# LETTER TO THE EDITOR

**Open Access** 

# The need for a food allergy educator program for allied healthcare professionals in Canada



Jennifer L. P. Protudjer<sup>1,2,3,4,5,6\*</sup>, Carina Venter<sup>7</sup>, Marion Groetch<sup>8</sup>, Tara Lynn Mary Frykas<sup>1,4</sup>, Jasmin Lidington<sup>2</sup> and Harold Kim<sup>2,9,10</sup>

# Abstract

Owing to a collaborative approach to patient care, and a paucity of allergists in Canada, there is a need to develop a food allergy educational program for allied health care professionals in Canada. Such programs already exist in the United States and Britain. Herein, we describe the outcomes of recent conference proceedings to inform the educational needs for such a program. As part of the 76th Annual Meeting of the Canadian Society of Allergy and Clinical Immunology (CSACI), held virtually due to the COVID-19 pandemic, we hosted a virtual workshop on the need for a food allergy educator program for Canadian allied health professionals. This workshop was co-developed with the CSACI and an industry partner, and featured allergy specialist dietitians. Attendance was open to all conference delegates, and to allied health professionals. As part of the registration process, registrants posed diverse food allergyrelated questions, ranging from how to use an epinephrine autoinjector, to daily management and, how to cure food allergy. A national food allergy educator program will empower both allergy and non-allergy specialist healthcare professionals to appropriately counsel patients. This virtually-delivered program will begin to close a gap in healthcare access resulting from the geographic size of Canada, as it will enhance allied healthcare providers' confidence to provide evidence-based food allergy care appropriately for those with food allergy.

Keywords: Allied health, Food allergy, Medical education

# To the editor:

In Canada, there are fewer than 250 allergists [1] to help support the estimated 6% of Canadians who live with probable food allergy [2]. Food allergy requires strict avoidance of the allergen, constant possession of an epinephrine autoinjector [3] and has negative financial [4, 5] and psychosocial [6, 7] consequences. Many patients and their families require healthcare management from other types of providers, including mental health

Tara Lynn Mary Frykas: At the time this letter was originally written

\*Correspondence: Jennifer.Protudjer@umanitoba.ca

<sup>3</sup> Department of Pediatrics and Child Health, University of Manitoba, 501G-715 McDermot Avenue, Winnipeg, MB R3E 3P4, Canada Full list of author information is available at the end of the article professionals and dietitians. Allied health professionals, including psychologists, speech language pathologists, registered dietitians, nurses (including nurse allergy educators), pharmacists and respiratory therapists, are key partners in optimizing patient care [8]. Although food allergy programs for allied health professionals exist in the United States [9] and in Europe [10], there is a noticeable absence of such training for allied health professionals in Canada. In fact, healthcare professionals, including psychologists [11] and dietitians [12] report having inadequate training to support the needs of those with food allergy. This raises substantial concerns, as research from our group points toward a lack of knowledge regarding food allergy, outside specialty settings. Dietitians have described how "they were afraid,



© The Author(s) 2022. **Open Access** This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicate otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit http://creativecommons.org/fuenses/by/4.0/. The Creative Commons Public Domain Dedication waiver (http://creativecommons.org/publicdomain/zero/1.0/) applies to the data made available in this article, unless otherwise stated in a credit line to the data.

they did not know what to do, they did not even know how to communicate with [food allergic] families" [12]. This knowledge gap is echoed by allergists who reported that "[education on basic dietary care] should be more part of our mandatory learning" [11].

These concerns exist despite the fact that rates of pediatric allergy are at an all-time high [2, 3], with some evidence that rates are continuing to increase [13], and new allergens continue to emerge [14, 15]. There is presently no food allergy educator program for allied healthcare professionals in Canada. This knowledge gap is further exacerbated by the limited food allergy curricula in post-secondary education dietetics and nursing. For example, the Canadian Dietetic Registration Examination Preparation Guide has a single mention of food allergy, which is coupled with intolerances, in terms of nutrition care [16]. The National Council Licensure Examination for Registered Nurses, which is administered to determine entry level ability for incoming nurses in Canada and the United States, includes questions on emergency management of food allergy reactions, including anaphylactic reactions [17]. Missing however, are questions on broader topics, including food allergy prevention. To address these knowledge gaps, our longterm vision is to create a food allergy educator program for allied healthcare professionals across Canada, which will be overseen by the Canadian Society of Allergy and Clinical Immunology (CSACI), the professional association of allergists and clinical immunologists in Canada. In Canada, healthcare is administered by the provinces, which contributes to significant variation in medical care, including food allergy care, across the country. A national educator program would lead to more consistency with regards to clinical management of food allergy. Herein, we describe the outcomes of recent conference proceedings to inform the educational needs for such a program.

As part of the 76th Annual Meeting of the CSACI, held virtually due to the COVID-19 pandemic, we hosted a virtual workshop on the need for a food allergy educator program for Canadian allied health professionals. This workshop was co-developed with the CSACI and Nutricia, and featured allergy specialist dietitians; C Venter PhD RD and M Groetch MS RDN, the co-creators of the US-based food allergy education program for healthcare professionals. Attendance at this workshop was open to all conference delegates. In addition, the workshop was open to allied health professionals at no cost, although advanced registration was required. In this latter category, 68 allied health professionals registered. As part of the registration process, we queried their top questions about food allergy, the food allergy education material to which they would like to have access, and confidence working with patients with food allergy. Top allergy questions were diverse, and ranged from how to use an epinephrine autoinjector, to daily management and, how to cure food allergy. Food allergy educational materials were similarly diverse, but notably included materials for both patients as well as allied healthcare professionals. Participant-reported confidence working with food allergy ran the continuum of the scale, from 1-10.

An estimated 6%-or 3 million Canadians-live with food allergy [2], an estimate which does not directly count families and communities. As such, the creation of a food allergy educator program for health professionals in Canada is highly practical in the short term, as it addresses an immediate knowledge gap among nonallergy specialist healthcare professionals, in parallel with the creation of evidence-informed resources for use in their own practices. Our long term vision is to embed our food allergy educator program into healthcare professional curricula. To this end, and to better reflect food allergy-related issues more broadly, there is a need to further address food allergy-related issues in Canada including access to allergy-friendly food and allergy care for Canadians in rural and remote regions of our country. As well, there is a need to expand the curriculum to include adults with food allergy.

In summary, a national food allergy educator program will empower both allergy and non-allergy specialist healthcare professionals to appropriately counsel patients. This virtually-delivered program will begin to close a gap in healthcare access resulting from the geographic size of Canada, as it will enhance allied healthcare providers' confidence to provide evidencebased food allergy care appropriately for those with food allergy. Downstream benefits include increased confidence and more effective use of healthcare providers' time. Long-term plans include certification for continuing medical education credits for those who successfully complete the program. Notably, such certified programs exist in Canada for certified respiratory educators [18] and diabetes educators [19]. The ultimate success of a national food allergy educator program will be to increase food allergy management amongst affected families, decrease the number of allergic reactions, and prevent accidental deaths. Such programs already exist in the United States [9] and in Europe [10]. Such a program is long overdue in Canada.

#### Abbreviation

CSACI: Canadian Society of Allergy and Clinical Immunology.

## Acknowledgements

We acknowledge the support of Nutricia in making this workshop free of charge to allied healthcare professionals. We also acknowledge the involvement of workshop participants.

# Author contributions

JP moderated the session on which this manuscript is based, co-wrote the first draft of the manuscript, and approved the final version. CV was a speaker at the session on which this manuscript is based, provided critical reflection on the manuscript and approved the final version. MG was a speaker at the session on which this manuscript is based, provided critical reflection on the manuscript and approved the final version. TLF helped facilitative the session on which this manuscript is based, provided critical reflection on the manuscript and approved the final version. TLF helped facilitative the session on which this manuscript is based, provided critical reflection on the manuscript and approved the final version. HK moderated the session on which this manuscript. All authors read and approved the final manuscript.

#### Funding

This workshop was co-developed with the CSACI and Nutricia, and featured allergy specialist dietitians; C Venter PhD RD and M Groetch MS RDN, the co-creators of the US-based food allergy education program for healthcare professionals.

## Availability of data and materials

A recording of the workshop is available upon request.

# Declarations

## Ethics approval and consent to participate

Data were collected as part of the registration process for this workshop. These are participant-reported data, not patient-reported data.

#### **Consent for publication**

Not applicable; manuscript does not contain data from any individual person.

#### **Competing interests**

JP has received research grants from the Canadian Institutes of Health Research; Research Manitoba, University of Manitoba; Children's Hospital Research Institute of Manitoba; Canadian Allergy, Asthma and Immunology Foundation; and George and Fay Yee Centre for Healthcare Innovation. She has a signed letter of intent with Nutricia, for CIHR Fall 2021 Project Grant Competition; has received in kind funding from Daiva Foods; and has accepted speaker fees from Novartis, CV reports grants from Reckitt Benckiser, Food Allergy Research and Education, and National Peanut Board,; and personal fees from Reckitt Benckiser, Nestle Nutrition Institute, Danone, Abbott Nutrition, Else Nutrition, and Before Brands. MG receives royalties from UpToDate, FARE, and AND; serves on the Medical Advisory Board of IFPIES, as a Senior Advisor to FARE, and as a Health Sciences Advisor for APFED; and has no commercial interests to disclose. TLF reports no conflicts of interest. JL is Associate Executive Director, CSACI. HK reports speakers' bureaus and/or advisory boards for ALK, AstraZeneca, Aralez, Bausch Health, CSL Behring, GSK, Kaleo, Novartis, Pediapharm, Pfizer, Sanofi, Shire, Stallergenes Greer, Takeda. The authors declare that they have no competing interests.

#### Author details

<sup>1</sup>Department of Food and Human Nutritional Sciences, University of Manitoba, Winnipeg, MB, Canada. <sup>2</sup>Canadian Society of Allergy and Clinical Immunology, Orleans, ON, Canada. <sup>3</sup>Department of Pediatrics and Child Health, University of Manitoba, 501G-715 McDermot Avenue, Winnipeg, MB R3E 3P4, Canada. <sup>4</sup>The Children's Hospital Research Institute of Manitoba, 501G-715 McDermot Avenue, Winnipeg, MB R3E 3P4, Canada. <sup>5</sup>George and Fay Yee Centre for Healthcare Innovation, Winnipeg, MB, Canada. <sup>6</sup>Centre for Allergy Research, Karolinska Institutet, Stockholm, Sweden. <sup>7</sup>Children's Hospital Colorado, University of Colorado, Denver, CO, USA. <sup>8</sup>Division of Pediatric Allergy & Immunology, Icahn School of Medicine at Mount Sinai, Jaffe Food Allergy Institute, New York, USA. <sup>9</sup>Faculty of Medicine, University of Western Ontario, London, ON, Canada. <sup>10</sup>Department of Medicine, McMaster University, Hamilton, ON, Canada. Received: 20 December 2021 Accepted: 21 June 2022 Published online: 07 July 2022

#### References

- 1. Canadian society of allergy and clinical immunology. Find an allergist. 2019. http://csaci.ca/find-an-allergist/?q=s#search. Accessed 17 Nov 2021.
- Clarke AE, Elliott SJ, St Pierre Y, Soller L, La Vieille S, Ben-Shoshan M. Temporal trends in prevalence of food allergy in Canada. J Allergy Clin Immuonol Pract. 2020;8(4):1428-30.e5.
- Sicherer SH, Sampson HA. Food allergy: a review and update on epidemiology, pathogenesis, diagnosis, prevention, and management. J Allergy Clin Immunol. 2018;141(1):41–58.
- Frykas TLM, Golding M, Abrams EM, Simons E, Protudjer JLP. Mothers of children wtih food allergies report poorer perceived life status which may be explained by limited career choices. Allergy Asthma Clin Immunol. 2021;17(1):12.
- Golding MA, Simons E, Abrams EM, Gerdts J, Protudjer JLP. The excess costs of childhood food allergy on Canadian families: a cross-sectional study. Allergy Asthma Clin Immunol. 2021;17(1):28.
- Protudjer JLP, Golding MA, Salisbury MR, Abrams EM, Roos LE. High anxiety and health-related quality-of-life in families with children with food allergy during COVID-19. Ann Allergy Asthma Immunol. 2021;126(1):83–8.
- Cummings AJ, Knibb RC, King RM, Jm L. The psychosocial impact of food allergy and food hypersensitivity in children, adolescents and their families. Allergy. 2010;65:933–45.
- The patient voice in 'shared decision making' in clinical practice and research. Health Expect. 2016;19 5:991–2.
- FARE. Pediatric food allergy: an exclusive course on nutrition an dcare for IgE- and non-IgE-mediated food allergies. 2021. https://www.foodallergy. org/our-initiatives/education-programs-training/fare-training/pediatricfood-allergy-course. Accessed 17 Nov 2021.
- British Society of Allergy and Clinical Immunology. Hope for allergy patients as first ever UK strategy for allergy education is launched. https://www. bsaci.org/hope-for-allergy-patients-as-first-ever-uk-strategy-for-allergyeducation-is-launched/. Accessed 17 Nov 2021.
- Herbert L, DunnGalvin A. Psychotherapeutic treatment for psychosocial concerns related to food allergy: current treatment approaches and unmet needs. J Allergy Clin Immunol Pract. 2021;9(1):101–9.
- Memauri T, Golding MA, Gerdts JG, Roos LE, Simons E, Abrams E, et al. The perceived impact of pediatric food allergy on mental health care needs and supports. Ann Allergy Asthma Immunol. 2021. https://doi.org/10. 1016/j.jacig.2022.01.002.
- Tang MLK, Mullins RJ. Food allergy: is prevalence increasing? Intern Med J. 2017;47(3):256–61.
- 14. Hildebrand HV, Arias A, Simons E, Gerdts J, Povolo B, Rothney J, et al. Adult and pediatric food allergy to non-priority legumes in the clinical context: a scoping review. J Allergy Clin Immunol In Pract. 2020;9(1):290–301.
- Ballardini N, Nopp A, Hamsten C, Vetander M, Melén E, Nilsson C, et al. Anaphylactic reactions to novel foods: case report of a child with severe crocodile meat allergy. Pediatrics. 2017. https://doi.org/10.1542/peds. 2016-1404.
- 16. Alliance of Canadian dietetic regulatory bodies. Canadian Dietetic Registration Examination (CDRE) preparation guide. 2021 November.
- 17. RegisteredNurseRN.com. Anaphylactic Shock NCLEX Questions 2021. https://www.registerednursern.com/anaphylactic-shock-nclex-questions/. Accessed 11 Sept 2021.
- Canadian Network for Respiratory Care. Certification for asthma, respiratory, COPD and tobacco educators. 2022. http://cnrchome.net/certification. html. Accessed 17 Nov 2021.
- Canadian Diabetes Educator Certification Board. 2022. https://www.cdecb. ca/. Accessed 17 Nov 2021.

## **Publisher's Note**

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.