Knowledge, Attitude and Practices of EpiPen® Use in Youths with Food Allergy in an Urban Multiethnic Community

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ABSTRACT

Background: Prevalence of food allergy and occurrence of anaphylaxis from food allergy have increased over the years in the United States. Adolescents with food allergy are at particular risk of life threatening anaphylaxis. There are no studies of knowledge, attitude and practices of EpiPen® use in youths with food allergy.
Objective: To assess awareness, knowledge (K), attitude (A) and practices (P) among youths with food allergy in an urban multiethnic community.
Design/Methods: Descriptive cross sectional study by questionnaire in English or Spanish offered to youths aged 12-18 years visiting Flushing Hospital Medical Center with food allergy. Exclusion criteria included youths not literate in English or Spanish. Questionnaire included demographics (age, gender, ethnicity), questions on K (10), A (2) and P (4) about EpiPen® use in food allergy reaction and anaphylaxis. Data were analyzed using percentages.
Results: Of the 42 completed questionnaires, 60% male, 74% Hispanic with mean age of 14.7±2.3 years. Family history of food allergy was in 62%. Diagnosis of food allergy by reaction was 100% and by blood test (IgE) in 60%. Most common reaction type involved skin 98%, most common food allergen was peanuts 38% followed by shellfish 33%. Definition of anaphylaxis was known in 26%, knowing EpiPen® as best therapeutic option in 91% and half used EpiPen® before. EpiPen® was prescribed by a physician in 86%. Knowing the correct number of doses per pen was in 55%, location of injector in 78%, side effect of EpiPen® in 50%, method of discarding EpiPen® properly in 24% and swelling as an indication for EpiPen® use in 67%. Only 10% carried EpiPen® and 48% had an expired EpiPen® at home. Location of where to inject was correctly identified in 57% and knowing correct method of administration in 21%.
Conclusion(s): Youths in our study have some knowledge of food allergy and food induced anaphylaxis. Healthcare providers need to educate their patients on signs and symptoms of anaphylaxis and the correct usage of EpiPen® auto-injector.

INTRODUCTION

- Anaphylaxis is a severe, life threatening generalized systemic hypersensitivity reaction
- Adolescents with food allergy are at particular risk for anaphylaxis
- Diagnosis, avoidance of allergens and carrying an EpiPen® auto injector is recommended
- Proper usage of EpiPen® in food allergy induced anaphylaxis can decrease poor outcome
- There are no studies of knowledge, attitude and practices of EpiPen® use in youths with food allergies

OBJECTIVE

To assess awareness, knowledge (K), attitude (A) and practices (P) among youths with food allergy in an urban multiethnic community.

METHODS

- **Design**: Descriptive study by questionnaire in English or Spanish
- **Setting:** Flushing Hospital Medical Center
- **IRB**: Approved by Flushing Hospital Medical Center
- **Time frame:** June 2018 – December 2018
- **Inclusion criteria:** Adolescents aged 12-18 years literate in English or Spanish with food induced anaphylaxis.
- **Exclusion criteria:** Adolescents aged 12-18 years not literate in English or Spanish without food induced anaphylaxis.
- **Tool:** Questionnaire
- **Statistical analyses**: Survey responses were analyzed using percentages

RESULTS

- **Completed questionnaires**: 42
- **Gender:** 60% male, Table 1
- **Ethnicity:** 74% Hispanic, Table 2
- **Mean age:** 14.7±2.3 years
- **Food allergy**: positive family history 62%, by reaction 100%, by blood test (IgE) 60%
- **Food allergen**: peanuts 38%, shellfish 33%, figure 1
- **Reaction type**: 98% involve skin, figure 2
- **Knowledge** of anaphylaxis and EpiPen®: EpiPen® as best therapeutic option 91%, Table 3, figure 3
- **Attitude and Practices:** EpiPen® prescribed by a physician 86%, knowing where to discard EpiPen® properly 24%, having an expired EpiPen® 48%, figure 4

Table 1: Gender

Total (n)	Female	Male
42	17	25

Table 2: Ethnicity

Ethnicity	Absolute	Percentage
Caucasian	2	5
Hispanic	31	74
African American	3	7
Asian	6	14

Figure 1: Food allergen

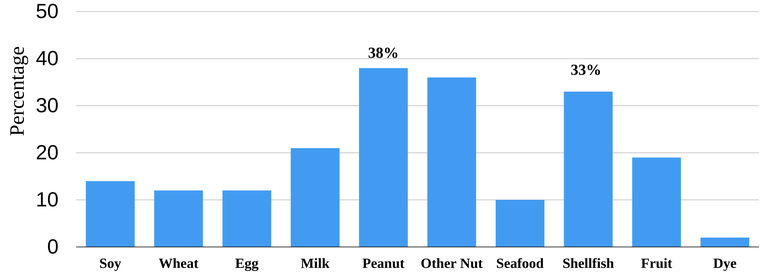


Figure 2: Reaction type

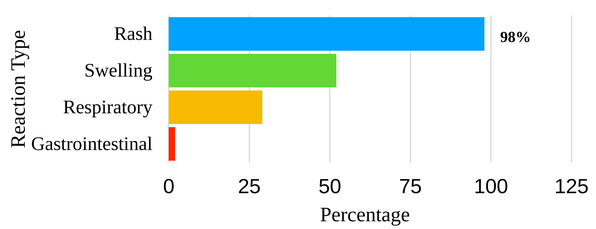


Table 3: Knowledge

Question	Answer	Percentage
Do you know what anaphylaxis is?	Yes	26
What is the treatment for anaphylaxis?	EpiPen®	91
Have you ever used an EpiPen ® ?	Yes	50

Figure 3: Injection Site

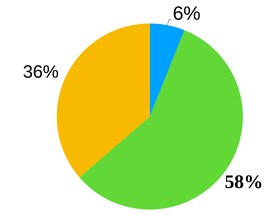
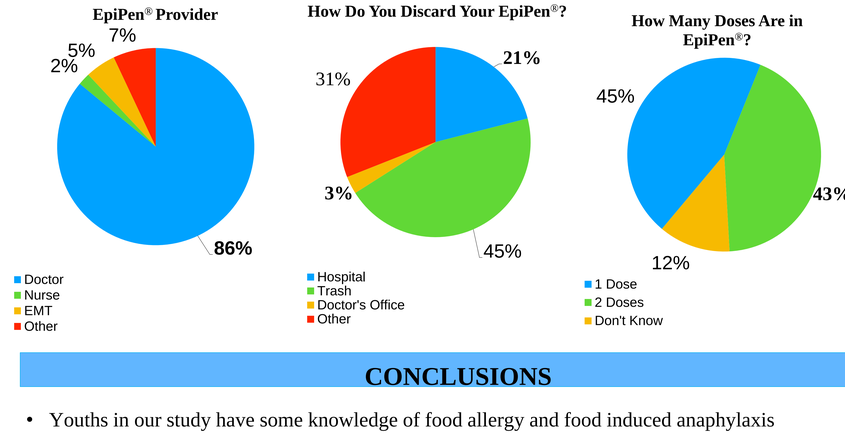


Figure 4: Attitude and Practices



CONCLUSIONS

- Youths in our study have some knowledge of food allergy and food induced anaphylaxis
- Healthcare providers need to educate their patients on anaphylaxis and the correct usage of EpiPen® auto-injector

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