

Exploring the need of mandatory availability of epinephrine auto-injectors in Toronto restaurants

A Preliminary Pilot Study

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Food Allergy

- Is an adverse immune reaction to a specific food protein.¹
- Vary significantly in their physiopathology and clinical manifestations ranging from mild rashes to life-threatening anaphylaxis.²
- In Canada, food allergy is responsible for approximately 6-10 deaths/year.³
- Currently there is no cure for food allergy.⁴
- Anaphylaxis is a multi-system allergic reaction that is rapid in onset, turning deadly in as little as 15 minutes.
- Epinephrine is the first and most important treatment for anaphylaxis. Prompt administration is *vital* to prevent progression.⁵
- For people with food allergies, dining in restaurants is significant challenging as there is limited control over what ingredients are added to the dishes and over cross-contamination during the food preparation process.⁶

Public Health Concern

- Studies on food-induced anaphylaxis showed that delayed or no administration of epinephrine is associated with many fatalities.⁷
- Only 1/5 Canadians at risk for an anaphylactic attack carry an EAI with them at all time.⁸
- There are no legal requirements around food allergy management in food premises. Food allergy training is voluntary and depends on the initiative of restaurant owners and managers.
- There is limited information describing actual restaurant policies, practices, and readiness to treat people with food allergies.
- In Toronto, only EMS providers have the capability to administer epinephrine. The response time to an emergency medical call is ≈ 13 min.⁹
- The National Guidelines for Food Safety Training Programs have recommended the inclusion of food allergen information in food safety training courses, however no changes have been made yet.¹⁰

Objectives

1. Determine the food allergy awareness and knowledge among restaurant managers
2. Asses the need of legal requirements around food allergy management in food premises.
3. Determine the willingness of Toronto restaurants to participate in a *Volunteer Stock EAI Pilot Project*.

Methods

Study Design. This survey-interview study was designed to investigate food allergy awareness and knowledge amongst restaurant managers in the City of Toronto, as well as to determine the willingness of Toronto restaurants to participate in a *Volunteer Stock Epinephrine Auto-injector Pilot Project*.

Method. The study was conducted through the administration of a structured questionnaire to twenty-five randomly selected Toronto restaurant managers.

Data Collection. The study was conducted between February 2018 and March of 2018. Restaurant managers were approached by the interviewer personally to invite them to take part. If the participant agreed to participate, the interviewer conducted the questionnaire, which took on average twenty minutes and was completed in the presence of the interviewer. Once completed, the questionnaire was collated by the interviewer.

Data Analysis. Questionnaire responses were analyzed using descriptive and inferential statistics. Then knowledge score were created by adding the number of correct answers (out of 21) and used the median score (M=14.6) to dichotomize the participants as having more or less knowledge.

Results

Table 1. Restaurant Characteristics.



Table 2. Manager Characteristics.

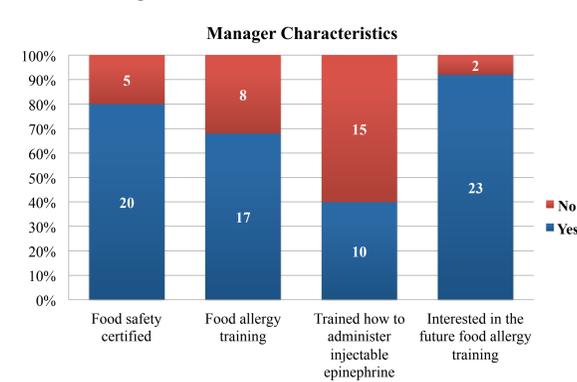


Table 3. Food allergy knowledge.

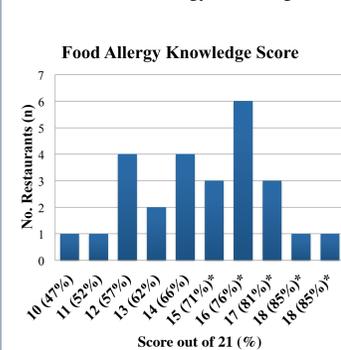


Chart 1. Prevalence of Food Allergies.

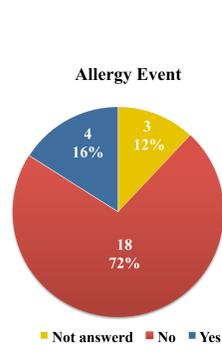


Chart 2. Willingness to Participate in Pilot Project.

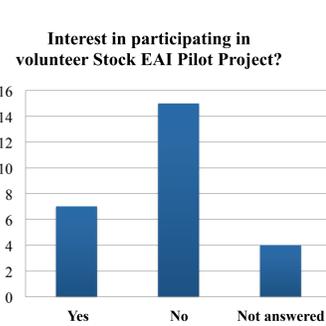
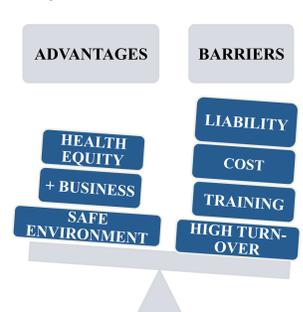


Chart 3. Perceived Barriers vs. Advantages of participating on Pilot Project.



Conclusions

1. The responses to food allergy knowledge questions revealed that restaurant managers are knowledgeable and have positive attitudes concerning accommodations for food allergic customers. The absolute majority of participants (52%) had scores higher than the mean (M=14.6) value. However, important gaps were identified. For instance, managers were less likely to recognize eggs (44%), milk (36%), and soy (40%) as a major allergens.
2. The large percentage of participants interested in receiving food allergy training in the future (25%) and the small percentage of participants having a program for their staff (44%) indicates need of legal requirements and training around food allergy management in food premises.
3. More than half (60%) of restaurants that are not willing to participate in a Volunteer Stock Epinephrine Auto-injector Pilot Project. However, the majority of managers (92%) are interested in receiving future food allergy training which reflects their commitment to reduce the risk of food allergic reactions at their restaurant.

Discussion

- Accurate food allergy knowledge is critical to preventing an allergic reaction.
- The Ministry of Health and the foodservice industry should work together to develop a food allergy education program.
- Food allergy training should be mandatory for key personnel in food establishments.
- Food establishments should be required to have a written food allergy management plan and to declare priority food allergens in their menu.

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