Food Service
Anaphylaxis/EAI Project

Presenter:

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Hamilton City Council
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Objectives

- To provide an overview of:
  - Anaphylaxis & food allergy
  - Gaps in management: healthcare providers, patients and community

- To describe a research pilot
  - To examine the dining experiences of the food allergic consumers
  - To study the placement of EAI in selected food service establishments
What is Anaphylaxis?

- **Most serious type** of allergic reaction
  - can affect different parts of the body
  - can happen quickly
  - can be life-threatening
- Immediate treatment is necessary

Could it be anaphylaxis?

Think FAST! Any of these symptoms may appear:

Face: itching, redness, swelling
Airway: trouble breathing, swallowing, speaking
Stomach: pain, vomiting or diarrhea
Total: hives, itching, swelling, weakness, paleness, sense of doom, loss of consciousness, dizziness
What symptoms can look like

Hives are not always present.
Life-saving medication

- **Epinephrine** is the first line medication which should be used for the emergency management of a person having a potentially life-threatening allergic reaction.
- No contraindications to its use in a normally healthy person.
  
  Administer at first sign of reaction (waiting can be dangerous).

  Second dose may be given within 5-15 minutes, or sooner, **IF** symptoms have not improved.

  Give additional medications after epinephrine (e.g. antihistamines, inhalers).

Source: Anaphylaxis in Schools & Other Settings, 2nd Edition, 2009, Canadian Society of Allergy and Clinical Immunology
Causes of anaphylaxis

Common
- Foods
- Insect stings
- Medication

Less Common
- Latex
- Exercise-induced
- Immunotherapy (‘allergy shots’)
- Unknown (‘idiopathic’)
- Mastocytosis

Kim & Fischer. Allergy, Asthma & Clinical Immunology 2011;7(Suppl 1):S6
Approximately 7% of Canadians with food allergy (approx. > 2.5 million)

<table>
<thead>
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<th>Allergen</th>
<th>Children</th>
<th>Adults</th>
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<tr>
<td>Soy</td>
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The Food Allergy Epidemic

- Health care data – CDC Hospital Discharge Dx

Average number of discharges per year among children < 18 years old with any diagnosis related to food allergy

* Statistically significant

SOURCE: CDC/NCHS, National Health Interview Survey
Anaphylaxis is on the rise as well

- Severe anaphylaxis episodes are dramatically increasing in all age groups…

Hospital admissions for anaphylaxis in US (N York)*

Hospital admissions for anaphylaxis in Australia

(medical care received at hospital emergency departments not included)

Lin et al 2008; Poulos et al, 2007
What is the scope of the problem in Ontario?
Accidental reactions are more likely to occur outside the home

Dining Experience:

- Data from Food Allergy and Anaphylaxis Network (FAAN) reveals, over 50% deaths were associated with eating in restaurants or other food establishments.

- In Ontario, 30% experienced an allergic reaction while dining out (Source: Anaphylaxis Canada)
Accidental reactions are more likely to occur outside the home

Mortality Study:
- 82 deaths were attributed to anaphylaxis in Ontario (1986-2011) (Source: Xu et al, study)
  - 71 adults, 11 pediatric
  - 32 involved food allergy
- Epinephrine auto-injector was prescribed for 17 patients (21%), only 9 of which (53%) carried it at the time of the reaction
- Prior to hospital, only 19 patients (23%) received epinephrine (including by EMS)
- In 2013 – 2 deaths in Ontario
Key Lessons from Fatalities

- Epinephrine not readily available
- Previous history of anaphylaxis
- Food-allergic person ate something they thought was ‘safe’
- Signs and symptoms were not recognized
- Asthmatic
- Teens and young adults
- Away from home

NEXT STEPS
What is the rationale for a research study?

- No Canadian studies
- Dining in restaurants and food establishments poses a danger
- Many patients do not carry an auto-injector
- Even when patients carry auto-injectors, many do not use it
- Not a replacement for patient self-management but will support the need for better educational programs
STEP 1: SURVEY

- To define the problem and scope of accidental ingestion by food-allergic individuals while dining out

- To inform educational strategies that address challenges faced by allergic consumers dining out
STEP 2 – PILOT STUDY

- Use of stock epinephrine in selected food service establishments (e.g., food courts)
- Examine the knowledge of food service staff on food allergies and anaphylaxis, and their comfort serving food-allergic consumers
- Examine outcomes:
  - # of times epinephrine requested or used
  - confidence of staff, consumers,
  - Others (To be determined): follow-up of patients, duration of pilot study
## TIMELINES

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### Source of Funding:

- Pending
Thank You!

- Q&A