

Hamilton Allergy

Is Home Challenge An Option in Food Protein-Induced Enterocolitis Syndrome?

Natural History Of FPIES And Results Of Home Allergen Re-Challenge

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Rationale

- Food protein-induced enterocolitis syndrome (FPIES) resolution and challenge times remain debated
- Characterization of FPIES' natural history helpful in guiding recommendation on timing and optimal allergen reintroduction
- In-office oral challenges used assess allergen resolution following published protocols:
 - 0.06-0.6 g (usually 0.3 g of food protein/kg body weight) with observation for 4-6 hours¹

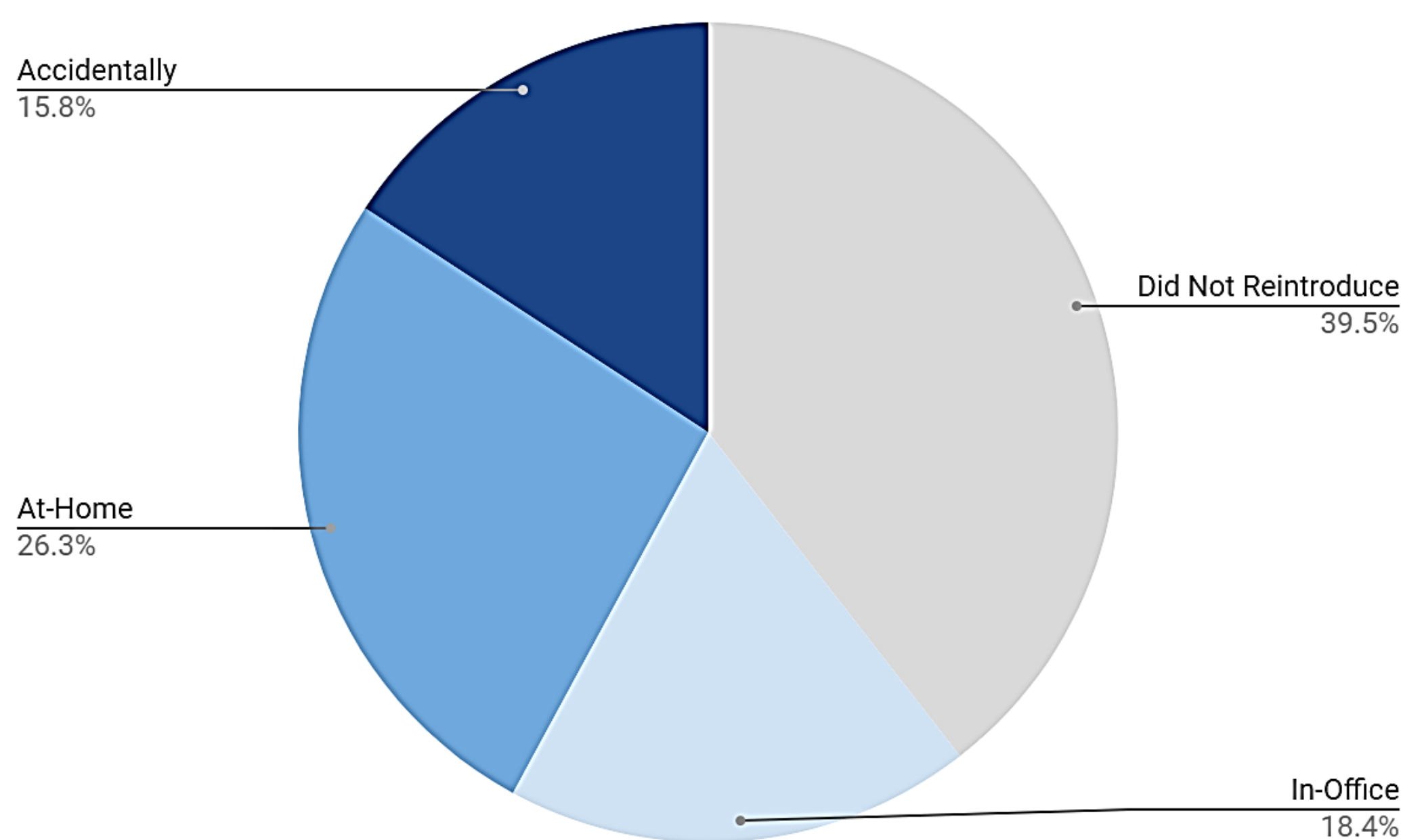


Figure 1: Reintroductions of triggers for FPIES cohort.

Methods

- Follow-up survey conducted via email and phone to collect information on pediatric FPIES
- Patients initially seen at a Southwestern Ontario Allergy clinic from June 2016 to June 2019

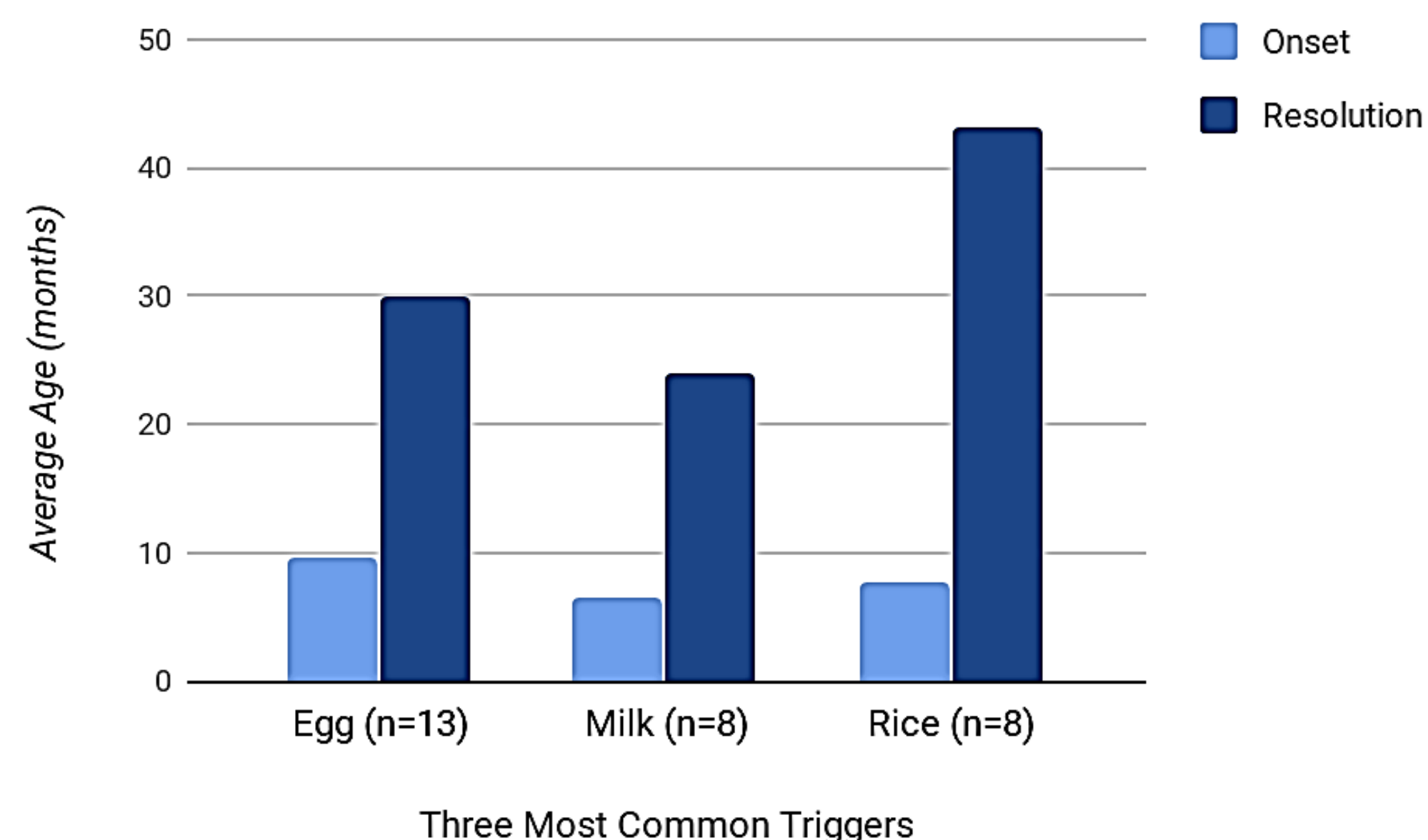


Figure 2: Resolution trends amongst cohort of FPIES patients

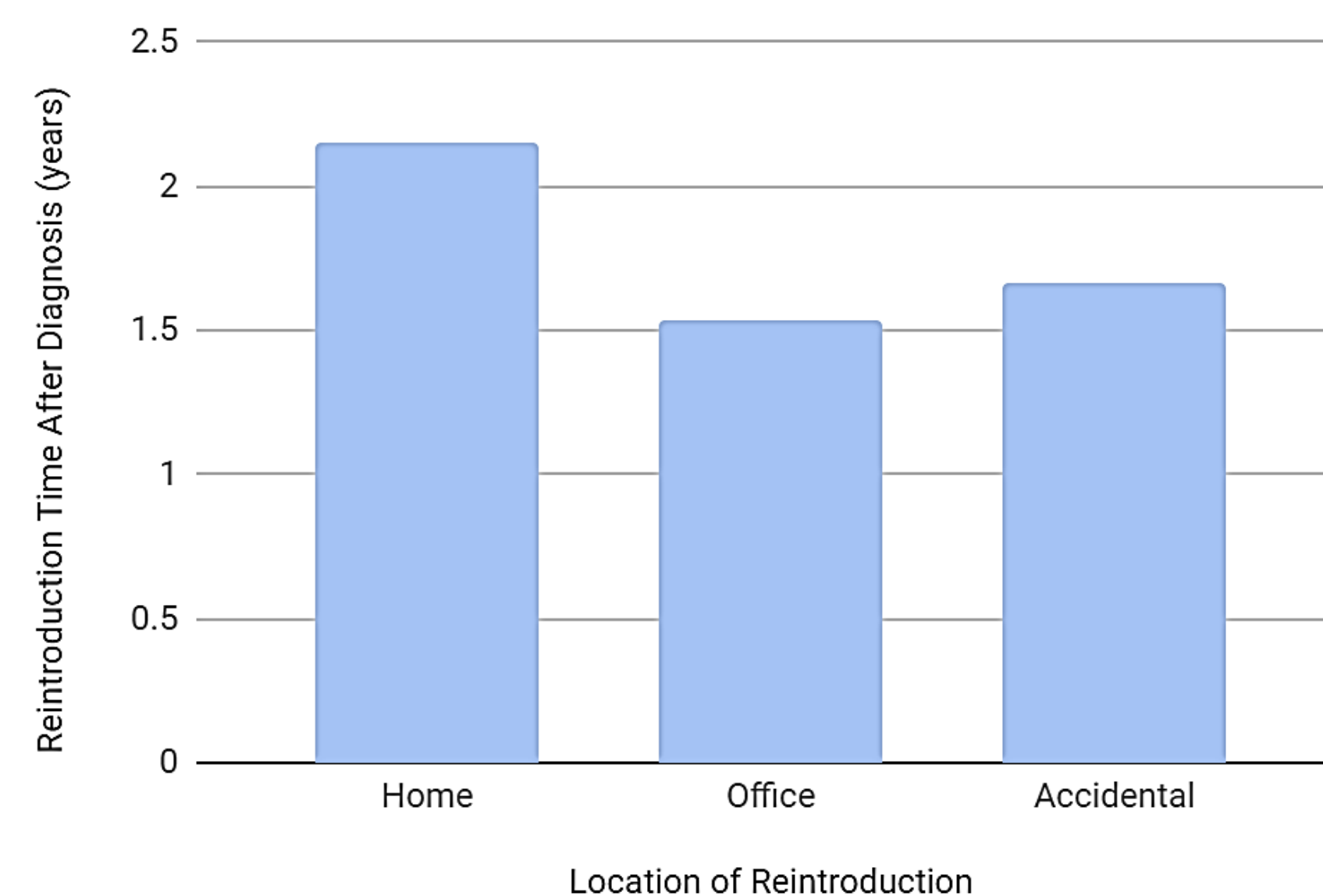


Figure 3: Resolution time after diagnosis per reintroduction location

Results

- Identified 60 FPIES patients ages 2-5 yrs over 5yr period
- 38/60 (63%) responses, majority **single-food** FPIES trigger (26, 68%)
- **Most common** FPIES triggers:
 - Hens Egg (13, 34%), average age, 9.5 mo
 - Cows milk (8, 21%), average age, 6.6 mo
 - Rice (8, 21%), average age, 7.6 mo
- 23/38 (61%) had **reintroduced** FPIES triggers
 - 16/23 (70%) outside of a clinical setting;
 - remaining 7/23 (30%) in-MD office challenge
- 2 re-introduction reactions: 1 in-office, 1 at home
- FPIES **spontaneous resolution** in 21 patients (55%)
- Average age of resolution:
 - Egg at 2.5 yrs, Cow's milk at 2yrs, Rice at 3.6yr
- More of those who resolved in-office tended to have FPIES to a single trigger (6/6 patients) compared to those with at-home resolutions (4/8 patients)

Conclusions

- FPIES to single food trigger is most common
- Average resolution age of resolution varies: earliest to cow's milk; latest to rice by mid-toddlerhood
- **Most food reintroductions occurred safely at home from 2 years on, avoiding need for supervised MD challenges**

Reference: 1. Nowak-Węgrzyn A, Chehade M, Groetch M, Spergel J, Wood R, Allen K et al. International consensus guidelines for the diagnosis and management of food protein-induced enterocolitis syndrome: Executive summary—Workgroup Report of the Adverse Reactions to Foods Committee, American Academy of Allergy, Asthma & Immunology. Journal of Allergy and Clinical Immunology. 2017;139(4):1111-1126.e4.