

# **Food Service Anaphylaxis/EAI Project**

Presenter:

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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:

**F**ace: itching, redness, swelling

**A**irway: trouble breathing, swallowing, speaking

**S**tomach: pain, vomiting or diarrhea

**T**otal: 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, 2<sup>nd</sup> 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

# Canadian data – Food allergy

- Approximately 7% of Canadians with food allergy (approx. > 2.5 million)

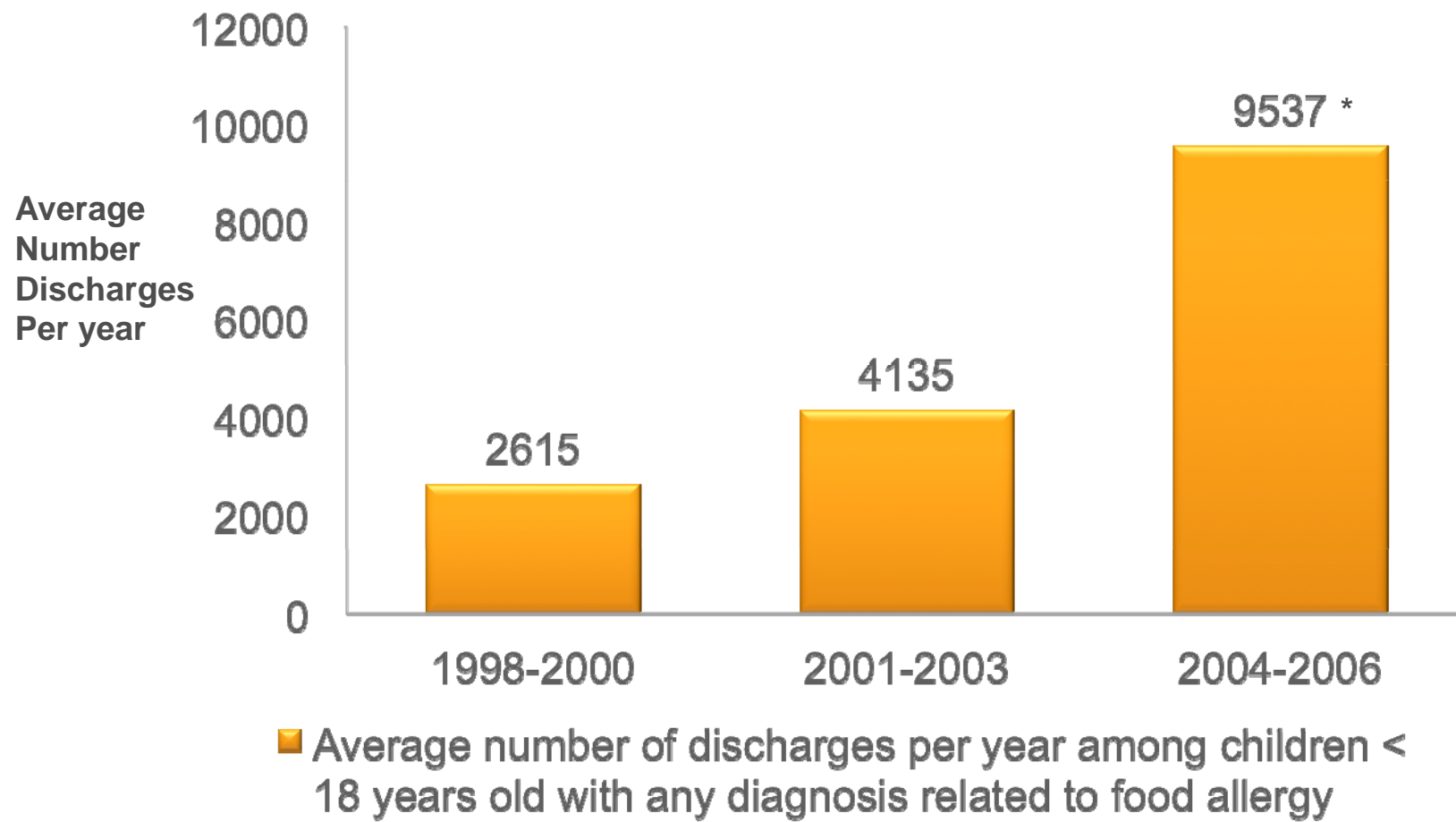


Allergen	Children	Adults	Overall
Peanut	1.8	.78	1.0
Tree nut	1.7	1.1	1.22
Fish	0.18	0.60	0.51
Shellfish	0.55	1.9	1.60
Sesame	0.23	0.07	0.10
Milk	2.23	1.9	1.97
Egg	1.23	0.67	0.80
Wheat	0.45	0.86	0.77
Soy	0.32	0.16	0.20



# The Food Allergy Epidemic

- Health care data – CDC Hospital Discharge Dx



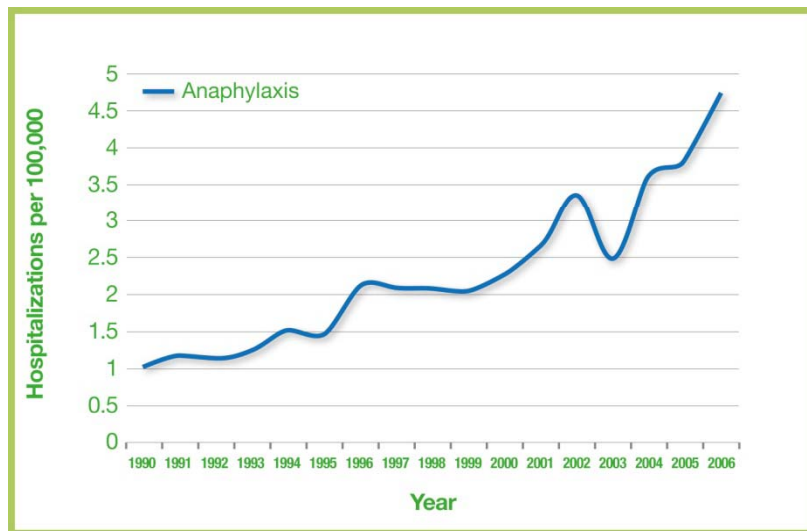
\* Statistically significant

SOURCE: CDC/NCHS, National Health Interview Survey

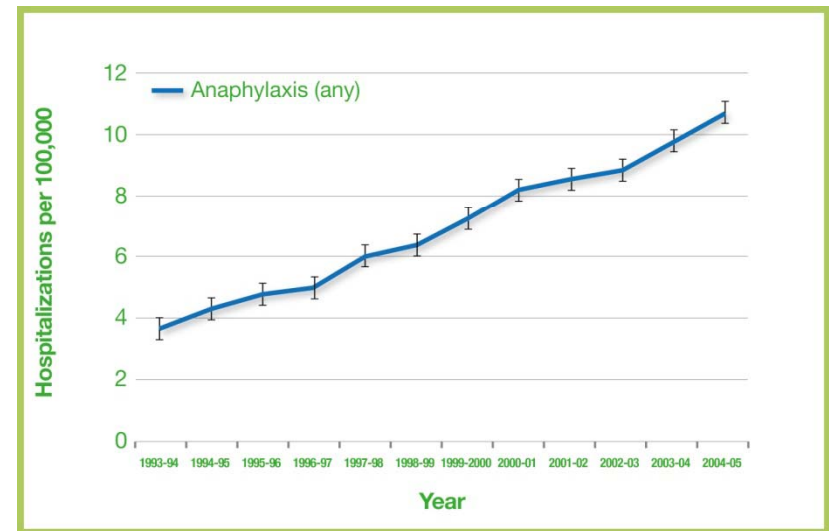
# Anaphylaxis is on the rise as well

- 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)

**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

TASKS		2013		2014					
		Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
STEP 1	SURVEY	X							
STEP 2	PILOT			X	X	X	X	X	X
STEP 3	REPORT FINDINGS						X	X	X

## Source of Funding:

- Pending

# Thank You!

- Q&A