

culture, and linguistics) (Fixsen, et. al., 2009; Becker, et al., 2020). Unique and hard-to-reach populations (UHRP) are defined based on physical location (i.e., remote or isolated), social position, or other vulnerabilities (i.e. member of an ethnic or racial minority group) (Thurman, & Harrison, 2020). ORN classifies 26 types of UHRP these types are not mutually exclusive. A frequency analysis of the UHRP types was conducted. Bivariate correlations between UHRP types that had a minimum of 30 cases were performed. RESULTS/ANTICIPATED RESULTS: Among 746 TA requests selected, 226 had missing information about UHRP types and 29 had missing information TA levels. These requests were excluded from the frequency analysis. The three most common UHRP types were people living in rural or remote areas (n=262, 50%), people who are uninsured or underinsured (n=162, 31%), and people who inject drugs (n=158, 30%). Most TA requests were targeted (69%), 23% were intensive, and 9% were basic. Bivariate correlations were performed between 21 UHRP types. Moderate (Pearson's $r=0.4-0.6$) or strong correlations ($r>0.6$) were found for 11 occurrences for the UHRP type of 'LGBT', 8 for 'Mental Illness', and 7 for 'Veterans'. Strong correlations were found between 'Justice Involved' and 'Incarcerated' ($r=0.645$), and between 'Disabilities' and 'Chronic Pain' ($r=0.603$). DISCUSSION/SIGNIFICANCE OF FINDINGS: There were more TA requests at targeted and intensive levels than basic levels suggesting the need for services to enhance readiness and build capacity. The moderate/strong correlations indicate that UHRP types were likely to coexist with other types. Future research can explore combining UHRP types that have moderate/strong correlations.

33392

Investigating the relationship between placement instability, mental health, behavioral and justice-related outcomes among sex-trafficked youth

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ABSTRACT IMPACT: This public health work contributes to the development and implementation of best practices for working with sex trafficked youth who experience placement instability and justice involvement. OBJECTIVES/GOALS: Youth removed from their home into foster care or a group home (i.e., placement instability) are vulnerable to sex trafficking. This study examines whether placement instability predicts mental health, behavioral and justice-related outcomes among sex-trafficked girls. METHODS/STUDY POPULATION: Placement instability occurs when children are temporarily or permanently removed from their home and placed in foster care or a group home. Domestic minor sex trafficking is exploitation and abuse of children for commercial sexual purposes in exchange for money or other goods/services. We hypothesize that sex trafficked girls who experience placement instability will report more mental health challenges, substance use, abuse history and justice involvement than those without placement instability. Data came from participant files in a specialty court program from 2012-2014 (N=184). Multiple sources contribute to the information contained court files; all data extracted by the research team come solely from the court files. Descriptive, bivariate, and logistic regression analyses were performed. RESULTS/ANTICIPATED RESULTS: All participants were (cis)/female, 74% were African American, 96% US citizens, with average age of 16 years. Three-quarters of participants had a documented mental health challenge,

such as depression and 88% reported substance use. Eighty-one percent of participants had been in a placement, with a group average of 4.5 placements. Girls with placement instability reported more mental health challenges ($p<.001$), substance use ($p<.001$), abuse ($p<.001$), running away ($p<.001$) and bench warrants ($p<.001$) than girls without placement instability. Logistic regression estimated housing instability was positively associated with mental health challenge, substance use, running away, number of bench warrants, and number of citations. DISCUSSION/SIGNIFICANCE OF FINDINGS: Among girls who have been trafficked, placement instability places them at greater risk for personal and behavioral challenges, including increased justice involvement. Comprehensive trauma-informed services should be provided to the family to help mitigate issues in the home.

41538

Characterizing Opioid Overdose Hotspots for Targeted Overdose Prevention and Treatment

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ABSTRACT IMPACT: Identifying factors associated with opioid overdoses will enable better resource allocation in communities most impacted by the overdose epidemic. OBJECTIVES/GOALS: Opioid overdoses often occur in hotspots identified by geographic and temporal trends. This study uses principles of community engaged research to identify neighborhood and community-level factors associated with opioid overdose within overdose hotspots which can be targets for novel intervention design. METHODS/STUDY POPULATION: We conducted an environmental scan in three overdose hotspots "two in an urban center and one in a small city" identified by the Rhode Island Department of Health as having the highest opioid overdose burden in Rhode Island. We engaged hotspot community stakeholders to identify neighborhood factors to map within each hotspot. Locations of addiction treatment, public transportation, harm reduction programs, public facilities (i.e., libraries, parks), first responders, and social services agencies were converted to latitude and longitude and mapped in ArcGIS. Using Esri Service Areas, we will evaluate the service areas of stationary services. We will overlay overdose events and use logistic regression identify neighborhood factors associated with overdose by comparing hotspot and non-hotspot neighborhoods. RESULTS/ANTICIPATED RESULTS: We anticipate that there will be differing neighborhood characteristics associated with overdose events in the densely populated urban area and those in the smaller city. The urban area hotspots will have overlapping social services, addiction treatment, and transportation service areas, while the small city will have fewer community resources without overlapping service areas and reduced public transportation access. We anticipate that overdoses will occur during times of the day when services are not available. Overall, overdose hotspots will be associated with increased census block level unemployment, homelessness, vacant housing, and low food security. DISCUSSION/SIGNIFICANCE OF FINDINGS: Identifying factors associated with opioid overdoses will enable better resource

allocation in communities most impacted by the overdose epidemic. Study results will be used for novel intervention design to prevent opioid overdose deaths in communities with high burden of opioid overdose.

41896

Surveying knowledge of quality of dementia care among Latino caregivers*

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ABSTRACT IMPACT: This qualitative study describes health system barriers to high-quality care for Latino older adults with Alzheimer's Disease and Related Dementias **OBJECTIVES/GOALS:** Compared to non-Latino Whites, Latino older adults are more likely to receive low-quality dementia care such as high-risk medications or services. Caregivers play a critical role in managing medical care for persons with dementia (PWD). Yet little is known about the perceptions and knowledge of dementia quality of care among Latino caregivers of PWD. **METHODS/STUDY POPULATION:** We used a qualitative research design and conducted interviews with Latino caregivers of PWD and caregiver advocates. We recruited both from community organizations, senior centers, and clinics. Our interview guide focused on experiences of caregiving, interactions with medical system, and knowledge and experiences managing behavioral and eating problems. We used Grounded Theory methodology for coding and analysis, focusing on contrasting and comparing experiences within and between caregivers and caregiver advocates. **RESULTS/ANTICIPATED RESULTS:** Preliminary results from interviews with two caregivers and two caregiver advocates illustrate that caregivers of persons with dementia have a difficult time receiving high quality care from primary care clinicians. All participants noted that many primary care doctors didn't know how to diagnose ADRD and dismissed critical symptoms as part of old age. Caregivers also reported that they wished they had more information on what to expect with ADRD disease progression, noting they received little information from the formal medical care system. With respect to behavioral problems, caregiver advocates noted that primary care doctors often did not provide non-pharmacological alternatives to behavioral problems. **DISCUSSION/SIGNIFICANCE OF FINDINGS:** Findings from our pilot study demonstrate that there is a clear need to train primary care physicians who serve Latino older adults on ADRD care. Improved diagnosis and management could improve outcomes among Latino older adults with dementia.

45419

Patient Perceptions of COVID-19 Impact on their Fertility Care

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ABSTRACT IMPACT: In alignment with principles of community engaged research, feedback from participants in this research study may influence infertility clinics to offer psychological support for individuals or couples experiencing high levels of psychosocial burden when pursuing fertility procedures, especially during periods of interrupted care or uncertainty. **OBJECTIVES/GOALS:** 1) To assess

the psychosocial impact on patients whose fertility treatments were interrupted during the COVID-19 shutdown. 2) To assess the correlation of patient perceived risk at the time of treatment cessation compared to the resumption of treatment, both during an ongoing pandemic. **METHODS/STUDY POPULATION:** Female patients with scheduled fertility treatments at Mayo Clinic within 6 months of 3/15/2020, were contacted through the patient portal and invited to participate in this study. Interested patients were contacted by a study staff member to obtain their consent and HIPAA authorization and to schedule a phone or Zoom interview. Semi-structured interviews were conducted individually, or in partner dyads depending upon participant preference, and were recorded with their permission. Audio recordings were professionally transcribed and de-identified. Transcripts were qualitatively analyzed using NVivo 12 based on the principles of grounded theory. **RESULTS/ANTICIPATED RESULTS:** 26 participants were interviewed; 20 interviews were conducted individually and 3 were conducted in dyads with their partners. Initial themes from the interviews show that COVID-19 compounded existing psychosocial burden on individuals and couples undergoing fertility treatments. Women who were older in age, had prolonged history of infertility, or multiple unsuccessful treatment cycles reported feeling an increased urgency to proceed with fertility treatments due to the time sensitive care, which outweighed the perceived risks of COVID-19 to either themselves or the potential pregnancy. Patients also reported a desire for improved communication regarding their procedures and overall well-being, as well as options for counseling services for individuals or couples undergoing fertility treatments. **DISCUSSION/SIGNIFICANCE OF FINDINGS:** Participants indicated the need for increased psychological support for patients pursuing fertility treatments, especially during periods of interrupted care or uncertainty, as highlighted during the COVID 19 pandemic. Offering counseling as a routine part of the treatment process may mitigate this burden.

49502

CHANGES IN DEPENDENCE, WITHDRAWAL, AND CRAVING AMONG ADULT SMOKERS WHO SWITCH TO NICOTINE SALT POD-BASED E-CIGARETTES*

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ABSTRACT IMPACT: This research suggests that African American and Latinx smokers who bear a disproportionate burden of tobacco-related harms are able to switch to e-cigarettes that present reduced harm to the user due to their similar reinforcement profile to cigarettes. **OBJECTIVES/GOALS:** Complete switching from combustible to electronic cigarettes (ECs) reduces harm to the user. For ECs to be a viable substitute, they need to be rewarding enough for regular use, indicated by factors such as craving and dependence (reinforcement value). Little is known about short-term changes in reinforcement value across trajectories of EC use. **METHODS/STUDY POPULATION:** Participants were randomized 2:1 to switch to a nicotine salt pod system EC or continue smoking (assessment-only control) in a 6-week trial. 114 African American (n=60) and Latinx (n=54) smokers were randomized to receive ECs and are included in the current investigation. At week 6, participants were classified by use trajectory: exclusive smokers (n=16), exclusive EC users (n=32), or dual users (n=66). Participants reported on their EC, cigarette, and total nicotine dependence (cigarette + EC