

youth who reported substance misuse were referred to the CFJC-Health Clinic for consultation by the next available clinic day. From June-August 2020, after providers completed buprenorphine waiver training, 81% of youth who reported substance misuse were referred for consultation. From Sept 2020-April 2021, after implementation of a referral and management protocol for opioid use and withdrawal, almost all (90%) of youth reporting misuse were referred.

Conclusions: Similar to previous literature, we found that the prevalence of opioid misuse among adolescents at CFJC was significantly higher than in the general population. Our findings demonstrate that two change interventions of provider buprenorphine training and the development of protocols to facilitate the assessment and management of opioid misuse and OUD increased the rate of youth who received treatment for OUD at CFJC. Further refinement of these guidelines is needed to ensure that all youth admitted to CFJC with opioid misuse and OUD receive timely consultation and support to decrease the rate of opioid-related morbidity and mortality in confined youth.

Sources of Support: None.

176.

A PILOT STUDY TO INFORM THE DEVELOPMENT OF THE PLAYSMART VIDEOGAME INTERVENTION TO PREVENT THE INITIATION OF OPIOID MISUSE AMONG ADOLESCENTS AND YOUNG ADULTS

Claudia-Santi Ferrante Fernandes, Ed.D., LPC, MCHES, NCC¹,
Tyra M. Pendergrass Boomer, MEM¹, Lynn E. Fiellin, MD¹
¹Yale University School of Medicine.

Purpose: The U.S. opioid epidemic is a major public health concern. Misusing opioids in adolescence is associated with an increased risk of long-term opioid use in adults. Therefore, preventing the initiation of opioid misuse among adolescents by targeting youth mental health strategies is critical. The purpose of this study was to inform the development of a videogame prevention intervention, PlaySMART, that will subsequently be tested in a large RCT with school-based health centers.

Methods: Formative work was conducted through seven focus groups with youth between the ages of 16-19 (n=37), six interviews with treatment providers of individuals with opioid use disorder (OUD) (n=6), one focus group with prevention specialists (n=6), five focus groups with School-Based Health Alliance (SBHA) adult affiliates (n=26), and three focus groups with SBHA youth (n=15) to inform the content of PlaySmart. Salient themes from focus groups/interviews were extracted to ensure relatable storylines, characters, and graphics. The intervention was then pilot tested among adolescents aged 16-19 (N=33) to evaluate gameplay experience. Feedback was then relayed to the game development company to address.

Results: Of the 92 who participated in the focus groups/interviews, 71% were female, 47% identified as White, 18% identified as Black, 14% identified as Asian, 13% identified as Unknown, 37% identified as Hispanic/Latinx. Six distinct storyline themes were extracted from focus groups/interviews to inform the content of PlaySmart: supporting a friend in distress, being offered opioids at a party, navigating addiction in a relationship, seeking help for mental health, and effectively communicating with adults and healthcare providers. Specifically, two storylines and one mini-game focused on the promotion of mental health strategies given the salient theme of mental health. Of the participants who pilot tested the intervention, the majority noted "I liked the art and design of PlaySMART" and "Playing PlaySMART

was interesting." Suggested improvements included: fixing key point errors, addressing "music too loud/distracting while playing," and adding tutorials to each mini-game.

Conclusions: A central theme in game design was mental health promotion, a key factor in preventing opioid misuse among adolescents and young adults. Overall, adolescents and young adults reported that the intervention was acceptable, informational, and relatable. Suggested improvement focused on the mechanics of gameplay, media, and content that were addressed by the game development company.

Sources of Support: NIDA/NIH as part of the Helping to End Addiction Long Term (HEAL) Initiative.

177.

IMPROVING THE DELIVERY OF E-CIGARETTE SCREENING AND COUNSELING SERVICES TO ADOLESCENTS

Carmen Chavez, MD¹, Thaina Rousseau-Pierre, DO¹, Annie Bu, RN²,
Maria Pilar Gonzalez, MD¹, Gregory Kenny, MD¹, Tania Lopez-Pichardo,
MD¹, Andres Rivera, MD¹, Janet Siegel, DO¹

¹Pediatric Department, Icahn School of Medicine Mount Sinai at Elmhurst; ²Elmhurst Hospital.

Purpose: E-cigarette use among adolescents increased dramatically over the past decade. In 2020, more than 4 in 10 twelfth-grade students reported ever using an e-cigarette device. Through a previous Quality Improvement project, we increased the screening rate among our adolescent population close to 100%. However, screening coupled with education, cessation resources, and follow-up is essential in better addressing the use of e-cigarettes among adolescents. Our Adolescent/Pediatric Clinics participated in the AAP E-Cigarette and Vaping ECHO (Extension for Community Health Care Outcomes), aiming to improve the delivery of e-cigarette screening and counseling services to adolescents. We aimed to increase to 100% within 6 months, the percent of patients, ages 13-21, who are seen during a well-visit, screened and counseled on the harm of e-cigarettes, and if vaping, presented information on cessation resources with follow-up.

Methods: The QI team met monthly and used the model of improvement to create a driver diagram leading to change ideas for each 5 PDSA cycles. To address screening, we added the S2BI screening model for substance use in our EPIC template, added photographs of different vaping devices to exam rooms, and e-mailed providers a video on substance use screening. Ultimately, we changed the screening tool to be self-administered. For educating patients, we embedded in our EPIC note, a smart phrase on "the harm of vaping and substance use," and nurses added information as a dot phrase in the After Visit Summary. To improve cessation and follow-up plans, we embedded a phrase with a smart list generating options for cessation resources and follow-up in the assessment and plan section. We also added local and national resources as a dot-phrase. Charts of all adolescents ages 13 to 21 seen for an in-person well exam during October 2020 and from February 2021 to July 2021 were reviewed for screening for e-cigarette use, education on the harms of e-cigarette use, providing cessation resources, and a follow-up plan for patients who screened positive. Run charts and Statistical Process Control P charts were used to display weekly rates of screening, counseling, and follow-up.

Results: 111 patient visits were included in the pre-intervention and 761 in the intervention period. The rate of screening for e-cigarette use remained around 100% pre and post-intervention. The rate of

positive use of e-cigarettes ranged from 8% at baseline to 12.5 % during the intervention period. Education on the harms of e-cigarette use improved to 44% after PDSA1 and to 100% at the end of the last PDSA showing special cause variation. The data on patients who reported e-cigarette use and were provided with resources showed sustained improvement at 100% after week 12. The data for those who reported e-cigarette use and were provided with a follow-up showed some improvement but without any special cause variation.

Conclusions: Modifying the screening model and training physicians on screening for substance use increased the rate of positive use. Embedding smart phrases in our EPIC note templates significantly improved education, presentation of cessation resources, and follow-up plans.

Sources of Support: None.

178.

SCHOOL CONNECTEDNESS AND E-CIGARETTE SUSCEPTIBILITY AND USE IN A DIVERSE URBAN ADOLESCENT SAMPLE

April K. Wilhelm, MD, MPH¹, Michael Evans, PhD², Luis Ortega³, David Vock, PhD², Geoffrey Maruyama, PhD⁴, Michele L. Allen, MD, MS¹

¹University of Minnesota, Department of Family Medicine and Community Health; ²University of Minnesota, Biostatistical Design and Analysis Center; ³SolaHmo Health and Wellness; ⁴University of Minnesota, Department of Educational Psychology.

Purpose: Adolescent school connectedness, particularly positive relationships with teachers, generally protects from health risk behaviors such as tobacco use, yet how this relates to adolescent e-cigarette use has not yet been described. This study examines the relationship between school connectedness and e-cigarette susceptibility and use in a diverse adolescent longitudinal sample.

Methods: This is a secondary analysis of a school-based intervention including ten public schools in one urban school district. We surveyed 661 middle (66.6% eighth grade) and high school (33.4% eleventh grade) student participants at three time points between spring 2019 and spring 2020. The 2020 surveys were completed early in the COVID-19 pandemic, prior to the transition to remote learning. Respondents had a mean age of 14.1 years, were 53% female, and 28% identified as non-Hispanic white, 15.6% as Hispanic, 23.8% as Black, 29.8% as Asian, and 2.9% as American Indian/Alaska Native. Ordinal logistic regression models examined unadjusted and adjusted associations between school connectedness (both baseline and concurrent) and an ordinal measure of e-cigarette susceptibility (any vs. none) and use (any vs. no past 30-day use) at all three time points. Covariates in the adjusted models included grade, intervention condition, English language learner status, gender, race/ethnicity, baseline use of any tobacco, and baseline weighted grade point average.

Results: Levels of any tobacco use were low in the spring of 2019 (3.8%), e-cigarettes represented the predominant form of tobacco use (2.4%), and most respondents reported no e-cigarette susceptibility (69%). E-cigarette susceptibility and use remained relatively stable during the follow-up period. Higher levels of baseline school connectedness were consistently associated with lower odds of e-cigarette susceptibility/use in spring 2019 (OR: 0.37, 95% CI: 0.26, 0.53), fall 2019 (OR: 0.51, 95% CI: 0.35, 0.74), and spring 2020 (OR: 0.47, 95% CI: 0.30, 0.73). Higher levels of concurrent school connectedness were also associated with lower odds of e-cigarette susceptibility/use over time: spring 2019 (OR: 0.36, 95% CI: 0.25, 0.51), fall 2019 (OR: 0.48, 95% CI: 0.34, 0.66), and spring 2020 (OR:

0.65, 95% CI: 0.42, 0.99). Findings were similar for eighth and eleventh graders and did not differ significantly both before and after adjusting for other covariates.

Conclusions: Both adolescents' baseline levels of connection to their schools and their connectedness over time appear to serve as protective factors for e-cigarette susceptibility and use. These findings highlight the importance of promoting positive school experiences and strong teacher-student relationships as a mechanism of reducing adolescent risk behaviors such as e-cigarette use among diverse adolescent populations.

Sources of Support: This project was funded by a grant from the National Institute of Minority Health and Health Disparities (NIMHD) grant number R01MD010586 (PI: Allen).

179.

IT'S A HURDLE WE HAVE TO CROSS, BUT IT'S JUST NOT A PRIORITY... WE HAVE TO DEAL WITH RIGHT NOW." PROVIDER PERSPECTIVES ON TOBACCO CESSATION FOR YOUNG ADULTS WITH HIV WHO CO-USE TOBACCO AND CANNABIS

Samantha V. Hill, MD, MPH¹, Paige Palenski, BA¹, Heidi Crane, MD, MPH², Conall O'Cleirigh, PhD³, Lynn T. Matthews, MD, MPH¹, Karen Cropsey, PysD¹

¹The University of Alabama at Birmingham; ²University of Washington; ³Massachusetts General Hospital.

Purpose: Health conditions related to tobacco use are the leading cause of morbidity among people with HIV (PWH). Twenty to 40% of PWH aged 18-24 use some form of tobacco; more than 50% of daily tobacco-using PWH aged 18-24 also smoke cannabis. Cannabis use can lead to challenges with tobacco cessation and even tobacco re-initiation. This study sought to explore provider perspectives about barriers and facilitators to approaching tobacco cessation in PWH 18-24 years old who co-use tobacco and cannabis.

Methods: The study was grounded in Social Cognitive Theory. Virtual in-depth interviews were conducted among physicians, nurse practitioners, and physician assistants who care for PWH 18-24 years old in three states- Washington (legalized cannabis), Massachusetts (legalized cannabis), and Alabama (cannabis not legal). Interviews were transcribed and analyzed using a deductive and exploratory, thematic approach. Thematic analysis was organized using NVivo 12 Plus.

Results: Twelve providers completed interviews- eight from Alabama, three from Massachusetts, and one from Washington. Eighty-three percent were physicians of whom 67% were infectious disease specialists and 16% were either adolescent medicine or family medicine HIV subspecialists. Cross-cutting themes included 1) provider and client prioritization of HIV and substances other than tobacco and cannabis' (e.g. cocaine and opioids) impact on provider ability to discuss tobacco; 2) healthcare structural barriers (e.g., time and siloed disciplines (psychology, social work, nutrition) that are crucial in addressing tobacco cessation); 3) provider-level barriers including knowledge about tobacco cessation and how vaping and cannabis impact tobacco cessation; 4) client-level barriers include priority given to addressing social determinates of health (e.g., safe housing and reliable employment) that impact clients' HIV management and associated mental health comorbidities; 5) clients and providers alike place lower health prioritization on cannabis use, regardless of the legal status of cannabis; and 6) optimization of continuing