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h2.008 and h1.029 were the most predictive of desensitization. IgE-reactivity to h1.029 and h2.008 remained stable, or slightly declined, over 12 months of treatment (Figure 1A). IgG4-reactivity to the same epitopes differentiated between placebo, responders and non-responders with a markedly different trajectory over the 12 months by group (Figure 1B). In comparison, AUC for peanut-sIgE and sIgG4/sIgE was 68% and 64%, respectively, at 12 months. **Conclusion:** We demonstrated that a BBEA may be a highly accurate tool for monitoring desensitization during EPIT.

A045

PHENOTYPIC DIFFERENCES IN ALLERGY TO MULTIPLE FOODS WITHIN A COHORT OF BLACK AND WHITE CHILDREN



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Introduction: IgE-mediated food allergy (FA) affects 8% of the US pediatric population, with greater disease burden observed among Black children, who previous survey data indicate may be more likely to be allergic to multiple foods. However, little work has investigated putative racial differences in multi-food allergy phenotypes within clinical FA populations.

Methods: Food-allergic children were sequentially recruited to the multi-site FORWARD cohort study from allergy clinics affiliated with 4 Midwestern/Mid-Atlantic medical centers and detailed food allergy histories were recorded. Latent class analysis was implemented via the poLCA R package to identify multi-food allergy phenotypes.

Results: Participants (N=676) were 64% White, 36% Black; 61% male, and 34% < 5 years-old. 63% were peanut-allergic, 53% tree-nut-allergic, 39% egg-allergic, 24% milk-allergic 17% shellfish/sesame-allergic, 14% finfish-allergic, 8% wheat-allergic, and 7% soy-allergic. Multi-food allergy was more common among Black children (66% vs. 61%), who also had higher rates of shellfish, finfish, and soy allergies (p<.05). LCA identified 4 latent classes/phenotypes, with 10% broadly food-allergic across the top 9, 52% predominantly peanut/treenut-allergic with some seafood allergy, 23% predominantly dairy-allergic with some peanut allergy, and 15% allergic to peanut/treenut and dairy with some sesame allergy. Latent class indicators and composition were invariant by race, except for a dairy-seafood multi-allergic phenotype comprising 20% of Black participants vs. a dairy-peanut/treenut phenotype comprising 32% of Whites.

Conclusion: Data from this large, multi-site clinical cohort of Black and White children are suggestive of racial differences in food allergy phenotypes, the etiologies of which warrant further investigation.

A046

DIETARY ACCESS AND BEHAVIORS AMONG FOOD ALLERGIC BLACK AND WHITE CHILDREN IN THE FORWARD STUDY



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Introduction: Although previous studies have explored how race affects the daily life of families of children diagnosed with food allergy (FA), racial disparities in dietary access and behaviors are less clear.

Methods: FORWARD is currently recruiting black (n=400) and white (n=400) children 0-12 years of age with physician-diagnosed IgE-mediated food allergies. Guardians of enrolled children completed surveys on dietary access and behaviors. Survey items were described and compared by race with chi-square tests. Multivariable logistic regression determined associations adjusting for household income, parental education, age, gender, multi-FA, and site.

Results: There were 226 white and 100 black children included in the analyses. Significantly more white children (88.1%) than black

children (59.1%) had access to allergy-free foods (p<0.001). Among white children, 35.2% had access to online shopping for allergy free-foods, whereas 12% of black children had online access (p<0.001). There were significant differences in parental anxiety levels on whether purchasing habits could lead to allergic reactions; 47% of parents of white children reported anxiety, compared to 33% of black parents (p=0.02). After adjustment, white children were 2.8 times as likely as blacks to have access to allergy-free foods (OR=2.8; 95% CI: 1.1–6.9), and 2.6 times as likely as blacks to have parents with anxiety about their purchasing habits causing allergic reactions (OR=2.6; 95% CI: 1.2–5.7).

Conclusions: This study indicates differences in the dietary access and behaviors of black and white families of children with FA. Additional analyses in the complete FORWARD cohort are needed to determine if these trends remain.

NEW! COVID-19

A050

THE IMPACT OF COVID-19 AND DISEASE CONTROL MEASURES ON PEDIATRIC FOOD ALLERGY PARENTS/CAREGIVERS AND PATIENTS



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Introduction: COVID-19 affects the daily lives of many food allergy (FA) patients. To characterize its impact, a national survey was administered to parents/caregivers of food-allergic children.

Methods: Surveys were administered to parents/caregivers from 1) FARE's patient registry, 2) the multi-site FORWARD clinical cohort study of Black and White food-allergic children, and 3) Stanford clinical FA patient database. Visual analogue scales from 0(much less)—5(equivalent)—10(much greater) quantified FA-related psychosocial burden relative to 2019. COVID-19 Exposure and Family Impact Surveys (CEFIS) were also administered.

Results: Responses were obtained through FARE (N=488), FORWARD (N=118), and Stanford (N=65) between 5/15-7/7. While a greater proportion of FARE and Stanford respondents were high-SES and reported White race/ethnicity relative to FORWARD participants, CEFIS scores were similar (M=6.9-7.6)—indicative of similar levels of COVID-19 exposure/impact. Compared to 2019, FARE respondents reported slightly elevated levels of concern (M=5.4;SD=2.5) about accidental ingestion, anaphylaxis management self-efficacy (M=5.2;SD=1.99); FA-related worry/anxiety/stress (M=5.7;SD=2.2-2.3); their child's nutrition (M=5.4;SD=2.2), and risk of severe (M=6.4;SD=2.3) and fatal (M=6.0;SD=2.1) FA outcomes. Greater parental concern was reported regarding ability to obtain safe foods (M=6.5;SD=2.4); worry about cross-contact among prepared/delivered foods (M=6.4;SD=2.3); activation of EMS (M=7.0;SD=2.3 or going to the ED (M=7.8;SD=2.1) for anaphylaxis treatment. Comparing parental self- vs child-proxy-report responses suggested children were less burdened. However, parent self- and child-proxy-report among FORWARD and Stanford patients indicated less concern relative to 2019 (M<5) for most of the aforementioned domains except for activating EMS (M=6.0-6.7;SD=2.8-2.3) or receiving FA treatment in the ED (M=6.9-7.3;SD=2.7-2.2).

Conclusions: The impact of COVID-19 on FA patients and their parents/caregivers is substantial, but heterogeneous.

NEW! Quality Improvement

A055

EXPANDING PENICILLIN ALLERGY EVALUATION FOR PRENATAL PATIENTS



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