Risk management requires patient and carer education on reducing the risk of exposure to allergic triggers, providing an emergency action plan if reactions occur, dealing with higher-risk situations (eg, exposure to unlabelled food, attendance at parties, school excursions and camps), and providing an adrenaline autoinjector to individuals considered to be at higher risk. As children age and approach their teenage years, self-management and concerns about parties (exposure to unlabelled food), alcohol exposure (reduced vigilance) and risks of exposure to food allergens by kissing⁵ should also be discussed.

The demand for evidence-based and nationally consistent education across jurisdictional boundaries on how best to care for individuals with FA and anaphylaxis continues to outstrip the current resources available for face-to-face training by community and hospital-based FA and anaphylaxis trainers. With most specialist services located in major cities, alternative models for education delivery are required to service the needs of rural areas.

To meet the challenge of increasing FA prevalence and demand for education, the Australasian Society of Clinical Immunology and Allergy (ASCIA) has developed a number of educational resources including national standardised emergency action plans, adrenaline autoinjector prescription guidelines (<http://www.allergy.org.au/health-professionals/anaphylaxis-resources>), and allergy

prevention guidelines for schools and child care.⁴ ASCIA has also partnered with various state education and health departments to develop childcare and school e-training courses, which are available without charge from the ASCIA website (<http://www.allergy.org.au>). The content of these educational programs was developed after extensive consultation, with childcare versions approved by the Australian Children's Education and Care Quality Authority. Since launching in March 2010, 178 000 school and childcare staff have registered for the e-training.

Additional separate modules on anaphylaxis and FA management have been specifically designed to meet the needs of medical practitioners, pharmacists, dietitians, first aid providers and the broader community, with Royal Australian College of General Practitioners accreditation of a 6-hour active learning module on allergy and anaphylaxis worth 40 (Category 1) continuing medical education points (<https://alm.ascia.org.au>).

Education of patients, caregivers and health professionals is recommended in FA and anaphylaxis guidelines, with the aims of improving patient care and reducing the risk of adverse outcomes.⁶ While the clinical outcome from provision of emergency action plans is yet to be investigated in controlled studies,⁷ educational training has been shown to result in more accurate recognition of symptoms of anaphylaxis by health professionals,⁸ and to improve knowledge of FA and change practice in catering staff.⁹ Finally, an evaluation of ASCIA pharmacist e-training demonstrated improved knowledge after training compared with baseline or no training, and long-term retention of knowledge 7 months after completion.¹⁰

Until specific strategies are available to reduce the health burden of FA and anaphylaxis, the challenges for our health care systems will be how best to develop evidence-based policies to reduce the risk of FA development, care for younger children presenting with new cases of FA or anaphylaxis, and manage the shifting burden on older teenagers and young adults, who carry the highest relative risk for fatal anaphylaxis. There will be an ongoing need to develop models of care to enhance access to specialist medical services, improve acute management and educate those charged with delivering care both within and outside the health care sector. We encourage health professionals involved in the care of patients with FA and anaphylaxis to update their skills in this area.

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Raymond J Mullins
PhD, FRACP, FRCPA^{1,2}

Richard KS Loh
FRACP³

¹ John James Medical Centre,
Canberra, ACT.

² Medical School, Australian
National University,
Canberra, ACT.

³ Princess Margaret Hospital
for Children, Perth, WA.

rmullins@allergycapital.com.au

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