Knowledge Assessment of "Addendum Guidelines for the Prevention of Peanut Allergy in the United States" Among Pediatric Primary Care Providers

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Abstract

Background: The 2017 addendum to the National Institute of Allergy and Infectious Diseases (NIAID) guidelines on peanut allergy prevention significantly altered recommendations for patients at risk of developing peanut allergies. It is unknown if primary care physicians are aware or following these guidelines.

Methods: A survey was developed to assess knowledge, awareness, and practice behaviors of the NIAID guidelines. It was distributed to Pediatric, Family Medicine, and Medicine-Pediatric residents and attending physicians at two large academic centers. Responses were analyzed with binary logistic regression.

Results: The survey was distributed to 605 providers with a response rate of 35% (n=210). The average score was 4.8 out of 7 questions answered correctly. 53% of participants incorrectly recommended at home peanut introduction in patients with egg allergy. Additionally, 40% of participants incorrectly believed the earliest age for peanut introduction was after 1 year of age. More than half of respondents were unaware of the new guidelines. On logistic regression, factors associated with adequate knowledge assessment scores were awareness of the guidelines (OR 2.98, CI:1.34-6.60), graduation from residency within 5 years (OR 3.60, CI:1.14-11.35) and affiliation with the Medicine-Pediatrics department (4.59, CI:1.07-19.65).

Conclusion: Primary Care providers incorrectly answer 1/3 of questions related to the prevention of peanut allergy. Increasing awareness of the 2017 NIAID guidelines may provide an opportunity to improve patient outcomes. There is an urgent need to develop innovative educational strategies to publicize these guidelines

Background

- Learning Early About Peanut Allergy (LEAP) study demonstrated that early introduction of peanut in high risk infants was associated with a reduction in peanut allergy.[1]
- In 2017 the NIAID addendum to their previous 2010 guidelines, encouraged early introduction of peanut in higher risk infants at 4-6 months of age when appropriate.[2]
- This is markedly difference from previous guidelines in 2004 that recommended the delay in introduction of peanuts until 3 years of age.[3]
- Other key changes include identifying patients with severe eczema and egg allergy to be high risk for peanut allergy

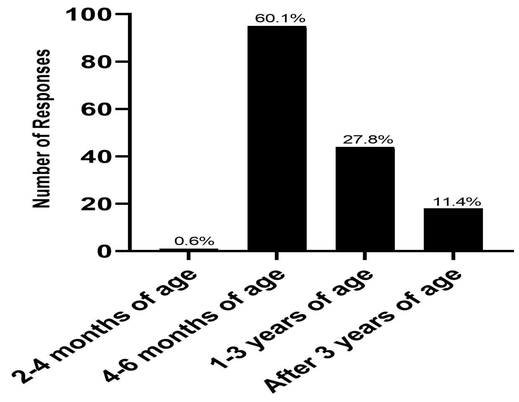
Methods

- Anonymous survey emailed to family medicine, pediatric and medicine pediatric residents and primary care faculty/staff physicians, residents, nurse practitioners and physician assistants
- Distributed in the Fall of 2018 at two academic centers in Michigan
- Analysis with binary regression models were constructed in which all variables were entered in a single step. Statistical significance was determined using a 2-sided α = 0.05.
- Questions were developed by the authors and were reviewed for face validity by a panel of Allergy/Immunology physicians at one site (University of Michigan).

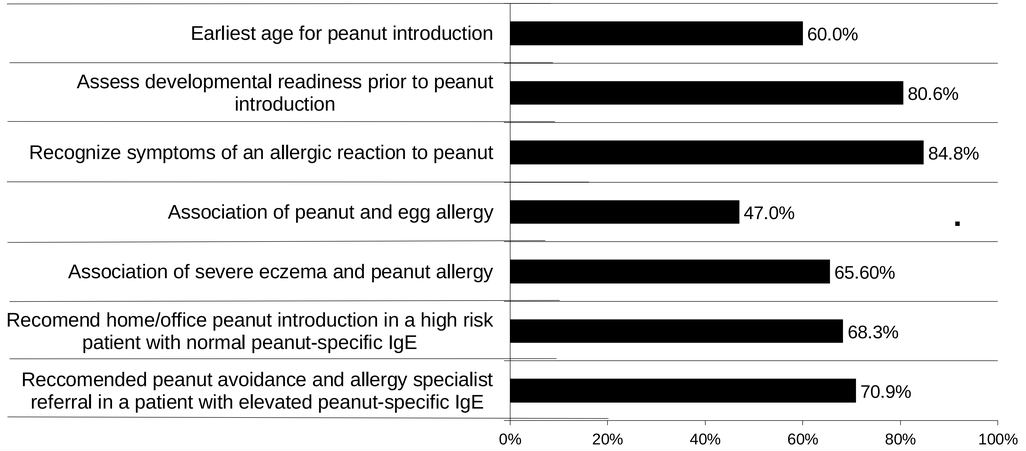
Results

- 210 survey responses, response rate = 35%
- Most common incorrect response (53%) recommended at home introduction of peanuts in an infant with a history concerning for egg allergy
- Adequate knowledge scores (≥ 5/7 answered correctly) was associated with awareness of the guidelines p=0.01, OR 2.98 (CI: 1.34-6.60); completing residency in the last 1-5 years p= 0.03, OR 3.60 (CI: 1.14-11.35), and affiliation with the Medicine-Pediatrics program, p=0.04 OR 4.59 (CI: 1.07-19.65).
- Attending a peanut allergy focused conference/lecture and participation in an allergy elective were not associated with adequate knowledge scores.

Reported earliest age for peanut introduction in high risk infants?



Percentage of correct survey responses per topic



Discussion

- There is inadequate awareness of the updated guidelines in the primary care community
- Resident education on the updated guidelines appears to be an opportunity to improve awareness in a structured, academic setting
- Further studies are needed to assess knowledge of these guidelines in community primary care physicians and the implementation of the guidelines into clinical practice

References

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