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Examining virtual research recruitment and participant diversity in a multi-center birth cohort, Childhood Allergy and the NeOnatal Environment" (CANOE)

Tonia Afshan

Aishwarya Kulkarni
Henry Ford Health, akulkar3@hfhs.org

Jennifer Smith

Talissa Blackshere

Elizabeth Tesson

See next page for additional authors

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Authors

Tonia Afshan, Aishwarya Kulkarni, Jennifer Smith, Talissa Blackshere, Elizabeth Tesson, Tina Hartert, Katherine Rivera-Spoljaric, Edward M. Zoratti, Christine L. M Joseph, Ronald Gangnon, James Gern, and Anne M. Singh

563 Designing an Optimized Electronic Health Record Search Strategy to Identify Patients with Peanut Food Protein Induced Enterocolitis Syndrome (FPIES)

Madeline Schutt, MD[1], George Lales, MS[2], Rajesh Kumar, MD, MS[1], Marc Rosenman, MD[3], Abigail Lang, MD[1]; [1]Ann & Robert H. Lurie Children's Hospital of Chicago, [2]Stanley Manne Children's Research Institute, Ann & Robert H. Lurie Children's Hospital of Chicago, [3]Stanley Manne Children's Research Institute, Ann & Robert H. Lurie Children's Hospital of Chicago, Department of Pediatrics, Northwestern University Feinberg School of Medicine.

RATIONALE: While peanut FPIES is increasingly reported, its true frequency is challenging to measure systematically. We sought to design a strategy to facilitate accurate identification of patients with peanut FPIES utilizing the electronic health record (EHR).

METHODS: We ran five distinct EHR phenotype queries at a single tertiary care children's hospital between 2016 and 2021. The queries included: 1) results or procedure codes for peanut allergy testing, 2) "peanut" in EHR allergy list, 3) ICD10 diagnosis codes for food allergy/anaphylaxis, 4) ICD10 diagnosis codes for allergic/dietetic gastroenteritis/colitis, and 5) ICD10 diagnosis code for FPIES. We then performed chart review validation in selected zones formed by overlap of the queries in a five-set Venn diagram. We reviewed all subjects in these zones if $n \leq 20$, or a random sample of 20 if $n > 20$.

RESULTS: We identified 23,419 patients fitting at least one EHR query. This included 503 with the FPIES ICD10 code, 2210 with a listed peanut allergy, and 9552 with peanut allergy testing. Among 116 charts reviewed, we identified 14 patients with peanut FPIES. All 14 confirmed cases had the FPIES ICD10 code; none of the charts reviewed without this code included a confirmed case. 13/14 had peanut allergy testing; 7/14 had peanut listed as an allergy. Of the 15 patients with both an FPIES ICD10 code and peanut listed as an allergy, 7 (47%) had confirmed peanut FPIES.

CONCLUSIONS: Standardized search algorithms and Boolean logic could facilitate case-finding for studies of peanut FPIES in larger cohorts, but additional search strategy refinement is needed.

564 Views Over Validity: Analyzing Asthma Information on TikTok to Increase Reach

Tori Martel, MPH[1], Lisa Gualiteri, PhD, ScM[2], Lynda Mitchell, MA[1]; [1]Allergy & Asthma Network, [2]Tufts University.

RATIONALE: With over 1 billion TikTok™ users and 40% of younger generations using TikTok™ as a search engine, the Allergy & Asthma Network (AAN) investigated the asthma education on this platform and to inform the future use of TikTok™ as an educational medium.

METHODS: A search for "asthma" resulted in 51 TikTok™ videos posted during March 2022. They were reviewed independently by three AAN experts and categorized based on the video context (accurate, inaccurate, guidance, entertainment, personal) and popularity.

RESULTS: Of the 51 videos, 27.5% were personal experiences, 25.5% were for entertainment purposes, 13.7% were deemed as accurate, 13.7% contained inaccurate medical advice, 7.8% were about pet asthma, 5.9% of videos contained helpful guidance, 3.9% mocked asthma, and 2% showed improper inhaler techniques. Only 9.8% of videos were posted by a professional practitioner. The most popular of the reviewed videos, was about the need to use a quick relief inhaler while engaging in sexual activity, categorized as entertainment, not educational and had 1.6 million likes. The combined total for the other 50 videos was 1.8 million likes. AAN 's reach was 60,336 views since February 2022.

CONCLUSIONS: Knowing the popularity of entertainment on TikTok™ combined with the prevalence of inaccurate asthma information has motivated AAN to develop a presence on TikTok™ to combat misinformation. The most popular videos are the easiest to find, yet achieving a smaller reach was deemed valuable to provide accurate asthma education to the user.

565 Examining virtual research recruitment and participant diversity in a multi-center birth cohort, Childhood Allergy and the NeOnatal Environment" (CANOE)

Tonia Afshan, MD, MPH[1], Aishwarya Kulkarni[2], Jennifer Smith[3], Talissa Blackshere[4], Elizabeth Tesson[5], Tina Hartert, MD MPH[4], Katherine Rivera-Spoljaric, MD[6], Edward Zoratti, MD, FAAAAI[7], Christine Joseph, PhD[2], Ronald Gangnon, PhD[3], James Gern, MD FAAAAI[8], Anne Marie Singh, MD[8]; [1]University of Wisconsin Hospitals and Clinics, [2]Henry Ford Health System, [3]University of Wisconsin-Madison, [4]Vanderbilt University, [5]Washington University - St. Louis, [6]St. Louis Children, [7]Henry Ford Hospital, [8]University of Wisconsin.

RATIONALE: Recruitment for a NIH/ECHO-supported multi-center birth cohort, "Childhood Allergy and the NeOnatal Environment" (CANOE) stopped due to the COVID-19 pandemic. Redesign of study procedures emphasized virtual and socially distanced activities. We hypothesized that "virtual" recruitment methods (social media, websites, email) would surpass "traditional" methods (in-clinic, telephone, flyers/print materials) and increase enrollment of families from diverse backgrounds and communities.

METHODS: Pregnant women (n=439, target 500) were recruited from four academic medical centers in Detroit MI, Madison WI, Nashville TN, and St. Louis MO. We collected demographic and social information by questionnaires and examined race, ethnicity, age, parity, and employment status in relation to recruitment method using chi-square tests.

RESULTS: In-clinic and telephone recruitment comprised 55% of enrollment, followed by print materials (17%), and social media and email (15%). The cohort includes families self-identifying as Caucasian/White (63%), African American/Black (27%), Hispanic/Latino (3.3%), Asian (3.5%), and mixed races (1.2%). This reflects site demographics for White and Black patients, while other populations are not as well recruited into this cohort. Recruitment method success did not vary by race, ethnicity, maternal age, or employment status (p=ns for each comparison). Most (63%) multigravida mothers (9.1% of participants) were recruited in clinic, while primigravida participants were recruited more evenly via all methods.

CONCLUSIONS: "Virtual" recruitment methods comprised a smaller proportion of cohort enrollment than hypothesized and study recruitment method did not vary by race/ethnicity; however, consideration of combined, varied, and novel recruitment methods may add to the development of best practices for more representative research study recruitment.

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