

# PolicyLab PAS Meeting Presence

## PHASE I: April 30-May 4

**DATE:**

*Note: All names bolded and underlined are PolicyLab team members.*

**April 30**

**Title:** The Farm Food Box Program Survey

**Time:** 6-7 a.m. ET

**Presenter:** Alyssa Kyle

**Authors:** Alyssa Kyle, Iliana Garcia, Megha Kulshreshtha, Yael Lehmann, **Saba Khan**

**Presentation type:** Health Equity/Social Determinants of Health: e-Posters–Food Insecurity

Poster Board #: 987

Publication #: EP-148.987

Background: The United States Department of Agriculture estimates that 1 in 6 children live in food-insecure households. While the novel coronavirus has affected all aspects of life, it has had a particular impact on food insecurity. It is estimated that food insecurity has doubled among households with children during the pandemic. In response, Children's Hospital of Philadelphia (CHOP) implemented the Farm Food Box Program to provide weekly deliveries of produce boxes to families in need. Through this collaboration, CHOP identified food-insecure recipients, Common Market sourced and packaged produce from local farms, and Food Connect delivered the boxes to families' homes.

Objective: To evaluate participants experience with the Farm Food Box program and solicit feedback for improvement.

Design/Methods: A 17-item survey was developed to evaluate participants' experience with the program and solicit feedback for improvement. The survey was created using REDCap and the link to the survey was sent to program participants via text message in September 2020 and remained open for four weeks.

Results: Over 16 weeks, 95,000 pounds of food were delivered to families in need. 100 of the 389 participants responded to the survey and 81% reported they were "very satisfied" with the quality of the food received. 78% described the amount of food was "just right," while 17% reported it was "too little," showing opportunity for future plans to tailor food boxes to family size. Contactless delivery proved to be the most impactful factor of this program as 93% of participants

## 2021 Pediatric Academic Societies (PAS) Meeting

reported it was “very important” that the food be delivered. Due to the pandemic, transportation, finances, safety and food shortages were common concerns reported. Additionally, the program extended participants access to nourishing food as 91% said the program increased their family’s access to vegetables. Results illustrate the program’s impact extended beyond the immediate families served as 59% reported sharing leftover food with family outside of the house.

Conclusion(s): While meeting the needs of food-insecure families during the pandemic is complex, a contactless delivery program of nutritious food can address the challenges of transportation, access and nutritional content. Patients reported high levels of satisfaction. Results emphasized the importance of delivery and revealed broader need for items such as toiletries and clothing that should be considered for future social determinant programming.

**April 30**

**Title:** Provider Perspectives of Telehealth for Quality Pediatric Care Delivery

**Time:** 6-7 a.m. ET

**Presenter:** Pegah Maleki

**Authors:** Pegah Maleki, Alexis W. Phillips, Haley L. Faust, Danielle Petsis, Danielle Apple, Lisa A. Schwartz, Kari Baber, John Chuo, Nadia Dowshen, Sarah M. Wood

**Presentation type:** Telemedicine/EHR/Medical Informatics: e-Posters-Telehealth

Poster Board #: 2216

Publication #: EP-231.2216

Background: In response to the COVID-19 pandemic, telehealth implementation has expanded exponentially in 2020.

Objective: To explore attitudes of clinicians new to telehealth on advantages and challenges of delivering high-quality pediatric and adolescent health care via telehealth.

Design/Methods: Web-based survey of clinicians’ attitudes toward telehealth within an academic pediatric health care system administered four months post-implementation of synchronous video visits. Descriptive statistics identified provider characteristics. We used an inductive coding approach to analyze open-ended survey responses detailing advantages and challenges of telehealth and categorized generated themes within the Institute of Medicine (IOM) dimensions of health care quality.

Results: Providers (n=378) were majority White (84%), female (73%), physicians (69%), with a median age of 43 years (IQR: 36-53). Provider representation spanned 24 divisions, including primary care and subspecialty programs. In the qualitative data, providers elucidated advantages and disadvantages in each of the IOM

## 2021 Pediatric Academic Societies (PAS) Meeting

dimensions: 1) Safety (improving care of medically fragile patients, but lacking clarity on which patient scenarios were safe for telehealth); 2) Effectiveness (improving adherence to care plan, but limiting scope of practice); 3) Timeliness (providing continuity of care during the pandemic, but facing visit interruptions due to technical issues); 4) Efficiency (reducing patient travel, but needing separate clinician and lab visits); 5) Equity (decreasing financial burden by reducing missed work/school, but introducing barriers to care due to poor access to high-speed internet); and 6) Patient-centeredness (improving patient-provider interactions by allowing providers to see patients in their home, but creating difficulties through the behavioral challenges of engaging children over video). In addition, we identified a Provider-level Benefits/Disadvantages theme: enabling provider mental health and wellness and improved work-life satisfaction, but producing challenges with care delivery due to technology limitations during visit.

**Conclusion(s):** Telehealth may maintain and even improve quality of patient care while also enhancing provider work-life balance. However, technology-based challenges may exacerbate barriers to quality care for marginalized patients and families, and policies and programs should focus on providing technological resources and support to ensure equitable high-quality care through telehealth.

**April 30**

**Title:** Fresh Start: Experiences with Produce Access Among WIC-Eligible Families

**Time:** 6-7 a.m. ET

**Presenter:** Brittany J. Van Remortel

**Authors:** Priyanka Joshi, Brittany J. Van Remortel, **Danielle L. Cullen**

**Presentation type:** Health Equity/Social Determinants of Health: e-Posters-Food Insecurity

**Poster Board #:** 981

**Publication #:** EP-148.981

**Background:** Nearly 22% of children in Philadelphia live in food-insecure (FI) households, often leading to reliance on inexpensive, nutrient-poor foods and associated poor health outcomes. Eating patterns developed in childhood carry into adulthood, indicating the importance of early development of healthy eating behaviors. Conducted in partnership with our local WIC office, this study explores: 1) experiences with produce access among low-income families with young children in West Philadelphia, and 2) caregiver preferences for food assistance in order to inform future programming.

**Design/Methods:** We abstracted basic demographic and contact information from the electronic health record for families of children under the age of five from an urban, pediatric primary care center

## 2021 Pediatric Academic Societies (PAS) Meeting

who are WIC-eligible. We recruited 30 caregivers to participate in semi-structured phone interviews to understand experiences with produce access and explore preferences for programs aimed at increasing produce consumption. All interviews were digitally recorded and transcribed. We used content analysis with constant comparison to code interviews inductively and identified emerging themes through an iterative process.

**Results:** 30 caregivers with an average of three children per household and a 61% rate of FI participated in our qualitative study. A major theme that emerged from the data is a preference among caregivers for their children to eat more produce, although there were many barriers to produce access, including: limited availability, convenience, cost, difficulty shopping with young children and time constraints. Barriers exacerbated by the COVID-19 pandemic included lack of child care, decreased access to WIC benefits due to office closures and fear of visiting stores. Owning a vehicle and receiving both SNAP and WIC benefits improved ability to purchase produce.

**Conclusion(s):** Our study demonstrates desire for better access to fresh produce among WIC-eligible families, and highlights multiple barriers, which have been worsened by the pandemic. Caregivers described a preference for delivery-based, low-or-no cost food programs to increase produce access and intake among children.

**April 30**

**Title:** Impact of COVID-19 on Caregiver Experiences with Food Access

**Time:** 6-7 a.m. ET

**Presenter:** Kanak Verma

**Authors:** Kanak Verma, Georgia Reilly, Rachel Brown, **Danielle L. Cullen**

**Presentation type:** Health Equity/Social Determinants of Health: e-Posters-Food Insecurity

**Poster Board #:** 995

**Publication #:** EP-148.995

**Background:** Food insecurity affects 1 in 5 households with children in the United States, and can impact long-term physical, cognitive and emotional health. The COVID-19 pandemic has exacerbated existing socioeconomic and racial/ethnic disparities, further limiting access to sufficient, nutritious food among vulnerable populations. This study explores the experiences with food access among caregivers of children participating in a clinically based free summer meal program during the pandemic.

**Design/Methods:** We partnered with a community agency to provide free breakfast and lunch to all children ages 2-18 and their siblings during clinical visits in the emergency department and four

## 2021 Pediatric Academic Societies (PAS) Meeting

outpatient centers associated with an urban children's hospital. Boxed meals were offered to patients and siblings, along with additional information regarding how to access community free meal sites. During a three-month study period (June-August 2020), caregivers were asked to complete a survey during initial participation including an assessment of: food insecurity; intended repeat use of the free meal program; and perceived impact of the COVID-19 pandemic on food access through free-text responses. We used content analysis to identify emerging themes in respondent data through an iterative process.

**Results:** A total of 20,010 meals were distributed across the five clinical sites during the study period. Among the 856 study participants, 40% reported food insecurity, and 80% planned to use the free meal program again. 52% reported increased difficulty obtaining enough food for their family during the COVID-19 pandemic. Three primary themes emerged as barriers to food access: 1) grocery supply and demand, 2) store accessibility, and 3) financial strain. Caregivers described difficulty maintaining a sufficient food supply due to decreased grocery store stock with simultaneous increased consumption of food due to children at home full time. Store accessibility was hindered by closures, limited child care, transportation issues and fear of COVID-19 exposure. Additionally, caregivers described financial constraints stemming from job loss or salary cuts along with increased grocery costs, which lead to increased reliance on food assistance programs.

**Conclusion(s):** Our findings demonstrate increased difficulty with food access among participants in a clinically-based free meal program during the COVID-19 pandemic. Caregivers elucidated multiple factors that influence family-level food access, and described the key role of food assistance programs in improving food access.

**April 30**

**Title:** Cafeteria to Clinic: Assessing the Nutritional Value of Federally Sponsored School Meals Distributed in Primary Care during the COVID-19 Pandemic

**Time:** 6-7 a.m. ET

**Presenter:** Senbagam Virudachalam

**Authors:** Senbagam Virudachalam, Melissa Hewson, Alyssa Tindall

**Presentation type:** Health Equity/Social Determinants of Health: e-Posters–Food Insecurity

**Poster Board #:** 984

**Publication #:** EP-148.984

**Background:** Pediatric primary care clinics and other community sites have distributed school meals (supported by the federal Child and Adult Care Food Program, CACFP) during the COVID-19 pandemic to help combat food insecurity. These meals must be nutritious to

## 2021 Pediatric Academic Societies (PAS) Meeting

support optimal health among vulnerable children.

Objective: (1) Assess the nutritional content of CACFP-supported meals distributed in a pediatric primary care office during the COVID-19 pandemic. (2) Compare the nutritional value of meals to CACFP guidelines and federal dietary recommendations for children.

Design/Methods: This descriptive study examined the nutritional content of all school breakfast meals served to 0-18 year olds in a pediatric primary care clinic in Philadelphia in November 2020. We characterized macronutrient content and compared this data to CACFP guidelines and federal dietary recommendations for children.

Results: The average meal contained 435 calories (SD 51.2), 5g fat (SD 1.5), 1g saturated fat (SD 0.6), 88g carbohydrates (SD 10.4), 12g protein (SD 3.4), 49g sugar (SD 8) and 6g fiber (SD 1.2). Food was shelf stable and frequent inclusions were cereals with added sugar, dried fruit, and non-fat chocolate or 1% white milk. Meals contained CACFP required components, but cereals exceeded maximum allowable sugar content. Meals were low in fiber and energy dense, two markers of nutritional value not included in CACFP guidelines. Based on federal recommendations for a sedentary 8 year old, meals provided on average 35% of daily energy needs, 67% of recommended carbohydrates and 24% of fiber intake. Meals provided 22% of a 15-year-old's energy needs but 43% of a 3-year-old's.

Conclusion(s): CACFP-supported meals distributed in a pediatric primary care clinic during the COVID-19 pandemic exceeded CACFP sugar guidelines and offered too little fiber to constitute a balanced meal. CACFP guidelines do not adequately reflect U.S. dietary recommendations for children but could be modified to do so. Distributing meals in primary care may be inappropriate given varying nutritional needs of infants, children and adolescents. Additionally, only shelf-stable foods can be offered. Nutritional content of meals should be optimized to align this important safety net program with the healthy eating recommendations provided during pediatric primary care visits.

**April 30**

**Title:** Variation in Caregiver-Reporter Early Childhood Sleep Problems by Community Disadvantage

**Time:** 6-7 a.m. ET

**Presenter:** Ariel Williamson

**Authors:** Ariel A. Williamson, Erin Leichman, Russell A. Gould, Russel M. Walters, Jodi A. Mindell

**Presentation type:** Health Equity/Social Determinants of Health: e-Posters–Material Needs

Poster Board #: 1016

Publication #: EP-150.1016

## 2021 Pediatric Academic Societies (PAS) Meeting

Background: Caregiver-perceived sleep problems are common in early childhood, but little is known about variation and sleep problem correlates across levels of community disadvantage.

Objective: The purpose of this study was to examine correlates of a caregiver-perceived child sleep problem across levels of community disadvantage.

Design/Methods: 14,980 caregivers (85.1% mothers; child age 6-35.9 months, M=13.88 mos; 52.6% boys) from the publicly available Johnson's Bedtime sleep app completed the Brief Infant Sleep Questionnaire-Revised. Socioeconomic disadvantage was indexed by zip code using the Distressed Communities Index (DCI), with quintile scores ranging from prosperous to distressed. Logistic regression was used to examine correlates of a caregiver-reported child sleep problem by DCI. Models examined child sleep patterns (bedtime, sleep onset latency, number and duration of night wakings, nighttime and total sleep duration) and sleep behaviors (consistent bedtime routine, bedtime difficulty, impact of child sleep on caregiver sleep), covarying for child sex, age and independent sleep arrangement.

Results: Caregiver-reported sleep problems significantly decreased with increased community disadvantage: 57.9% prosperous communities, 54.4% comfortable, 52.0% mid-tier, 47.3% at-risk and 42.6% distressed ( $p < .001$ ). Overall, impact of child sleep on caregiver sleep (odds ratio [OR] =5.93), bedtime resistance (OR=2.74) and frequent wakings (ORs=1.7) were most associated with sleep problems (OR > 1.2,  $p < .01$ ). Within each level of community disadvantage, results were similar, although association between the impact of child sleep on caregiver sleep and a caregiver-perceived child sleep problem was attenuated in more disadvantaged communities (ORs: 4.29- 5.72). Nighttime sleep duration was linked to sleep problems only in more advantaged communities.

Conclusion(s): Caregiver-reported child sleep problems are lower in disadvantaged communities and are primarily correlated with the impact of child sleep on caregiver sleep, followed by bedtime difficulties and night wakings. Caregivers in advantaged communities are more likely to consider the negative impact on their sleep and short child sleep duration. Clinicians should consider multiple factors, including caregiver impact, in assessing and treating child sleep problems.

May 1

**Title:** The Impact of a Quality Improvement Initiative on HPV Vaccination in a Large Primary Care Network

**Time:** 11:20-11:30 a.m. ET

**Presenter:** Elena Huang

**Authors:** Elena Huang, Kathleen M. Filograna, Jonathan Crossette, Katie Lockwood, **Brian Jenssen**

## 2021 Pediatric Academic Societies (PAS) Meeting

**Presentation type:** Quality Improvement/Patient Safety:  
Ambulatory and Urgent Care QI

Publication #: 1325-PL-QA.3

Background: The HPV vaccine prevents cancer, but only 40% of U.S. teens complete the HPV series by 13 years old. Early HPV vaccination maximizes its effectiveness prior to initiation of sexual activity. A major barrier to HPV vaccination is lack of consistent provider recommendation to initiate and complete the series in a timely manner. In our large primary care network that sees >260,000 patients each year, <33% of patients completed HPV vaccination by age 13 (range: 10-65%). These low rates and wide variation prompted a network-wide quality improvement (QI) initiative.

Objective: To increase HPV vaccine completion rates before age 13 by 15% across our Primary Care Network by December 2020.

Design/Methods: Our interprofessional team identified key drivers to improve HPV vaccination. We engaged physicians, nurses and administrative leaders at each office. Our strategy was to implement network-wide interventions in Phase 1 (Summer 2019), followed by customized site-based PDSA cycles in Phase 2 (Fall 2019 to Summer 2020). We implemented high-impact, achievable interventions across the network: 1) Update clinical decision support (CDS) to prompt HPV vaccine starting at age 9 in a default, opt-out manner (pre-selected order); 2) Push-out HPV vaccine data regularly to providers; 3) Provide focused education via webinars on HPV disease and vaccine; 4) Standing orders for all HPV doses. To optimize physician involvement, we provided Maintenance of Certification (MOC) credit.

Results: At project launch (June 2019), HPV dose #1 rates for patients 9-12 years old quickly surpassed the goal ( $\geq 15\%$  above baseline). Rates stayed high during the COVID-19 pandemic and met criteria for special cause. 90% of offices increased dose #1 rates  $\geq 15\%$  above baseline, and network rates increased from 10% to  $>30\%$  ( $p < 0.0001$ ). Network HPV dose #2 rates dropped to 27% early in the pandemic, then rose steadily to a record-high by December 2020: 83% of patients seen in primary care who were eligible for dose #2 received the vaccine. Our outcome metric, HPV vaccine completion for patients before age 13, also fell during the pandemic but rebounded in late 2020. Physician engagement was robust with 36% of network physicians attesting for MOC credit.

Conclusion(s): Our QI project is improving HPV vaccine initiation and completion before age 13 for patients in our primary care network. Key interventions have been: 1) CDS to prompt HPV vaccine starting at age 9, 2) data feedback to providers, 3) and interprofessional engagement.

May 1

**Title:** Where the Rubber Meets the Road: Interpreting Cycle Thresholds during the COVID-19 Pandemic

**Time:** 3:00-3:10 p.m. ET

## 2021 Pediatric Academic Societies (PAS) Meeting

**Presenter:** Morgan Congdon

**Authors:** Morgan Congdon, Irit Rasooly, Kevin O'Callaghan, Alexandra R. Linn, Brandy Neide, Rebecca M. Harris, Louis M. Bell, Julia S. Sammons, **Susan E. Coffin**, Eimear Kitt

**Presentation type:** Infectious Diseases: COVID-19 & Zika

**Publication #:** 1615-PL-QA.1

**Background:** SARS-CoV-2-infection in children is identified with reverse transcriptase–polymerase chain reaction (RT-PCR) of viral sequences from respiratory samples. Cycle threshold (CT value) is the point at which the nucleic acid target is detectable, with an inverse correlation between the amount of viral genetic material present and the value reported. Adult studies showed that the probability of replication competent virus declines significantly after seven days of symptoms and minimal viral growth in culture after day eight of symptoms or with CT > 24. CT thresholds for ascertaining infectivity and transmissibility in children are not established.

**Objective:** To compare temporal trends in the CT values and symptoms amongst symptomatic and asymptomatic pediatric patients

**Design/Methods:** This was a single-center retrospective, observational study of children who tested positive for SARS-CoV-2 from July 23 to Aug. 20, 2020. Flocked nasopharyngeal swab samples were analyzed via in-house, laboratory developed RT-PCR testing (positive results for  $\beta$ -actin target at < 45 CT). Indication for testing was abstracted from the electronic health record as “diagnostic/symptomatic,” “screening/asymptomatic” (admission, pre-procedure), “post-exposure/asymptomatic” or “unknown.” The relationship between symptoms and CT any reported symptoms were delineated. The median CT for each testing indication, symptom category, and reported symptom were calculated and Student's T-test were performed.

**Results:** Clinical information was available for 210 patients (95%) with positive tests. The cohort was 51% female, with median age of 14.4 years (IQR 6-18). Race was reported for 83% of patients; of which, 32% identified as Black/African American, 50% as White and 1% as Asian. 54% were diagnostic tests, 21% screening, 9% post-exposure and 16% were unknown. The median CT value for all tests was 30.91 (IQR 22.57 to 36.91). Symptomatic patients had significantly lower CT values than asymptomatic patients. Among symptomatic patients (n=114), tests were obtained on a median of day 3 (IQR 2-5). Fever was the most common reported symptom (n=62). Certain symptoms were significantly associated with lower CT values.

**Conclusion(s):** Our study reveals significantly lower CT values among symptomatic children. Fever, sore throat, rhinorrhea, cough and headache had CT values associated with an increased potential for

## 2021 Pediatric Academic Societies (PAS) Meeting

infectivity. Our findings add to the growing body of literature on the clinical epidemiology of pediatric SARS-CoV-2.

May 1

**Title:** Transmasculine Youths' Experiences with Chest Binding: A Qualitative Analysis

**Time:** 3:00-3:10 p.m. ET

**Presenter:** Jamie E. Mehringer

**Authors:** Jamie E. Mehringer, Jacqueline B. Harrison, Kit M. Quain, **Danielle Apple**, Judy A. Shea, Linda A. Hawkins, **Nadia Dowshen**

**Presentation type:** Adolescent Medicine I

Publication #: 1600-PL-QA.1

Background: Transmasculine (TM) individuals—those assigned female at birth but who identify as masculine—often practice chest binding: wearing compression garments to flatten the chest. Research shows TM adults frequently report adverse health effects from binding that are outweighed by the perceived psychological and functional benefits; however, there is little known about binding in TM youth.

Objective: To understand TM youths' experiences with chest binding.

Design/Methods: TM youth ages 13-21 were recruited from a large pediatric gender clinic and completed a semi-structured qualitative interview which included exploration of experiences with binding. Three investigators coded transcribed interview recordings. Thematic analysis was completed using a modified grounded theory approach and NVivo-12 software. Median inter-rater reliability across codes was  $K = 0.92$ .

Results: Participants (N=30) were mean age 17.5 years. All youth reported a history of binding, with 53% reporting currently binding and 47% no longer binding due to receiving masculinizing chest surgery (MCS). Here we report on youths' experiences prior to undergoing MCS. The majority of youth reported daily binding, and the mean age of binding onset was 13.8 years. Youth began binding at various stages of personal identity development. They most commonly learned to bind from online sources, though several discovered binding on their own. Most youth had learned of guidelines for "safe binding"—thought to prevent physical harm or poor cosmetic outcomes of future MCS—but many found it challenging to abide by these rules. All youth described binding as physically uncomfortable and many reported other adverse health effects such as difficulty breathing, skin irritation and musculoskeletal problems. Despite negative effects, all youth found binding to be beneficial. Binding was critical to affirming youths' gender identity, alleviating dysphoria, promoting confidence and emotional comfort, and improving functioning.

## 2021 Pediatric Academic Societies (PAS) Meeting

Conclusion(s): This study is among the first to describe experiences of binding in TM youth. Similar to studies of TM adults, we observed that discomfort and adverse physical effects are common, yet are typically outweighed by the psychological and functional benefits. Nevertheless, it is important to improve access to MCS for youth who desire this procedure and are developmentally appropriate MCS candidates to reduce the need for binding in this population.

May 1

**Title:** Neighborhood Social Environment and Dietary Intake Among Preschool-aged Children and Their Mothers

**Time:** 6:30-6:45 p.m. ET

**Presenter:** Stephanie L. Mayne

**Authors:** Stephanie L. Mayne, Chloe Hannan, Gabrielle DiFiore, Karen Glanz, Senbagam Virudachalam, Alexander Fiks

**Presentation type:** Obesity I

Publication #: 1750-PL-L.5

Background: Evidence increasingly suggests that obesity tracks across generations and that parent-child dietary intakes are correlated, underscoring the importance of examining diet from an intergenerational perspective. Positive neighborhood social features such as safety and collective efficacy may promote healthier behaviors, yet few studies have examined associations between neighborhood social environment and diet among parents and children.

Objective: To examine associations of neighborhood social environment with dietary intake among preschool-aged children and their mothers.

Design/Methods: We administered a cross-sectional survey to a convenience sample of 300 mothers/female caregivers of Medicaid-enrolled 2-4-year-old children in Philadelphia. Mothers reported their own and their child's dietary intake using the validated Dietary Screener Questionnaire. Perceived neighborhood safety and collective efficacy were assessed using 2- and 10-item validated scales. Participant addresses were geocoded to link police-recorded violent crime rates at the census block group level. Multiple imputation was used to impute missing data. Mixed-effects linear regression models assessed the associations of the neighborhood social environment (in tertiles of safety, collective efficacy and crime) with parent and child dietary intake, adjusted for demographics, family socioeconomic status, neighborhood poverty, and perceived and objective measures of the neighborhood food environment.

Results: Among mothers (mean age 31, 60% Black), higher perceived neighborhood safety was associated with higher daily intake of fruits

## 2021 Pediatric Academic Societies (PAS) Meeting

and vegetables ( $\beta=0.31$  cups, 95% CI: 0.07, 0.55 comparing the highest to lowest tertile), as was higher perceived neighborhood collective efficacy ( $\beta=0.27$ , 95% CI: 0.03, 0.51). Living in a neighborhood in the lowest tertile of violent crime (vs. highest) was associated with higher intake of whole grains ( $\beta=0.14$  ounces, 95% CI: 0.01-0.28). Among children (mean age 3.8, 44% female), higher maternal perceived neighborhood safety was associated with higher intake of whole grains ( $\beta=0.09$ , 95% CI: 0.02-0.15). Neighborhood social exposures were not associated with intake of added sugars or sugar-sweetened beverages for mothers or children.

Conclusion(s): Perceptions of better neighborhood social environments are associated with higher consumption of some healthy foods among mothers and their young children. Future work should explore mechanisms and whether intervening on the social environment improves diet.

May 1

**Title:** Pandemic Food Access: Caregiver Experiences and the Impact of a Clinically-Based Produce Program

**Time:** 7:15-8:15 p.m. ET

**Presenter:** Danielle L. Cullen

**Authors:** Danielle L. Cullen, Rachel Brown, Georgia Reilly, Falguni Patel, Carly Freedman, Senbagam Virudachalam

**Presentation type:** Health Equity/Social Determinants of Health: Highlighted e-Posters

Poster Board #: 39

Publication #: 1904-HP-QA.39

Background: The COVID-19 pandemic has intensified food insecurity (FI) across the country, and families with children are disproportionately affected. This study explores: 1) experiences with FI and social resources during the pandemic among families participating in a free clinically-based community-supported agriculture (CSA) program, and 2) the impact of this CSA on food access and interactions with produce.

Design/Methods: Free weekly boxes of organic produce from a local farm cooperative were distributed to caregivers of pediatric patients during a 12-week pilot period at two outpatient centers in low-income areas associated with an urban children's hospital. Caregiver demographic information and a two-question screen for FI were collected. We purposively sampled 30 caregivers representative of all program participants for semi-structured interviews on a rolling basis to understand experiences with FI, social resources and this CSA during the pandemic. Interviews were recorded and transcribed. We used content analysis with constant comparison to code interviews inductively and identify emerging themes.

## 2021 Pediatric Academic Societies (PAS) Meeting

Results: Interviews elucidated four major barriers to adequate food during the pandemic: 1) Fluctuations in price, availability and quality of food; 2) Financial strain; 3) Faster consumption with all family members home; 4) Shopping challenges: fear of the virus, store closures and lack of child care. SNAP, WIC and school meal programs were facilitators to food access; increased SNAP allotments were particularly useful, and delays of mailed WIC benefits were a challenge. Participation in the clinically-based CSA program helped mitigate barriers to food access by reducing the frequency of shopping trips, and enabled the reallocation of finances to needs other than food. Further, the program cultivated caregivers' and children's favorable attitudes toward fresh produce, increased interest in purchasing produce, and developed confidence in preparing produce through exploration of recipes and exposure to new ingredients.

Conclusion(s): This qualitative study describes major facilitators and barriers to food access among CSA program participants during the pandemic, suggesting areas of potential policy intervention. Furthermore our findings demonstrate the potential of a clinically-based subsidized CSA program to improve food access, and positively impact families' exposure to and interaction with produce, even during an unprecedented time of stress and financial strain.

May 1

Title: Understanding Low-income Parents' Perceptions of the Philadelphia Beverage Tax

Time: 7:15-8:15 p.m. ET

Presenter: **Emma Edmondson**

Authors: **Emma Edmondson**, Judy A. Shea, **Stephanie M. Garcia**, Jeemin Kwon, **Emily Gregory**, Christina Roberto, **Senbagam Virudachalam**

Presentation type: Obesity: Highlighted e-Posters

Poster Board #: 106

Publication #: 1910-HP-QA.106

Background: Excise taxes on sugar-sweetened beverages (SSBs) may improve dietary behaviors, but may also place a disproportionate financial burden on low-income families. The Philadelphia Beverage Tax, a sweetened beverage tax implemented in 2017, directs revenue to programs benefiting young children, like free pre-kindergarten and parks. Little is known about how low-income parents perceive the fairness and effectiveness of such SSB taxes.

Objective: Characterize perceptions of the Philadelphia Beverage Tax among low-income parents.

Design/Methods: We conducted semi-structured interviews with Philadelphia parents and caregivers of 2-11-year-old children with Medicaid insurance (as a marker of low income). The interview guide

## 2021 Pediatric Academic Societies (PAS) Meeting

was developed using a conceptual model that shows perceived fairness and perceived effectiveness as two critical elements for public acceptance of a food policy. Interviews, conducted summer 2020 by telephone, were recorded and transcribed. Thematic analysis was performed using NVivo 12.

**Results:** Participants (n=30) were predominantly African American (97%), female (100%) and had annual household incomes < \$50,000 (80%). Participants were 26 to 72 years old, with an average of 2.6 children per household (range 1-5). Themes emerged in three main domains: level of awareness of the tax, perceptions of the tax and how its revenue is used, and perceptions of how the tax affected SSB intake. All but one participant was aware of the tax; most were familiar with its goal of raising revenue for free pre-K. Some participants had personally benefitted from the expansion of free pre-K. Many participants perceived the tax as fair, with the caveat that the perceived fairness of the tax hinged on its revenue coming back into the community in noticeable ways. There was a spectrum of perceived effectiveness of the tax. Many felt the tax had not changed their intake of sweetened beverages and reported leaving the city limits to purchase sugary drinks or substituting drink mixes, which are not taxed. Other participants perceived a decrease in their sugary drink intake and an increase in water consumption.

**Conclusion(s):** For low-income parents in Philadelphia, accountability of city government to use tax revenue in the way it was promised was critical to their perceptions of tax fairness and effectiveness. Because many reported leaving the city to avoid taxation, state or national level taxes may be more effective at influencing SSB intake.

May 2

**Title:** Association of Neighborhood Gun Violence with Increased Mental Health-Related Pediatric Emergency Department Utilization

**Time:** 10:13-10:23 a.m. ET

**Presenter:** Aditi Vasan

**Authors:** Aditi Vasan, Hannah K. Mitchell, Joel A. Fein, David G. Buckler, Douglas Wiebe, Eugenia C. South

**Presentation type:** APA Presidential Plenary

**Publication #:** 2100-PP-L.2

**Background:** Exposure to gun violence is highly prevalent among children and adolescents in the United States. The immediate effects of this exposure on children's mental health are not well understood.

**Objective:** To examine the association between episodes of neighborhood gun violence and subsequent mental-health related pediatric emergency department (ED) utilization.

**Design/Methods:** This retrospective cohort study examined 297,048

## 2021 Pediatric Academic Societies (PAS) Meeting

ED encounters for children living in South and West Philadelphia who presented to an urban academic pediatric ED from Jan. 1, 2014 to Dec. 31, 2018. Philadelphia Police Department data were used to identify the location of all known episodes of gun violence occurring within the study area during this time period. Children were included in the study if they (1) had one or more ED visits in the 60 days before or after an episode of gun violence, and (2) lived within a 2-3 block or 4-6 block radius of where this incident occurred. ED chief complaint and primary diagnosis (ICD-9/ICD-10) data were used to identify mental health-related ED visits. Multivariable logistic regression was used to compare odds of mental health-related ED utilization before and after an episode of neighborhood gun violence.

**Results:** There were 4,217 episodes of gun violence in the study area between 2014 and 2018, and 53,984 children had one or more ED visits within sixty days of an episode. The majority of these children were Black (84.5%) and Medicaid-insured (78.2%). After adjusting for age, gender, race, ethnicity, zip code, median household income by zip code and insurance status, children residing within 2-3 blocks of an episode of gun violence had greater odds of mental health-related ED presentations in the subsequent 7 days (adjusted odds ratio (aOR), 1.49, 95% CI, 1.04-2.17) and 30 days (aOR 1.23, 95% CI 1.01-1.49). In stratified analyses, the largest 7-day effect size was seen in adolescents ages 11-19 (7-day aOR 1.85, 95% CI 1.17-2.95).

**Conclusion(s):** Exposure to neighborhood gun violence has immediate adverse effects on children's mental health, resulting in increased mental health-related ED utilization. Pediatric health systems and city public health departments should partner with community-based organizations to provide both neighborhood-based support for children and families exposed to gun violence and trauma-informed care for the subset of these children who subsequently present to the ED. Policies aimed at reducing children's gun violence exposure are a crucial public health priority.

**May 2**

**Title:** Developmental and Behavioral Pediatrics: Autism

**Time:** 11 a.m.-1 p.m. ET

**Moderator(s):** Kate Wallis and Diane Langkamp

**Presentation type:** Platform

**Course number:** 2305-PL-QA

**Format Type:** On-Demand with Live Q&A

**May 2**

**Title:** Prevalence of Asthma in Hospitalized and Non-Hospitalized Children with COVID-19

**Time:** 3:00-3:10 p.m. ET

**Presenter:** George C. Floyd

## 2021 Pediatric Academic Societies (PAS) Meeting

**Authors:** George C. Floyd, Jesse Dudley, Rui Xiao, Chris Feudtner, Kiara Taquechel, Kristen Miller, Sarah E. Henrickson, David A. Hill, Chen C. Kenyon

**Presentation type:** Asthma

Publication #: 2600-PL-QA.1

Background: Several underlying medical conditions are associated with severe presentations of coronavirus disease 2019 (COVID-19) in children, but the association between pediatric asthma and COVID-19 severity risk remains unclear, with small studies providing conflicting results.

Objective: Our primary objective was to determine whether current asthma diagnosis was associated with hospitalization in a large health system cohort of children testing positive for severe acute respiratory coronavirus 2 (SARS-CoV-2).

Design/Methods: We extracted electronic medical records for all children aged  $\leq 21$  years with a positive polymerase chain reaction (PCR) test for SARS-CoV-2 within a large pediatric health system that includes primary/urgent care and a large tertiary children's hospital between March 17, 2020-Aug. 26, 2020. We used multivariable logistic regression models to determine the association between current asthma diagnosis and COVID-19-related hospitalization risk, adjusting for demographic and clinical characteristics including age, sex, race, ethnicity, payer, concurrent obesity diagnosis and number of complex chronic conditions. Since all hospitalized patients were screened for COVID-19 on admission regardless of symptoms or exposure risk, we performed a sensitivity analysis including only hospitalizations determined to be COVID-19-related based upon chart review by board-certified pediatricians.

Results: From March 17, 2020-Aug. 26, 2020, 979 patients tested positive for COVID-19. Of these patients, 205 (21%) had a current asthma diagnosis. 121 children (12%) were hospitalized within 14 days of their first positive COVID-19 PCR, and 11 (9%) of the hospitalized patients had asthma. After adjusting for the above demographic and clinical characteristics, asthma diagnosis was associated with a lower odds of hospitalization for COVID-19 (OR: 0.28; 95%CI: 0.14-0.55;  $P < .001$ ). In the sensitivity analysis, 74 of the 121 hospitalizations (61%) were determined to be COVID-related and the association between asthma and lower odds of hospitalization remained (OR: 0.40; 95%CI: 0.19-0.84;  $P = 0.02$ ).

Conclusion(s): In a large cohort of children testing positive for COVID-19, the prevalence of asthma reflected the overall health system prevalence, yet asthma was associated with lower odds of hospitalization. Further work using multi-center data is needed to confirm this inverse association and explore potential explanations for this phenomenon.

## 2021 Pediatric Academic Societies (PAS) Meeting

May 2

**Title:** The Association of Neighborhood Social Environment and Maternal Stress

**Time:** 3:30-3:40 p.m. ET

**Presenter:** Stephanie L. Mayne

**Authors:** Stephanie L. Mayne, Gabrielle DiFiore, Chloe Hannan, Senbagam Virudachalam, Karen Glanz, Alexander Fiks

**Presentation type:** Environmental Health

**Publication #:** 2610-PL-QA.4

**Background:** Low-income families are disproportionately exposed to neighborhood stressors, like crime. Consistent parental stress may negatively impact child physical and mental health, while living in a neighborhood with a supportive social environment may circumvent the effects of stress and promote well-being. Few studies have examined the relationship between neighborhood social factors and stress among mothers of young children.

**Objective:** To examine the association between neighborhood social environment and stress among mothers of low-income, preschool-aged, children.

**Design/Methods:** Between October 2019-August 2020, we administered a survey to 300 mothers of Medicaid-enrolled 2-4-year-old children who were English-speaking and lived in Philadelphia. Maternal stress was measured via the validated, 10-item Perceived Stress Scale and analyzed as a continuous variable (range 0-40). Mothers' perceived neighborhood social characteristics (safety, collective efficacy, social cohesion, informal social control) were assessed using validated scales. Items were averaged to create summary scores (range 1-5) for each measure. Parent addresses were geocoded to link census block group police-recorded crime rates. We used multivariable linear regression to examine associations of neighborhood social environment measures with maternal stress score, adjusted for demographics, family socioeconomic status and neighborhood covariates. Multiple imputation was used to address missing data.

**Results:** Among mothers (mean age 31, 60% Black/African American), the overall mean stress score was  $16.8 \pm 7.2$ , similar to national averages among women. Higher perceived neighborhood safety, collective efficacy, social cohesion and informal social control were associated with lower maternal stress scores after adjustment for individual, family and neighborhood covariates. Each 1-point increase (on a 5-point scale) in perceived neighborhood safety was associated with a 2.10-point decrease in maternal stress (95% CI: -2.92, -1.29). Similarly, each 1-point increase in perceived neighborhood collective efficacy was associated with a 2.82-point

## 2021 Pediatric Academic Societies (PAS) Meeting

decrease in maternal stress (95% CI: -3.99, -1.65). Police-recorded crime rates were not associated with maternal stress.

Conclusion(s): Mothers of young children who perceive their neighborhood social environment more favorably have less stress compared to those who feel their neighborhood environment is less safe and socially cohesive. However, associations were not observed for objective crime rates.

May 2

**Title**: Randomized Controlled Trial of Text Message Reminders for 2nd Dose of Influenza Vaccine for Young Children: An AAP Pediatric Research in Office Settings (PROS) Study

**Time**: 5:30-5:45 p.m. ET

**Presenter**: Melissa S. Stockwell

**Authors**: Melissa S. Stockwell, Laura P. Shone, Ekaterina Nekrasova, Chelsea S. Wynn, Alessandra Torres, Miranda Griffith, Russell Localio, Justine Shults, Rebecca Unger, Leigh Ann Ware, Chelsea A. Kolff, Donna L. Harris, Lindsay Berrigan, Alexander Fiks

**Presentation type**: Immunizations/Delivery: Reminders, Hesitancy and Delivery Systems Improvement

Publication #: 2720-PL-L.1

Background: Nationally, less than half of children in need of two influenza vaccine doses in a season receive both doses. Further, only half who receive both doses do so before influenza activity peaks. Few, if any, pediatric text message vaccine reminder studies have been conducted in diverse primary care practices nationally.

Objective: Compare the effectiveness of text message reminders with embedded interactive educational information vs. usual care on receipt and timeliness of the 2nd dose of influenza vaccine.

Design/Methods: In this NIH-funded RCT conducted in two influenza seasons (2017-18; 2018-19), caregivers of children who needed the 2nd influenza vaccine dose that season were recruited in 50 pediatric primary care offices across 26 states at the time of the 1st dose. Practices (28% Northeast, 36% South, 16% Midwest, 20% West) were from the AAP PROS practice-based research network. Children 6 months-8 years were randomized 1:1 into intervention vs. usual care, stratified by age (6-23 months, 2-8 years) and language (English, Spanish) within each practice. Intervention caregivers received automated, personalized text messages on days 14, 21, 25, 28 and 42 post-receipt of 1st dose, which included 2nd dose due date, office specific walk-in hours or phone number to make an appointment, and both static and interactive educational information including need for timely receipt of 2nd dose. Primary outcomes were receipt of 2nd dose by April 30 (season end) and by day 42 (2 weeks after 2nd dose due) assessed by Mantel Haenszel methods adjusted

## 2021 Pediatric Academic Societies (PAS) Meeting

by practice and language, and timeliness of 2nd dose by Kaplan-Meier curves with log rank tests, stratified by practice site. All analyses were intention to treat.

Results: Overall, 2086 dyads enrolled; most children were age 6-23 months, half were publicly insured, and most caregivers preferred messages in English. Intervention children were more likely to receive a 2nd dose by the end of the season (83.8% vs. 80.9%; adjusted risk difference (ARD) 3.8%; 95%CI [0.1 to 7.5]) and by day 42 (62.4% vs. 55.7%; (ARD) 8.3%; 95%CI [3.6, 13.0]). Kaplan-Meier curves demonstrated more timely vaccination.

Conclusion(s): In this multi-state trial, text message reminders were effective in promoting increased and more timely delivery of the 2nd dose of influenza vaccine.

May 2

**Title:** Trauma and Resilience in Interpreter and Limited English Proficiency Communities in the Wake of Covid-19

**Time:** 5:45-6:00 p.m. ET

**Presenter:** Robin Ortiz

**Authors:** Robin Ortiz, Gabriela Vega, Christina Rojas, Nicole DiBattista, Priscilla Ortiz, Gabriela Jenicek, Nancy Kassam-Adams

**Presentation type:** Health Services Research II

Publication #: 2715-PL-L.2

Background: Interpreters are essential to health care professionals and liaisons to communities with limited English proficiency (LEP). Prior to the pandemic they faced potential secondary trauma through suffering conveyed by patients. In the wake of COVID-19 they face layered distress through the families they serve on the frontlines and personal hardship.

Objective: We aimed to: 1) understand the challenges experienced by interpreters and the families they serve before and after the pandemic, 2) assess potential solutions and supports.

Design/Methods: We conducted semi-structured interviews via video platform with medical interpreters working with children and families around the country. A qualitative thematic analysis was conducted using an iterative open coding approach (Atlas.ti software). Grounded subcategories were abstracted upwards to themes.

Results: Participants (n=20) were mostly female (90%) with 12 working languages. In general work, most (>=80%) expressed *emotional burden* in challenging medical situations and in experiencing an *underappreciation of professional interpretation services* (80%). Over half felt strain in *extending their role* beyond professional boundaries including as a *community*

## 2021 Pediatric Academic Societies (PAS) Meeting

*advocate*. Challenges faced by families of LEP were frequently identified (90%) and diverse. Examples related to cultural humility, deportation fears and rights to interpreter services. Due to the pandemic interpreters ( $\geq 75\%$ ) had *safety concerns* complicated by *environmental challenges* (80%) such as non-verbal cues masked by protective equipment and computer screens. Interpreters often found themselves troubleshooting *technology challenges* (80%) for families. Participants identified *coping mechanisms alone* (75%) and *in relationships* (75%) supportive in work and adjustment to the pandemic. They identified *policy implications* (80%) related to certification and agency work and needed *supports for families* (75%) including tailored, culturally relevant resources universal in language, such as pictorial, with need for broader dissemination.

Conclusion(s): These results informed the development of a survey to be distributed to the national interpreter community. Though interpreters and families with LEP are facing pandemic challenges layered on prior trauma, interpreters are a valuable voice in both interpretation and the development of solutions to support resilience in their profession and vulnerable children, families, and communities especially relevant to pandemic-related disparities, care access and vaccine uptake.

May 2

**Title:** Hospital Presentations for Children Physical Abuse Before and During the COVID-19 Pandemic

**Time:** 6:00-6:15 p.m. ET

**Presenter:** Kate Henry

**Authors:** M. Katherine Henry, Divya Talwar, Victor S. Ritter, Mitchell A. Johnson, Apurva Shah, Mark R. Zonfrillo, **Joanne Wood**, Samantha Schilling

**Presentation type:** Child Abuse & Neglect

Publication #: 2705-PL-L.3

Background: The economic stress and isolation created by COVID-19 may have led to increases in child physical abuse. Yet, with school closures and stay at home orders, child exposures to mandated reporters have decreased and therefore, reports of suspected abuse to child welfare agencies might be falsely low. Hospital discharge data provide an alternative method for measuring trends in physical abuse.

Objective: To evaluate the rate of emergency department and hospital admission encounters for physical abuse among children <6 years before and during the pandemic, and to compare physical abuse rates to all-cause injury rates during the same time period.

Design/Methods: We performed a retrospective study of children <6 years with a hospital encounter (emergency department, observational, or inpatient) at 44 pediatric hospitals in the Pediatric

## 2021 Pediatric Academic Societies (PAS) Meeting

Hospital Information System Database from Jan. 1, 2017 to June 30, 2020. The start of the pandemic was defined as March 1, 2020. We examined trends in encounter rates for physical abuse and for all-cause injury. For the 42-month study period, we estimated monthly rates of hospital encounters via a longitudinal generalized estimating equations negative binomial regression accounting for clustering by hospital. Two models were used with dependent variables of (1) number of physical abuse cases and (2) number of all-cause injury cases per month per hospital. Independent variables in both models were calendar year-month, indicator of pandemic presence and an offset term corresponding to the log of all hospital admissions.

**Results:** During the 42-month period, 17,631 children were diagnosed with physical abuse among 44 pediatric hospitals. The rate of physical abuse encounters changed from 2.5 per 1,000 encounters (95% CI: 2.1, 2.9) before the pandemic to 3.4 per 1,000 encounters (95% CI: 2.8, 4.1) during the pandemic ( $P < 0.001$ ), whereas all-cause injury rates changed from 26.6 per 1,000 encounters (95% CI: 24.4, 29.0) before the pandemic to 26.4 per 1,000 encounters (95% CI: 23.7, 29.5) during the pandemic ( $P=0.9$ ).

**Conclusion(s):** Multi-center hospital data show an increase in rate of pediatric hospital encounters for physical abuse in the first four months of the pandemic, compared with the preceding 38 months, during a time of stable all-cause injury encounter rates. The rate of physical abuse encounters may be falsely elevated due to a decline in non-injury encounters during the pandemic; ongoing analysis as additional data become available will be critical to understanding the pandemic's impact on child physical abuse.

May 2

**Title:** Evaluating the Impact of the Philadelphia Beverage Tax on Soda Intake in Adolescents

**Time:** 6:30-6:45 p.m. ET

**Presenter:** Emma Edmondson

**Authors:** Emma Edmondson, Christina Roberto, Emily Gregory, Nandita Mitra, Senbagam Virudachalam

**Presentation type:** Obesity II

**Publication #:** 2750-PL-L.5

**Background:** Soft drinks are the leading source of added sugars in the American diet, contributing significantly to obesity. Excise taxes on sugar-sweetened beverages (SSBs) may reduce SSB intake among youth, but little is known about the impact of SSB taxes on adolescent soda intake.

**Objective:** Evaluate the association between the Philadelphia Beverage Tax, a sweetened beverage tax enacted in 2017, and adolescent soda intake.

## 2021 Pediatric Academic Societies (PAS) Meeting

Design/Methods: We used school district-level Youth Risk Behavior Surveillance System (YRBSS) data from 2013-2019, which are weighted to be representative of all adolescents in each school district. School districts that had a survey question on weekly soda intake from 2013-2019 were included. A difference-in-differences analysis with year and school district fixed effects compared changes in soda intake among adolescents before and after implementation of the Philadelphia Beverage Tax with soda intake among adolescents in seven comparison cities without SSB taxes. Secondary analyses compared 100% juice and milk intake trends to evaluate for substitution effects. We used linear regression to control for age, sex, race/ethnicity, and BMI and performed subgroup analyses by racial/ethnic group and overweight or obesity status.

Results: There were 87,928 participants (mean age 15.8 years; 52% female) from eight U.S. cities (Philadelphia, Baltimore, New York, Los Angeles, San Diego, Fort Lauderdale, Orlando and West Palm Beach) who had a soda intake survey question in YRBSS between 2013-2019. In the pre-tax period, adolescents in cities with no tax had a mean intake of 4.1 servings of soda per week compared to 5.5 servings per week in Philadelphia. The presence of a sweetened beverage tax was associated with a 0.91 servings per week reduction in soda intake ( $p=0.01$ , 95% CI -1.6 to -0.21). The decrease in soda intake associated with the tax was largest in Hispanic/Latinx adolescents (-1.3 servings per week,  $p<0.01$ , 95% CI -2.27 to -0.34) and adolescents with obesity (-1.4 servings per week,  $p=0.01$ , 95% CI -2.49 to -0.31). There was no significant difference in milk intake in the post-tax period. There was a near significant increase in 100% juice intake in Philadelphia post-tax (0.55 servings per week,  $p=0.06$ , 95% CI -0.03 to 1.13).

Conclusion(s): The Philadelphia Beverage Tax was associated with a reduction in reported soda intake among high school students, providing empirical evidence that such taxes can improve dietary behaviors that could reduce childhood obesity.

**May 2**

**Title:** Improving Interdisciplinary Non-Pharmacological Care for Infants with Neonatal Abstinence Syndrome Results in Decreased Length of Stay

**Time:** 6:45-7:00 p.m. ET

**Presenter:** Michelle-Marie Pena

**Authors:** Michelle-Marie Pena, Lauren Orfe, Sharon Silks, Whitney Zachritz, Michelle Ferrant, Williette Walker, Marianne D. Bittle, Alissa Ferri, Joanna J. Parga-Belinkie, Abby McDowell, Taylor Hemphill, Jennifer Peterman, Michael Posencheg, Lori Christ

**Presentation type:** Neonatal-Perinatal Health Care Delivery: Quality Improvement

Publication #: 2740-PL-L.6

## 2021 Pediatric Academic Societies (PAS) Meeting

Background: Evidence supports the use of non-pharmacologic therapies in caring for infants with Neonatal Abstinence Syndrome (NAS) to safely decrease length of stay (LOS) and the need for pharmacologic therapy. At the Hospital of the University of Pennsylvania, newborns prenatally exposed to opioids experienced a LOS longer than infants in comparable units.

Objective: To redesign our NAS care model focusing on non-pharmacologic care. Within one year (May 2019-June 2020), we aimed to decrease the average LOS for infants with NAS admitted for pharmacologic therapy to our Intensive Care Nursery (ICN) from 30 days to 15 days.

Design/Methods: An interdisciplinary NAS Taskforce was created in April 2019 to re-examine care for infants  $\geq 34$  weeks evaluated for NAS. Infants were scored using the Finnegan Scale for neonatal opioid withdrawal symptoms, with future planned enrollment in Eat Sleep Console study. Baseline data were collected for nine months retrospectively. To standardize non-pharmacologic care, we developed a “Nonpharmacologic Care Bundle” of parental presence, white noise machines, baby carriers, lavender bath supplies, and provider and nurse education. “Escalation Huddles” were developed to maximize non-pharmacologic interventions using a checklist and structured discussion prompts jointly reviewed at the bedside by nurses, providers and parents. Optimal feeding guidelines were developed to promote breastfeeding and, if unable to provide maternal milk, high-calorie formula. Multidisciplinary “Snack and Learn” sessions were implemented to address bias through discussion. Data were presented at monthly Neonatology Morbidity and Mortality Conferences. Run charts and statistical process control charts tracked data over time.

Results: 79 opioid and polysubstance-exposed infants met criteria for this QI initiative. With this new care model, the average LOS decreased from 30 days to 13.6 days for infants with NAS receiving medications, which has been sustained for six months. Escalation Huddles were documented in a median of 50% of patients initially admitted to the newborn nursery. There was no significant change in the percentage of infants receiving medications (median 40%).

Conclusion(s): An interdisciplinary approach to redesigning the NAS care model to enhance non-pharmacologic care can decrease LOS for infants with NAS receiving pharmacologic therapy.

May 2

**Title:** Impact of the COVID-19 Pandemic on Emergency Department Management of STIs

**Time:** 7:15-8:15 p.m. ET

**Presenter:** Nadia Dowshen

**Authors:** Nadia Dowshen, Jennifer L. Reed, Theron C. Casper, Erin M. Augustine, Andrea T. Cruz, Cynthia Mollen,

## 2021 Pediatric Academic Societies (PAS) Meeting

Michelle L. Pickett, Sarah Schmidt, Kristin Stukus, Cara L. Elsholz, Krista Ellis, Monika K. Goyal

**Presentation type:** Adolescent Medicine: Highlighted e-Posters

Poster Board #: 121

Publication #: 2900-HP-QA.121

Background: Emergency departments (ED) are a common site for the diagnosis of *Neisseria gonorrhoea* (GC) and *chlamydia trachomatis* (CT) among adolescents. Pediatric EDs experienced an unprecedented decline in ED visits during the pandemic period. Hospital laboratories concentrated their efforts on ramping up SARS-CoV-2 testing early in the COVID-19 pandemic, resulting in a decrease in STI testing availability and delays in GC/CT test processing. Because of the inability to meet the testing demand, many health care facilities were forced to send these tests to outside laboratories for processing. Such procedures may have led to a lower rate of STI detection and treatment delays. We describe trends in STI testing, positivity and treatment at six institutions across the U.S.

Objective: To describe trends in STI testing, positivity and treatment at six institutions across the U.S.

Design/Methods: Sites in a national intervention study completed a survey in September 2020 regarding institutional changes in STI testing practices. Using the number of ED visits made by 15-21 year olds as the denominator, we measured rates of GC/CT tests ordered and GC/CT positivity from January-October 2020 across six EDs pre- and during the COVID-19 pandemic using March 16, 2020 as the beginning of the U.S. pandemic. Additionally, we compared time to treatment between these two periods.

Results: 50% (n=3) of sites reported restrictions, including sending STI tests out to other laboratories. From January-October 2020 there were 38,659 visits made by adolescents among the six EDs (5,037 visits/month pre-pandemic vs. 3,476 visits/month during pandemic; % change: -31%). During these visits, 3,150 underwent GC/CT testing (375/month pre-pandemic vs. 295/month during pandemic; % change: -21.3%). Of these, 597 tested positive for GC/CT (61.2/month pre-pandemic and 59.2/month during pandemic; % change: -3.3%). Of adolescents who tested positive for GC/CT, time to treatment did not differ between those pre-vs. during pandemic (p=0.14).

Conclusion(s): Adolescent ED visits decreased by 30% during the pandemic. Although STI testing rates decreased by 21% during the pandemic, STI positivity rates remained similar. Decrease in rates of STI testing may have substantial impact on the health not only of the individuals affected, but also on the community at large, as there may be increased community spread with underdiagnosed and undertreated GC/CT infection. This has important policy implications for prioritizing manufacture and distribution of STI testing and laboratory supplies.

## 2021 Pediatric Academic Societies (PAS) Meeting

May 2

**Title:** Prevalence and Predictors of Dyad Care Among Adolescent Mothers and Their Infants

**Time:** 7:15-8:15 p.m. ET

**Presenter:** Alexandra Larsen

**Authors:** Alexandra Larsen, **Scott Lorch**, **Molly Passarella**, **Emily Gregory**

**Presentation type:** Adolescent Medicine: Highlighted e-Posters

Poster Board #: 128

Publication #: 2900-HP-QA.128

Background: Teen mothers and their children experience poor health outcomes compared to older mothers. Teen-tot models, in which teens and infants are seen at the same time, by the same clinician, have demonstrated benefits in reducing repeat pregnancies and decreasing maternal morbidity. Little is known about how many teen-infant dyads receive this type of care.

Objective: Identify factors associated with teen-infant dyad care in the year after birth.

Design/Methods: This retrospective cohort used Medicaid Analytic eXtract (MAX) data for teen-infant dyads aged 12-17 with births in 2007-2012. We included 12 states with high rates of mother-infant record linkage and high-quality encounter data. All dyads had at least 11/12 months of Medicaid eligibility in the year after birth. We focused on teens under 18 years with Medicaid coverage to eliminate insurance and scope of practice for pediatrics as potential barriers to dyad care. The primary outcome was dyad care, defined as at least one visit for both teen and infant that occurred on the same day and were billed to the same National Provider Identifier or Medicaid provider ID. We were unable to determine whether visits occurred in dedicated teen-tot clinics or just to the same provider. Well and acute visits were identified using CPT codes. Logistic regression assessed the relationship between dyad care and maternal demographics (age and race/ethnicity), dyad health (maternal cardiovascular risk, maternal mental health risk, and infant prematurity or low birthweight based on ICD and CPT codes during pregnancy), and community factors (poverty level, urban/rural area, state).

Results: We included 20,254 teen-infant dyads, of whom 3,415 (16.9%) had at least one dyad visit. Pairs with dyad care had a mean of 1.6 (SD 1.2) dyad visits. Those with dyad care had more visits overall (16.5 (SD 10.7) vs. 11.7 (SD 8.3)), including more acute visits for teens and infants and more well visits for teens. In regression, dyad care was associated with maternal factors (younger age, non-Latinx White race, maternal health risks), residence in rural or high poverty areas, and ever having a visit with Family Medicine.

## 2021 Pediatric Academic Societies (PAS) Meeting

Conclusion(s): Rates of dyad care were low overall. Use of dyad care was associated with greater engagement in health care. Increased implementation of dyad care may lead to improved preventive care for teens in the postpartum year.

May 3

**Title:** Contraception Counseling of Adolescents Seeking Care in Pediatric Emergency Departments

**Time:** 11:20-11:30 a.m. ET

**Presenter:** Cynthia Mollen

**Authors:** Cynthia Mollen, Romina L. Barral, Tara Ketterer, Jungwon Min, Laurel S. Gabler, Lauren Poole, Amber Adams, Elizabeth Miller, Aletha Akers, Melissa K. Miller

**Presentation type:** Emergency Medicine I

Publication #: 3305-PL-QA.3

Background: Efforts to increase contraceptive use among adolescents are urgently needed. One approach is to use clinical settings that do not routinely provide contraception services, such as the emergency department (ED). Though many are amenable to ED-based contraceptive care, best practices for providing this care are largely unexplored.

Objective: To assess intention to initiate contraception among adolescent females immediately after receiving ED-based contraceptive counseling, and to assess counseling feasibility, contraception initiation and completion of a follow-up visit for contraceptive care.

Design/Methods: Prospective cohort study in two urban pediatric EDs. Using webinar modules and in-person sessions, advanced practice providers (APPs) were trained to deliver brief contraception counseling. Through a patient-centered approach, APPs discussed contraception type, same-day initiation and follow-up needs. Patients aged 15-18 years with any chief complaint were included if they were not currently pregnant and identified as high-risk for pregnancy (reported heterosexual sex within the last six months or likely future sexual activity, did not desire pregnancy, were not currently using hormonal contraception/copper intrauterine device). At the index visit, we assessed demographics, feasibility of the counseling session (by both participant and APP) and intention to initiate contraception (5-point Likert scales), and contraception initiation/follow-up completion (assessed via medical record review and participant phone interview at eight weeks post-index visit).

Results: We trained 27 APPs. 62 adolescents have completed study procedures; mean age was 16.6 years, and 26% were White, 55% Black, 16% Hispanic. Counseling lasted a mean of 12 minutes. APPs reported: counseling was easy to deliver (97%); sufficient time to complete the counseling (89%); and feeling competent to provide the

## 2021 Pediatric Academic Societies (PAS) Meeting

counseling (89%). Most adolescents (94%) reported satisfaction with the counseling session. Half (53%) reported high intention to initiate contraception; 13 (21%) were prescribed contraception during the index visit. Seven (11%) completed a follow-up visit.

**Conclusion(s):** A brief contraception counseling session was feasible during a pediatric ED visit. The majority of those counseled expressed intention to initiate contraception, including some who initiated during the ED visit, but few followed-up after the ED visit. Further efforts to increase contraception access among sexually-active ED patients should include contraception initiation during ED visits.

**May 3**

**Title:** Clinical Factors Associated with COVID Disease Severity in Children

**Time:** 3:10-3:20 p.m. ET

**Presenter:** James W. Antoon

**Authors:** James W. Antoon, Carlos G. Grijalva, Cary W. Thurm, Alicen B. Spaulding, Ronald J. Teufel, Mario A. Reyes, Samir S. Shah, Julianne E. Burns, Troy Richardson, **Chen C. Kenyon**, Adam Hersh, Derek J. Williams

**Presentation type:** Hospital-based Medicine: COVID

**Publication #:** 3605-PL-QA.2

**Background:** Although most children with COVID are asymptomatic or experience mild illness, little is known about the clinical factors associated with coronavirus disease-19 severity in children. A better understanding of risk for severe disease may inform strategies on vaccine distribution and prioritizing school re-opening.

**Objective:** Determine the clinical factors associated with severe disease among children with COVID-19.

**Design/Methods:** We performed a retrospective cohort study across 44 children's hospitals in the United States using the Pediatric Health Information System Database (PHIS). Children 30 days to 18 years old discharged with a primary diagnosis of COVID-19 between 3/1/20-6/30/20 were included. COVID-19 severity was assessed as an ordinal outcome as follows: (1) "mild" = ED discharge, (2) "moderate" = hospital floor, (3) "severe" = ICU without mechanical ventilation, shock or death, and (4) "very severe" = ICU with mechanical ventilation, shock or death. First, we assessed factors associated with hospitalization (encompassing severity levels 2, 3, 4) versus ED discharge, using logistic regression. We then assessed factors associated with advancing severity (severity levels 2, 3 and 4) among hospitalized children only, using ordinal logistic regression.

**Results:** A total of 3094 encounters were included, 2240 (72.4%) were discharged from the ED and 854 (27.6%) were hospitalized. The severity distribution was: mild (2240, 72.4%), moderate (670, 21.7%),

## 2021 Pediatric Academic Societies (PAS) Meeting

severe (95, 3.1%) and very severe (89, 2.9%). Factors associated with hospitalization included obesity/Type II DM (aOR 13.3, 95% CI 7.0, 25.7), cardiovascular CCC (aOR 7.6, 95% CI 5.1, 11.3), and immunocompromised CCC (aOR 4.4, 95% CI 3.0, 6.6) neuromuscular CCC (aOR 3.2, 95% CI 2.0, 5.0) and asthma (aOR 1.3, 95% CI 1.0, 1.8). Among children hospitalized with COVID, factors associated with greater severity included older age (aOR xxx, 95% CI xx, xx), cardiovascular CCC (aOR 5.5, 95% CI 3.6, 8.3) and obesity/Type II DM (aOR 2.0, 95% CI 1.1, 3.6); whereas Hispanic race/ethnicity (aOR 0.5, 95% CI 0.3, 0.9) and private payor (aOR 0.6, 95% CI 0.3, 0.96) were associated with lower severity.

**Conclusion(s):** Among children cared for COVID-19 at U.S. children's hospitals, severe disease was uncommon (~6%). Identified risk factors should be considered when prioritizing mitigation strategies to prevent infection including remote school, group activity avoidance and prioritization of COVID-19 vaccine, when approved for children.

May 3

**Title:** Using Technology to Improve Social Needs Support Among Hospitalized Children

**Time:** 6:00-6:15 p.m. ET

**Presenter:** Kristine Fortin

**Authors:** Kristine Fortin, **Aditi Vasani**, **Leigh Wilson-Hall**, **Betsy Brooks**, **David Rubin**, Philip Scribano

**Presentation type:** Health Equity/Social Determinants of Health: Systems Considerations

**Publication #:** 3710-PL-L.3

**Background:** While social factors are vital determinants of health, standardized approaches to addressing social needs of hospitalized children are lacking. Incorporating technology in workflows to address social needs could alleviate common barriers by decreasing burden on staff time and facilitating linkage to community-based organizations (CBO). We implemented a workflow to address social needs on one inpatient unit, incorporating electronic health record (EHR) enhancements, a caregiver-administered screening tool, and a web-based resource map that caregivers can search for CBO.

**Objective:** Administer a standardized social needs screener to ≥80% of eligible caregivers on the unit. Respond to all caregivers with identified social needs using social work (SW) and the resource map.

**Design/Methods:** We conducted a quality improvement project on one unit for young children. Key inputs were: 1- standardized social needs screener, 2 - EHR enhancements, 3- resource map and 4- process map. The screener was self-administered by caregivers in REDCap using a tablet. EHR enhancements included automation of resource map information on discharge paperwork for caregivers and primary care providers. The resource map

## 2021 Pediatric Academic Societies (PAS) Meeting

(CommunityResourceConnects.org) was developed by contracting with an outside vendor and refined using SW focus groups. A process map for implementation of these tools was refined with Plan-Do-Study-Act cycles. Care Team Assistants introduced the screener. Staff received automated notification of results. All caregivers received information about the resource map through discharge paperwork and an information card. SW met with caregivers who identified a social need. Measures included process (% of eligible caregivers screened); outcome (identification of social needs); balancing (failure to address identified needs).

**Results:** Over 22 weeks, 147 caregivers were screened and two declined the screener. The goal of  $\geq 80\%$  screened was achieved in all but two weeks. Prevalence of social needs was:  $\geq 1$  need 34%, positive response on caregiver depression screen (PHQ-2) 23%, food insecurity 19%, utilities 10%, transportation need 3% and intimate partner violence 3%. All caregivers received information about the resource map, and 99% with an identified need met with SW.

**Conclusion(s):** Implementing a standardized approach for addressing social needs on an inpatient unit using technology is feasible. Needs were identified in  $>1/3$  of caregivers, and a web-based resource map was used as a strategy to link families to CBO.

May 3

**Title:** Caregivers' Attitudes and Preferences Regarding Childcare Options

**Time:** 7:15-8:15 p.m. ET

**Presenter:** Yuan He

**Authors:** Yuan He, Jennifer Whittaker, Katherine Kellom, Sherita T. Williams, Marsha Gerdes, Tara E. Dechert, Meredith Matone

**Presentation type:** Child Abuse & Neglect: Highlighted e-Posters

**Poster Board #:** 276

**Publication #:** 3901-HP-QA.276

**Background:** Participation in quality child care, or early child care and education (ECE), is shown to improve child developmental, educational, health and social outcomes, and has emerged as a promising strategy to reduce the risk of child maltreatment. Despite its role in reducing disparities in the early childhood period, in the United States, enrollment in ECE programs remains low, especially among low-income families. Factors influencing families' perceptions of safety and their impact on decisions and preferences for ECE options are likely drivers, but have not been well-described.

**Objective:** To examine caregivers' perceptions, attitudes and preferences regarding ECE, particularly as they relate to feelings of trust, comfort and connection, to understand maltreatment and safety considerations in ECE decision-making.

## 2021 Pediatric Academic Societies (PAS) Meeting

Design/Methods: 11 semi-structured interviews were conducted in 2019 with caregivers recruited from an Early Head Start program in Philadelphia. Transcripts were analyzed with NVivo software using an inductive, grounded theory approach to identify content themes. A conceptual framework of access to quality ECE for children from disadvantaged backgrounds was used to examine caregivers' considerations for selection and engagement with ECE options.

Results: Fear of child maltreatment was a key driver of early child care decision-making among many caregivers, with few safety distinctions made among home-based, center-based and familial care options. Negative media attention surrounding maltreatment in child care shaped families' safety concerns, and motivated some caregivers to keep children at home until they are able to speak. Finally, caregivers expressed a strong desire for personal connections with child care centers and staff. Many cited the importance of clear, consistent and direct communication, particularly around safety and child well-being, in fostering feelings of trust.

Conclusion(s): Fears of child maltreatment, exacerbated by negative media coverage, influence caregivers' perceptions of ECE options. Opportunities to build trust and connection with families should be centered on improving communication and transparency. This research builds on existing literature by elucidating caregivers' perceptions, preferences and attitudes regarding ECE, and can inform primary care efforts to support families in making decisions around early child care, as well as child policy efforts to support ECE engagement, particularly during and following the coronavirus disease 2019 (COVID-19) pandemic.

May 3

**Title:** Pediatric Practices' Perceptions of Text Message Communication with Families: An AAP Pediatric Research in Office Settings (PROS) Study

**Time:** 7:15-8:15 p.m. ET

**Presenter:** Ekaterina Nekrasova

**Authors:** Ekaterina Nekrasova, Alexander Fiks, Chelsea S. Wynn, Alessandra Torres, Miranda Griffith, Laura P. Shone, Russell Localio, Justine Shults, Rebecca Unger, Leigh Ann Ware, Melissa S. Stockwell

**Presentation type:** Telemedicine/EHR/Medical Informatics: Highlighted e-Posters

Poster Board #: 378

Publication #: 3912-HP-QA.378

Background: Text messages can be an effective, low-cost and scalable mechanism of reminding patients about appointments, vaccinations and other health information; however, they are yet to be consistently integrated into pediatric primary care.

## 2021 Pediatric Academic Societies (PAS) Meeting

Objective: To explore pediatric primary care clinicians and staff perceptions of pediatric office text message communication with families.

Design/Methods: As part of the NIH-funded Flu2Text randomized controlled trial (RCT) of 2nd dose influenza vaccine text message reminders, in July-August 2019 we conducted seven focus groups and four individual interviews (up to one hour each) with pediatric clinicians (16 pediatricians, nine nurse practitioners), registered nurses (n=3), medical assistants (n=5) and staff (n=5). Overall, 10 PROS pediatric primary care practices in 10 states were selected for participation based on stratified sampling of those with the highest (n=5) and lowest (n=5) effect sizes out of 37 primary care practices in the RCT. Semi-structured discussion guides included possible uses, perceived usefulness and ease of use of text messages; practice's current text messaging infrastructure; and barriers/facilitators to future use of texting. Utilizing conceptual content analyses based on the Technology Acceptance Model transcripts were independently coded by two investigators using NVIVO 12 Plus. Inter-coder reliability was high (K= .86); discrepancies were resolved by consensus.

Results: Overall, participants were supportive of text reminders for 2nd dose influenza vaccine, for other vaccines (e.g. HPV vaccine) and appointments. Participants perceived text messaging as a preferred method of communication for caregivers. Health information privacy and patient confidentiality were the main concerns cited by clinicians and staff. Only practices with no internal appointment text-message reminder system (n=5) prior to the study, expressed concerns about technology implementation logistics, time and financial commitment. Themes did not differ between practices based on effect sizes in the RCT.

Conclusion(s): Text message reminders, for various uses, appear to be well accepted among a relatively diverse group of pediatric practices after participation in a trial of text message reminders for the 2nd dose influenza vaccine. Pediatric practices expressed interest in using text messages; however, they also expressed the need to address privacy, confidentiality and resource barriers to facilitate successful implementation.

May 4

**Title:** Pediatric ED as a Gateway for PrEP Services in Adolescents

**Time:** 11:06-11:28 a.m. ET

**Presenter:** Sarah Wood

**Presentation type:** Adolescent HIV: Addressing the Epidemic in the Pediatric Emergency Department

May 4

**Title:** A Hybrid Type I Effectiveness and Implementation Study of a Clinically Based Free Meal Program During COVID-19

## 2021 Pediatric Academic Societies (PAS) Meeting

**Time:** 3:15-3:25 p.m. ET

**Presenter:** Danielle L. Cullen

**Authors:** Danielle L. Cullen, Georgia Reilly, Rachel Brown, Jungwon Min, Kanak Verma, Joel A. Fein

**Presentation type:** SPR Plenary Series: Women and Children First: Mitigating COVID-19 Impact on Children

**Publication #:** 4415-PP-L.11

**Background:** The USDA Summer Food Service Program (SFSP) was extended to provide free meals to children during remote learning in the face of COVID-19, but fewer than 1 in 8 eligible children participate. The medical center is one of the few institutions that families access during the pandemic, and as such may be a prime point-of-entry for these programs. We evaluated the effectiveness of situating a SFSP in the medical setting in terms of 1) intended and ultimate repeated use of the SFSP, and 2) subsequently reported family level food access, while gathering information on implementation.

**Design/Methods:** We partnered with a community agency to provide free breakfast and lunch to all children ages 2-18 and their siblings during clinical visits in the emergency department and four outpatient centers associated with an urban children's hospital. Families were offered boxed meals along with information regarding how to access community SFSP sites. During a three-month study period (June-August 2020), parents completed a survey at time of participation and 30 days after regarding intended and actual repeat use of the SFSP and perceptions regarding food access. We also measured implementation acceptability, feasibility and reach, as well as factors influencing implementation success.

**Results:** Since March 18, 2020, our program distributed a total of 43,015 meals across the five clinical sites, and reached 344 families per day at its peak. 449 caregivers, with a median of one child per family (IQR 1-4) and 41% reported rate of food insecurity, participated in our longitudinal study. 23% reported previous knowledge of the SFSP. The majority (82%) planned to use the SFSP again, either at the hospital or in the community. On follow up, 53% used the program again during the subsequent 30 days; 43% had at least weekly participation. Repeat program use was significantly associated with improvement in food access over a 30 day follow-up period ( $p < 0.001$ ). Families and clinical staff rated the program as highly acceptable, while remaining feasible and adhering to COVID-19 regulations in all five settings without reported impact on clinical flow.

**Conclusion(s):** This study demonstrates that situating a SFSP in the medical setting increases awareness of and subsequent engagement with community resources among families. Furthermore, it provides evidence to support the potential of co-locating direct service

## 2021 Pediatric Academic Societies (PAS) Meeting

programs along with referrals in the clinical setting to positively impact family level food access, even during a pandemic.

May 4

**Title:** Variability and Race-Based Inequities in Chlamydia Screening in a Pediatric Primary Care Network

**Time:** 3:40-3:50 p.m. ET

**Presenter:** Sarah Wood

**Authors:** Sarah M. Wood, Danielle Petsis, Vicky Tam, Kenisha Campbell, Jungwon Min

**Presentation type:** Adolescent Medicine II

Publication #: 4610-PL-QA.5

Background: Despite public health recommendations, *Chlamydia trachomatis* (CT) screening for adolescent females remains suboptimal in primary care.

Objective: To determine variability of annual CT screening rates across a large pediatric primary care network. We also aimed to identify multi-level (patient, provider, clinic) correlates of CT screening.

Design/Methods: Retrospective cohort study including all annual well visits for 15-19-year-old females in a 31-clinic, primary care network, July 2014-November 2019. We calculated annual CT screening rates as the proportion of well visits/year with CT testing ordered at/within 364 days prior to visit. Descriptive statistics summarized characteristics of patients (race/ethnicity, prior CT screening or infection [proxy measures for sexual activity and risk], Medicaid or private insurance) and clinics (provider number, type [title X urban, non-title X urban, suburban], adolescent patient volume). Mixed-effects logistic regression estimated associations between patient and clinic factors and receipt of CT screening, accounting for patient and clinic random effects. To explore the effect of race on provider level screening, we estimated within-provider associations between patient race (Black or non-Black) and receipt of screening adjusting for potential patient and clinic-level confounders.

Results: 37,039 adolescent females had 66,401 well visits with 630 unique providers. Patients were 27.9% Black, 25.3% Medicaid insured, with a median age of 16 (IQR 15-17). The mean annual network CT screening rate was 8.0% and varied highly between clinics (range 0%-39%). In the adjusted model estimating effects of patient and clinic factors on screening, Black females had 67% higher odds of receiving screening (aOR 1.67, 95% CI 1.51-1.85), adjusting for patient and clinic-level factors. We identified significant within-provider associations between patient race (Black vs non-Black) and CT screening (aOR 1.75, 95% CI 1.54-1.98), indicating that after accounting for the different race distribution of patients between

## 2021 Pediatric Academic Societies (PAS) Meeting

providers, individual clinicians remained significantly more likely to screen Black than White females.

Conclusion(s): Chlamydia screening practices were highly variable between clinics within a large health system. Black adolescent females were significantly more likely to be screened than their White peers, even within individual provider practice, suggesting that cognitive biases around race may affect screening practices and should be addressed in future interventions.

May 4

**Title:** Pediatric Practice Experiences Administering the 2nd Dose of the Influenza Vaccine: An AAP Pediatric Research in Office Settings (PROS) Study

**Time:** 7:15-8:15 p.m. ET

**Presenter:** Chelsea S. Wynn

**Authors:** Chelsea S. Wynn, Melissa S. Stockwell, Ekaterina Nekrasova, Alessandra Torres, Miranda Griffith, Laura P. Shone, Russell Localio, Justine Shults, Rebecca Unger, Leigh Ann Ware, Alexander Fiks

**Presentation type:** Immunizations/Delivery: Highlighted e-Posters

Poster Board #: 432

Publication #: 4904-HP-QA.432

Background: Less than half of children needing two doses of influenza vaccine in a season receive both, leaving them at increased risk of disease. Little is known about barriers and facilitators to increasing full influenza vaccination coverage.

Objective: To explore experiences of pediatric clinicians and staff in administering the 2nd influenza vaccine dose.

Design/Methods: We conducted seven focus groups and four individual interviews with PROS practices that participated in the 2nd season (2018-19) of the NIH-funded Flu2Text RCT of text message reminders for 2nd influenza vaccine dose. Of 37 participating practices, 10 were selected for focus groups/individual interviews through stratified sampling of practices with the highest (n=5) and lowest (n=5) effect sizes in the RCT. Semi-structured discussion guides with clinicians (16 pediatricians, nine nurse practitioners), nurses (n=3), medical assistants (n=5), and staff (n=5) included questions that addressed parental, practice, and health system barriers/facilitators to 2nd dose administration. Using the Systems Model of Clinical Preventive Care as a conceptual framework, which focuses on factors involved in the provision and receipt of clinical preventive care, two investigators independently coded transcripts (K=.86, high agreement) with NVivo 12 Plus. Coding inconsistencies were resolved by consensus.

## 2021 Pediatric Academic Societies (PAS) Meeting

Results: We identified themes aligning with the Systems Model of Preventive Care. Influenza vaccine administration, especially the 2nd influenza dose, differed from other childhood vaccines. Perceived barriers included parents' general vaccine hesitancy, uncertainty about 2nd dose necessity and transportation issues. Practice/system level factors such as vaccine availability and difficulty scheduling the 2nd dose were also identified. Despite barriers, participants reported most parents accepted the 2nd dose and highlighted a number of factors that enabled vaccination, including influenza vaccine clinics, education on necessity of both doses, local media coverage and their existing relationships with families. Themes did not differ by practice performance in the RCT or by 2nd dose completion.

Conclusion(s): Despite distinct challenges, pediatric practices incorporated strategies to encourage receipt of the 2nd dose for those who need it. Themes from this study provide a framework for understanding challenges and opportunities to bolster 2nd dose influenza vaccination uptake.

### Trainee Talks

**Title:** A Longitudinal Curriculum on Implicit Bias and Structural Racism in a Pediatric Residency Program

**Presenter:** Hannah Anderson

**Authors:** Hannah Anderson, **George Dalembert**, Nicole R. Washington, Adelaide Barnes, Jessica Fowler, Beth Rezet

**Presentation type:** Medical Education: e-Posters–Curriculum 1

Poster Board #: 1275

Publication #: EP-168.1275

Background: While curricula for targeting implicit bias and structural racism have been developed in residency programs around the U.S., longitudinal interventions to improve trainees' awareness of and response to implicit bias are lacking. Single curricular interventions such as the Implicit Association Test (IAT) have been demonstrated as useful in medical education, however, their effectiveness as a stand-alone intervention is limited. Additionally, short-term training on topics such as bias are potentially problematic if not sustained by continued space for reflection and discussion.

Objective: This curriculum aimed to increase and sustain trainees' awareness of and response to implicit bias and structural racism.

Design/Methods: We developed and piloted a three-year longitudinal curriculum from 2017-2020. Starting at intern orientation and continuing through their 3rd year, residents engage in the IAT and an exclusion/inclusion exercise followed by regularly scheduled implicit bias noon conferences, advocacy journal clubs, grand rounds, health equity rounds and a film series. All sessions include facilitated discussions.

Results: After the three-year pilot, evaluation of the curriculum was

## 2021 Pediatric Academic Societies (PAS) Meeting

conducted, including interviewing matriculating residents on their experiences in the curriculum. We conducted thematic analysis of their responses. We identified several themes in resident responses: residents noted increased confidence in discussing bias, development of a shared language to understand and process bias, and gained tools to confront bias when it arose in clinical and educational environments.

**Conclusion(s):** A longitudinal curriculum designed to increase and sustain trainees' awareness of and response to implicit bias and structural racism may support pediatric residents in developing confidence, a shared language, and practical tools to discuss, process and confront bias.

### Trainee Talks

**Title:** Racial Bias Towards Children in the Early Childhood Education Setting

**Presenter:** Emma Blackson

**Authors:** Emma A. Blackson, Marsha Gerdes, Ellie Segan, Crystal Anokam, Tiffani Johnson

**Presentation type:** Health Equity/Social Determinants of Health: ePosters–Discrimination and Bias

Poster Board #: 970

Publication #: EP-147.970

**Background:** Racial disparities in the education setting are well-documented, including suspensions and expulsion for Black children beginning in pre-school. Racial bias has been hypothesized as a factor contributing to these disparities. However, little is known about the racial attitudes that child care educators and staff have towards children.

**Objective:** To describe levels of implicit and explicit racial bias towards children among early childhood educators.

**Design/Methods:** We measured implicit pro-White/anti-Black racial bias of teachers and staff from five urban child care centers using the Child Race Implicit Association Test (IAT). Explicit bias was measured using a racial preference scale.

**Results:** Of the 67 participants in this sample, 43% were White, 43% Black, and 14% identified their race as Hispanic, Asian or other. The median age was 37 years and 94% were female. On average, participants had a weak pro-White/anti-Black bias on the Child Race IAT ( $M=0.18$ ,  $SD=0.43$ ). Although 22% ( $n=15$ ) of participants had no racial bias on the Child Race IAT, just more than half had implicit pro-White bias ranging from weak to strong ( $n=35$ , 52%). The remaining participants had implicit pro-Black bias ranging from weak to strong ( $n=17$ , 25%). There were notable racial differences on Child IAT scores, with White participants having more implicit bias in comparison to Black participants [ $M=0.40$ ,  $SD=0.42$ ] versus ( $M=-$

## 2021 Pediatric Academic Societies (PAS) Meeting

0.02, SD=0.33.) Cohen's  $D=1.11$ ]. Regarding explicit bias, 97% of participants reported having no explicit racial preferences towards White or Black children.

**Conclusion(s):** Despite 97% of early childhood educators in this sample reporting no explicit racial preferences towards White or Black children, more than half were found to have weak to strong implicit pro-White/anti-Black racial bias. With increasing evidence demonstrating racial disparities in the early childhood education setting, knowledge of bias can help develop strategies to mitigate bias and reduce disparities in child care settings.

### Trainee Talks

**Title:** Clinically Based Produce Provision to Address Food Insecurity During the Pandemic

**Presenter:** Danielle L. Cullen

**Authors:** Danielle L. Cullen, Rachel Brown, Georgia Reilly, Falguni Patel, Carly Freedman, Senbagam Virudachalam

**Presentation type:** Health Equity/Social Determinants of Health: e-Posters–Food Insecurity

Poster Board #: 986

Publication #: EP-148.986

**Background:** Early evidence demonstrates success of clinically-based community-supported agriculture (CSA) programs in addressing the dual health risks of food insecurity (FI) and poor diet quality among low-income families. In the context of increasing financial strain and rising rates of FI during the pandemic, this study describes the evaluation of a clinically-based CSA program at two outpatient centers in low-income areas associated with an urban children's hospital in terms of: 1) the ability to reach families without eligibility criteria, and 2) caregiver experiences and preferences for programming.

**Design/Methods:** Free boxes of organic produce from a local farm cooperative were distributed without eligibility criteria to caregivers of pediatric patients during a 12-week pilot period. Reach was measured by number of participating families and caregiver demographic information. We purposively sampled 30 caregivers representative of all program participants for semi-structured interviews on a rolling basis to understand program preferences. Interviews were digitally recorded and transcribed. Content analysis with constant comparison was employed to code interviews inductively and identify emerging themes.

**Results:** Of the 1,472 caregivers who participated in the program, nearly half (48.3%) screened positive for food insecurity, and 45% received federal food assistance. While many caregivers were initially "surprised" by the program setting within the clinic, they ultimately felt that it reinforced the hospital's commitment to "whole health" and perceived it to be safer than other food program settings during

## 2021 Pediatric Academic Societies (PAS) Meeting

the pandemic. Several programmatic features emerged as particularly important: ease and efficiency of use, kindness of staff and confidentiality. Program acceptability was bolstered by the quality of the produce: despite being free, it did not feel like “leftovers.” 77% of participants desired continued programming, noting transition to a fee-per-box model as acceptable as long as priced below market value, and expressing tension between what the produce is “worth” and what is affordable.

Conclusion(s): Our findings demonstrate that a cost-subsidized CSA in the clinical setting is an acceptable approach to addressing food insecurity during the pandemic, and highlights caregiver preferences for a sustainable model. Furthermore, our data suggest that an “offer” rather than “screen and qualify” model may streamline operations while enhancing confidentiality, facilitating programmatic reach to low-income and FI families.

### Trainee Talks

**Title:** Implementing a Virtual Youth Leadership Council in a Large Safety Net Hospital System During COVID-19

**Presenter:** Lily Ann Divino

**Authors:** Lily Ann M. Divino, **Robin Ortiz**, Ashley Duran, Amiyar Holland, Richard Zapata, Katherine Piwnica-Worms

**Presentation type:** Public Health & Prevention: e-Posters–COVID-19 Pandemic

Poster Board #: 2080

Publication #: EP-220.2080

Background: Youth Leadership Councils (YLCs) in health care are a meaningful way to engage youth in improving adolescent care. NYC Health+Hospitals, the nation’s largest safety net hospital system serving over 110,000 adolescent patients each year piloted its first YLC during the COVID-19 pandemic, which required quickly adapting from an in-person to a virtual format.

Objective: Organized by the Adolescent Health Program, we describe the implementation, feasibility and program evaluation of a virtual health-focused YLC.

Design/Methods: The YLC runs from July 2020 to June 2021. Youth meet for an average of 16 hours/month and receive a stipend. YLC employs the Positive Youth Development approach. Using participatory methods based in self-determination theory, youth provided input for adapting the YLC to a virtual format with accessible platforms and tools aligned with age-appropriate teaching and group facilitation methods. Evaluation (to be conducted at baseline, 6-, and 12-months) utilizes mixed methods with: pre- and post-assessment of training topics; validated surveys quantifying engagement, resilience and psychological safety; and independent semi-structured interviews with novel questions evaluating the virtual format. Evaluations and interviews are also planned with YLC staff.

## 2021 Pediatric Academic Societies (PAS) Meeting

**Results:** The inaugural YLC includes six youth, ages 14-17 with 100% retention thus far. Youth completed a 2-month training on adolescent health, LGBTQ+ humility, and minor's rights. YLC members adapted projects for a virtual platform, including focus groups, social media and adolescent MyChart access. Post-test knowledge assessments showed an average score of 90.8%, standard deviation  $\pm 3.9$ . There was an average increase of 55.3%,  $\pm 21.3$  in familiarity with training topics, the greatest change in minor's rights (122.2%,  $\pm 83.1$ ). Baseline surveys illustrated mean scores  $\geq 4$  (1=low, 5=high) for convenience and privacy of virtual platform, engagement, resilience and psychological safety. The 6-month evaluation will start January 2021.

**Conclusion(s):** Preliminary results show a virtual health-focused YLC is feasible if youth are engaged in the problem-solving and decision-making process. Though the COVID-19 pandemic has disrupted school and community connections putting adolescent mental health at risk, YLCs provide an opportunity to create positive, mentored environments for youth. Virtual YLCs also offer a flexible and safe approach for large hospital systems to increase youth engagement in adolescent health initiatives and quality improvement.

### Trainee Talks

**Title:** Social Needs of Hospitalized Children with Complex Chronic Conditions

**Presenter:** Kristine Fortin

**Authors:** Kristine Fortin, **Leigh Wilson-Hall**, Kimberly St Lawrence, Stuti Tank, Arleen Juca, Philip Scribano

**Presentation type:** Children with Chronic Conditions: e-Posters 1

**Poster Board #:** 604

**Publication #:** EP-109.604

**Background:** Children with complex chronic conditions (CCC), conditions involving multiple systems expected to last  $>1$  year, represent a significant proportion of pediatric hospitalizations. CCC, caregiver social needs and health care spending are interrelated. While it is clear that addressing social needs of hospitalized children with CCC is important, prior research suggests that standardized approaches are lacking. Data to inform improvements in addressing social needs of hospitalized children with CCC are needed.

**Objective:** Describe the prevalence and nature of social needs among hospitalized children with CCC. Compare social needs between hospitalized children with and without CCC.

**Design/Methods:** As part of a quality improvement project, we implemented a standard social needs questionnaire over a 5-month period at an urban pediatric hospital on one inpatient unit. The unit has 22 beds, 10 general pediatrics and 12 complex care. We derived questions about food access, utilities, transportation, caregiver

## 2021 Pediatric Academic Societies (PAS) Meeting

depression, and intimate partner violence from Accountable Health Communities tool and Partner Violence Screen. Inclusion criteria included English-speaking caregiver present at bedside during unit social worker's hours, and no impending discharge or transfer. Staff explained screener, and provided tablet for consenting caregivers to self-administer screener in REDCap. We entered demographic data from the electronic health record into REDCap. All caregivers received information about our web-based resource map, and caregivers with positive screen met with social work. We performed descriptive statistics and logistic regression using SAS.

**Results:** 147 caregivers were screened; 84 had children with CCC. 42% of the child with CCC group had an identified social need. The most common needs were positive depression screen response (32%) and food (23%). Compared to caregivers of children without CCC, CCC group were more likely to identify  $\geq 1$  need, utility needs and positive depression screen response.

**Conclusion(s):** Standardized screening identified social needs in  $>4/10$  caregivers in the CCC group. Depression screens were positive at rates higher than comparison group of parents with hospitalized children without CCC. Given the additional burdens of caring for medically complex children, initiatives to support caregiver well-being are needed for this population, as are resources to support financial needs (food, utilities). Additional caregiver support and dissemination strategies are currently being explored.

### Trainee Talks

**Title:** Let's Talk About It: Clinical Event Debriefing Practice in Diverse Care Areas

**Presenter:** Mary C. Haggerty

**Authors:** Mary Haggerty, Meghan M. Galligan, Dawn DeBrocco, Heather Wolfe; **Stephanie M. Garcia, Katherine Kellom**, Eda Akpek, Rebecca Neergaard, Frances Barg, Eron Friedlaender

**Presentation type:** Hospital-based Medicine: e-Posters–Career Development and Medical Education

**Poster Board #:** 1106

**Publication #:** EP-157.1106

**Background:** Clinical event debriefing (CED) can improve individual and team performance as well as patient outcomes. While unit-specific CED practice is fairly well described (e.g. emergency room resuscitations), best practices generalizable to diverse care areas remain poorly defined.

**Objective:** In this qualitative study, we sought to characterize and compare hospital staff experiences with CED in the neonatal/infant intensive care unit (N/IICU) and in the medical behavioral unit (MBU), which serves children with psychiatric comorbidities.

## 2021 Pediatric Academic Societies (PAS) Meeting

Design/Methods: We completed 31 semi-structured interviews with N/IICU and MBU staff who attended a CED within the previous seven days. We asked staff about their experiences with CED in their unit, including CED barriers and facilitators. Interviews were audio recorded, transcribed and analyzed using NVivo 12 software. We used content analysis with constant comparative coding to understand priorities identified by participants, systematically applying the resultant codebook to the data.

Results: Participants identified common priorities in CED practice, with some unit-specific differences. Staff in both units agreed that “successful” CED ensures participation from staff involved in the event, includes a diversity of roles, establishes a shared mental model and promotes psychological safety. Competing clinical priorities and scheduling were common CED barriers. Both units use “hot” and “cold” CED. Hot debriefs, which occur immediately following a patient deterioration or behavioral event, had similar structure and goals, including event review and feedback exchange. The structure and goals of cold debriefs, which take place at a delay, differed. In the N/IICU they occur days to weeks after an event with similar goals to hot debriefs. In the MBU, cold CED takes the form of weekly team meetings to discuss relevant events and care plans. CED outcomes varied by unit. N/IICU staff emphasized tangible changes such as equipment repairs. MBU staff identified improved teaming activities such as provider communication and plan care consistency.

Conclusion(s): Across two distinct hospital units, staff identified universal factors for CED success, including a shared mental model and a climate of psychological safety. While both units identified similar structure and goals for hot CED, cold CED and CED outcomes varied by unit. Future study will seek to identify a generalizable framework for successful CED that can be adapted to diverse care areas.

### Trainee Talks

**Title:** Identifying Teens Mothers at Infant Well Child Visits in an Urban Pediatric Health Center

**Presenter:** Sutton Higgins

**Authors:** Sutton Higgins, **Emily Gregory**, **Aletha Akers**

**Presentation type:** Adolescent Medicine: e-Posters 2

Poster Board #: 520

Publication #: EP-101.520

Background: In non-integrated pediatric health systems, Electronic Health Records (EHR) may lack tools for identifying parenting teens at routine infant visits. Yet, these visits may be an opportunity to address the intergenerational primary care needs of teen mothers, including unmet contraceptive needs.

Objective: To compare standard and tailored electronic health record

## 2021 Pediatric Academic Societies (PAS) Meeting

(EHR) tools' ability to identify teen mothers during infant pediatric primary care visits.

Design/Methods: This retrospective cohort study used EHR data from a large, urban pediatric primary care practice. Maternal age data were abstracted for January 2015-December 2019 from birth history, social history and insurance fields (standard cohort). Data for January 2018-December 2019 were abstracted from an EHR template (tailored cohort). We compared maternal age documentation in the standard versus tailored cohorts, and estimated the prevalence of teen mothers in each cohort. Chi-square tests of independence with post-hoc pairwise differences analysis were used for analysis.

Results: Of the 9,292 and 3,119 infants in the standard and tailored cohorts, 85.9% (standard error 3.2%) and 83.4% (0.9%) had maternal age documented, respectively ( $p < 0.001$ ). Documentation increased in the standard cohort from 79.3% (2015) to 96.1% (2019), but decreased in the tailored cohort from 83.4% (2018) to 82.4% (2019). In the standard cohort, maternal age documentation was higher in birth history and insurance fields than social history: 68.8% (2.8%), 61.2% (8.0%) and 0.2% (0.04%), respectively ( $p < 0.001$ ). Of infants with documented maternal age, the proportion with teen mothers was the same and decreased over time in both cohorts.

Conclusion(s): Standard EHR tools had higher maternal age documentation, but this data may be harder to access during point-of-care service delivery. Tailored tools may better enable identification of teen mothers and co-located preventive service provision. Maternal age documentation rates using standard tools increased throughout the study period. However, documentation rates using a tailored tool surpassed provider documentation using standard birth history fields. Tailored documentation data is more easily accessible in the EHR and stored in a format that facilitates clinical and research applications. A decrease in the proportion of infants with teen mothers was observed throughout the study period at the study site, on par with city and national trends. The proportion of infants with teen mothers remained significantly higher than those of Philadelphia and the nation.

### Trainee Talks

**Title:** Association between Caregiver Experience of Discrimination and Child Obesity

**Presenter:** Pankhuri Jha

**Authors:** Pankhuri Jha, **Jennifer L. Robbins**, Thao-Ly T. Phan

**Presentation type:** Health Equity/Social Determinants of Health: e-Posters–Discrimination and Bias

Poster Board #: 973

Publication #: EP-147.973

Background: The stress associated with experiencing discrimination can have physiologic and psychologic effects on an individual that can

## 2021 Pediatric Academic Societies (PAS) Meeting

predispose to weight gain. While studies have found an association between discrimination—especially racism and weight stigma—and obesity in adults, less is known about the downstream impact this might have on their children.

Objective: To determine if there is an association between caregiver experience of discrimination and child weight.

Design/Methods: Caregivers of children aged 2-5 presenting for care in an urban primary care setting completed the validated Everyday Discrimination Scale (short version) as part of a study comparing family psychosocial needs between children with overweight vs. healthy weight. Children's weight and height from the same primary care visit was extracted from the EHR. We conducted secondary analyses to explore the hypothesis that caregiver report of discrimination was associated with child weight using chi-square analyses.

Results: 178 caregivers (94% mothers, mean age 32) of diverse racial and ethnic backgrounds (27% non-Hispanic White, 53% non-Hispanic Black, 10% Hispanic) and of primarily low socioeconomic status (68% with annual household income below \$40,000) completed the scale. 49% of caregivers had a child with overweight, 28% had a child with obesity and 53% reported experiencing any discrimination. There was no association between caregiver report of any discrimination and child overweight; however, 66% of caregivers of children with obesity reported experiencing any discrimination compared to 48% of caregivers of children without obesity ( $p=0.03$ ). There were no significant associations between type of discrimination (including due to race and weight) experienced by caregivers and child weight.

Conclusion(s): In this diverse underserved population, caregiver experience of discrimination was associated with child obesity, highlighting the impact of discrimination on the health of generations. There were no significant associations between type of discrimination experienced by caregivers and child weight, but this may be due to the small sample sizes for each type of discrimination evaluated. Future studies should examine the association between caregiver discrimination and child obesity in a larger sample, with more diversity in types of discrimination experienced and a greater proportion of children with obesity, and evaluating the role of potential mediating factors on this relationship.

### Trainee Talks

**Title:** Pediatric Emergency Department Visits for Mental Health Conditions during the COVID-19 Pandemic

**Presenter:** Polina Krass

**Authors:** Polina Krass, Evan M. Dalton, Stephanie K. Douppnik, Jeremy Esposito

**Presentation type:** Emergency Medicine: e-Posters–Psych

## 2021 Pediatric Academic Societies (PAS) Meeting

Poster Board #: 792

Publication #: EP-129.792

Background: The mental health (MH) of children and adolescents has been negatively impacted by the COVID-19 pandemic. Pediatric Emergency Departments (EDs) serve an integral role in assessing and triaging children with MH conditions. Initial reports have identified shifts in pediatric ED MH visits following the onset of the COVID-19 pandemic with unclear clinical consequences.

Objective: This cross-sectional study describes changes in the frequency, demographics, and clinical outcomes of pediatric ED MH visits at a tertiary children's hospital before and during the COVID-19 pandemic.

Design/Methods: Data was collected from the electronic medical record of patients ages 5-24 years old who presented to a tertiary children's hospital ED between Jan. 1, 2018 and Jan. 1, 2021 with one or more of the following: a MH chief complaint or diagnosis code, positive depression screen, evaluation by a MH provider, or requirement of physical restraint or safety observation. The frequency, proportion, and characteristics of ED MH visits before (January 2018 - March 2020) and during the COVID-19 pandemic (April - December 2020) were compared with non-parametric hypothesis tests. An association of the COVID-19 pandemic with the proportion of MH visits requiring admission was evaluated with logistic regression, and an association with ED length of stay was evaluated with log transformed linear regression.

Results: There were 10,227 ED MH visits before the COVID-19 pandemic and 1,263 ED MH visits during the COVID-19 pandemic. There was a significant decrease in average monthly ED MH visits during the COVID-19 pandemic (346 to 270,  $p < 0.001$ ), but an increase in the percentage of ED visits for MH conditions (4.1% to 5.7%,  $p < 0.001$ ). Patients presenting for ED MH visits during the COVID-19 pandemic were more likely to be older (77.7% older than 12 years vs 71.4%,  $p < 0.001$ ), to require admission to the hospital (OR 1.54, 1.37-1.73), and to have a longer length of stay (median 4.8h to 4.6h;  $\beta$  0.02,  $p = 0.03$ ).

Conclusion(s): The percentage of pediatric ED mental health visits has increased since the onset of the COVID-19 pandemic. Patients presenting for pediatric ED mental health visits in our cohort were older and more frequently required admission to the hospital, possibly reflecting an increase in the severity of mental health presentations and a scarcity of mental health treatment resources.

### Trainee Talks

**Title:** Early Intervention Service Use Among Children with Developmental Disabilities During a Pandemic

**Presenter:** Jackson Kwok

**Authors:** Jackson Kwok, Sherry Winston, Marsha Gerdes, Knashawn Morales, Ellen J. McQuaid, James Guevara

## 2021 Pediatric Academic Societies (PAS) Meeting

**Presentation type:** Public Health & Prevention: e-Posters–COVID-19 Pandemic

Poster Board #: 2083

Publication #: EP-220.2083

Background: Low-income families of children with developmental disabilities require support from Early Intervention (EI) services. Mitigation strategies associated with the COVID-19 pandemic dramatically changed the delivery of EI services.

Objective: To determine changes in access to and use of EI services pre- and post-pandemic among children under three years of age in Philadelphia.

Design/Methods: This project recruited from an ongoing trial testing the effectiveness of patient navigation among families of children less than three with developmental delays who were referred for EI services. Families completed online surveys that asked whether children had completed EI referrals and received services pre- and post-pandemic lockdown (March 16, 2020) in Philadelphia. We assessed for differences in referral completion and service use pre- and post-pandemic. A subset of parents who completed surveys was purposively sampled to complete semi-structured telephone interviews. Interviews were audiotaped, transcribed and analyzed for thematic content.

Results: Among 98 participants who were enrolled in the study, 93 completed the survey. Of these, 61 (66%) had completed referrals for EI, and 48 (52%) had received EI services. These families were predominantly African-American (69%) or Hispanic (10%) with incomes below \$55,000 (81%). Of those who completed referrals, a majority (43 or 70%) completed referrals before the pandemic, 14 (23%) after the pandemic started and four (7%) did not specify. Among families receiving EI services, 41 of 43 (95%) reported receiving EI services before the pandemic, while only 19 of 48 (41%) received EI services after the pandemic began ( $p=0.005$ ). Families perceived post-pandemic virtual EI services to be less effective than in-person visits, with decreased engagement or cooperation between their children and the provider when meeting a virtual setting.

Conclusion(s): There was a significant decline in the use of EI services following pandemic mitigation strategies. Future study should investigate how virtual services can be more effective and engaging for families.

### Trainee Talks

**Title:** Understanding Barriers to and Facilitators of Community Resource Linkage for Pediatric Caregivers with Unmet Social Needs

**Presenter:** Aditi Vasan

**Authors:** Aditi Vasan, Olivia Darko, Kristine Fortin, Philip Scribano, Chen C. Kenyon

## 2021 Pediatric Academic Societies (PAS) Meeting

**Presentation type:** Health Equity/Social Determinants of Health: e-Posters–Material Needs

Poster Board #: 1023

Publication #: EP-150.1023

Background: Pediatric health systems are increasingly screening parents and caregivers for unmet social needs. How to successfully connect families who screen positive with available and appropriate community resources, however, remains unclear.

Objective: To (1) identify caregivers' perceived barriers to and facilitators of linkage with community resources, and (2) explore caregivers' perspectives on the use of an electronic web-based resource map to identify and connect with local resources.

Design/Methods: We developed an interview guide informed by the Integrated Behavioral Model and Technological Acceptance Model. We conducted semi-structured interviews with caregivers of pediatric patients admitted to a combined General Pediatrics and Complex Care unit at a quaternary care children's hospital. Caregivers were screened for social needs on admission, and those who screened positive for  $\geq 1$  unmet needs were invited to participate in an interview. Interviews were recorded, transcribed and coded in NVivo 12 by two coders, using content analysis to code transcripts inductively. Discrepancies in coding were reviewed and resolved by consensus. Interviews were continued until thematic saturation was achieved.

Results: We interviewed 28 of 31 caregivers who screened positive for social needs (90% response rate). Interviews were conducted from 2/1/2020 to 10/31/2020. Four primary themes emerged. First, caregivers cited burdensome application and enrollment processes as a barrier to resource connection. Second, caregivers of children with complex chronic conditions felt that competing priorities related to caring for their children often made it more challenging to establish connections with resources. Third, caregivers felt an electronic resource map was a valuable tool for identifying resources in their own community, and expressed a preference for electronic, web-based resources rather than paper resources. Lastly, caregivers expressed a desire for ongoing longitudinal support in establishing and maintaining connections with community resources after their child's hospital discharge.

Conclusion(s): Pediatric caregivers with unmet social needs reported logistical challenges and competing priorities as barriers to resource connection. While a searchable electronic resource map may help families identify available locally available programs and services, longitudinal supports are also needed to ensure that families are able to establish and maintain linkages with resources that meet their identified needs.

## 2021 Pediatric Academic Societies (PAS) Meeting

### Trainee Talks

**Title:** Family Connects: Development of a Multidisciplinary Social Needs Response Program

**Presenter:** Lauren VonHoltz

**Authors:** Lauren A. VonHoltz, **Danielle L. Cullen**, Maria C. Quidgley-Martin, Amanda Nomie, Ashlee Murray

**Presentation type:** Health Equity/Social Determinants of Health: e-Posters–Material Needs

Poster Board #: 1029

Publication #: EP-150.1029

Background: Poverty-associated social determinants of health are recognized as major drivers of poor health outcomes, and children are particularly vulnerable. During the COVID-19 pandemic, the prevalence and severity of social risk has increased. Families have less contact with the health care system, which often serves as a key navigator of available resources.

Objective: To meet increasing levels of social need, we developed a multi-disciplinary virtual social needs response program, Family Connects, within the emergency department (ED) of an urban, academic pediatric hospital.

Design/Methods: Beginning in April 2020, all adult caregivers arriving to the ED between 9 a.m.-11 p.m., Monday-Friday, are contacted by medical and social work (SW) students by phone during their visit. Social need is assessed, and resources such as emotional support, mental health resources and social service referrals including: housing, food and transportation assistance are offered. Encounters are documented within the electronic medical record and a secure external database. SW involvement is escalated to an in-person consultation if needed. Brief follow-up calls were made to select families in October 2020 for quality improvement (QI) purposes.

Results: Since inception, 4183 caregivers have been called, with 3015 (72%) successfully contacted. Emotional support has been provided to 910 (30%), and social resource referrals provided to 388 families (13%), with 41% of these families requesting resources in multiple domains. Specifically, 556 community resources have been provided, with the most commonly requested resources including food (28%), resource website (18%), housing (12%), utilities (11%), baby items (9%), mental health (8%), transportation (4%), employment (3%), education (3%) and clothing (2%). Post-participation QI phone calls (n=12) indicate general approval and acceptance of the program, with desire for additional follow-up.

Conclusion(s): The Family Connects program represents an innovative multi-disciplinary approach to reach families experiencing new or intensified need during the pandemic, while maintaining social distancing. The program provides an opportunity for whole

## 2021 Pediatric Academic Societies (PAS) Meeting

person care, using the ED visit as a point-of-entry into supportive programming and for community resources. Beyond the pandemic, Family Connects has the potential to expand and adapt to address short- and long-term stressors, connecting families with resources that address their social needs and have a profound impact on their overall well-being.

## 2021 Pediatric Academic Societies (PAS) Meeting

### PHASE II: May 10-June 4

**May 10**

**Title:** Innovation Methods to Enhance Healthcare Quality Improvement in the era of COVID-19

**Time:** 10 a.m.-12 p.m. ET

**Presenters:** Elena Huang (workshop leader), Daria Ferro, Maura Powell, **Katie McPeak**, Maya Dewan, Flaura Winston, **Alexander Fiks**

**Presentation type:** Workshop

Course #: 510-2-WS-L

Format type: Live

Target audience: Pediatricians and researchers interested in expanding their improvement skillsets with tools from Innovation, including trainees, fellows, Junior faculty, mid-level faculty, senior faculty

Learning objectives: By the end of the session participants should be able to: Describe relationships among Quality Improvement, Design Thinking and Innovation using COVID-19 use cases; Apply a Design Thinking technique useful for shifting teams into an innovation/growth mindset; Describe strategies for overcoming barriers to solving healthcare problems in a COVID-19 world

**May 18**

**Title:** There IS Such a Thing as a Free Lunch: Emerging Innovation to Combat Childhood Hunger

**Time:** 10 a.m.-12 p.m. ET

**Presenters:** **Danielle Cullen** (workshop leader), Laura Plencner, Molly Krager, Debbie Petitpain, Lawrence Lambert

**Presentation type:** Workshop

Course #: 518-4-WS-L

Format type: Live

Target audience: clinicians, administrators, researchers and trainees interested in community-clinical partnerships, and addressing social risk/food insecurity from the hospital setting

Learning objectives: 1. Discuss why health care institutions are uniquely positioned to address food insecurity in their patient populations and communities. 2. Describe summer child nutrition programs as a promising innovation within the non-traditional space of hospitals and health care institutions, with resultant qualitative and quantitative outcomes associated with this intervention. 3. Design an implementation plan for a summer meals program within a

## 2021 Pediatric Academic Societies (PAS) Meeting

health care setting and assess potential barriers to program implementation. 4. Identify resources, including an implementation guide and case studies, that support health care institutions ready to engage in the fight against hunger.

**May 26**

**Title:** APA Pediatric Clinical Research Networks (PCRN) SIG

**Time:** 2-4 p.m. ET

**Presenters:** Alexander Fiks (SIG chair), Patricia Hametz, Rebecca Orsenberg (SIG speakers)

**Presentation type:** Special Interest Group – APA SIG

Course #: 526-5-APASIG-L

Format type: Live

Target audience: Researchers in Pediatric, Adolescent and Family Medicine