TRAJECTORIES OF OPIOID USE FOLLOWING FIRST OPIOID PRESCRIPTION IN A POPULATION OF ADOLESCENTS AND YOUNG ADULTS

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Purpose: Prescription opioids are the most common way adolescents and young adults (AYA) initiate opioid use. In light of the opioid epidemic, elucidating patterns of prescription opioid receipt following the first opioid prescription may identify critical targets for prevention of opioid use disorder (OUD).

Methods: We conducted a retrospective cohort analysis of Pennsylvania Medicaid enrollees from 2007-2016 using pharmacy claims to identify those age 10-21 years at time of first opioid prescription. We included AYA with 6 months of continuous enrollment in Medicaid before and 12 months after first prescription. We used group-based trajectory modeling to identify latent trajectory groups for opioid fills. We defined group membership by looking at monthly opioid fills for the first year using opioid prescription as binary indicators of opioid prescribing. We then used general linear models to compare means across different trajectories examining patient factors (diagnoses of anxiety, depression, attention-deficit disorder, age, and sex), prescriber specialty type; and first prescription characteristics (length and dose). We measured opioid fills and OUD diagnosis beyond the initial 12-month trajectory period using all available claims data for each enrollee.

Results: 189,477 AYA received an initial opioid prescription. We identified four distinct patterns of long-term opioid therapy among the 47,477 who received at least one additional prescription within the following 12 months: Group 1 (n=780) filled persistently more opioid prescriptions each month compared to a gradually decreasing pattern of prescription fills in Group 2 (n=1,124) and rapid declines in fills for Groups 3 (n=29,826) and 4 (n=15,747). The enrollees in Group 1 and 2 (identified as higher-risk trajectories for persistent opioid use) were more likely to be older (mean 18.3 years) compared to Group 3 and 4 (17.4 and 17.3 years, respectively). Group 2 had the highest proportion of mental health diagnoses (depression 28.9%; anxiety 10.5%) compared to Groups 3 and 4 (18.1% and 16.9% with depression, and 7.4% and 6.9% with anxiety, respectively). The mean first prescription was over twice as long for those in Group 1 (10.5 days) compared to 4.5 days for Group 3 and 5.0 days for Group 4. Opioid prescriptions were 3-times as potent with 24.9 mean milligram morphine (MME) equivalents for Group 1 compared to 7.9 MME in Group 3. Dentists and surgeons accounted for a lower proportion of prescribers in the high-risk groups (for example, 7.3% in Group 1 vs. 36.5% in Group 4). Differences in groups persisted beyond the first 12-months: Group 1 had mean 31.9 months of opioid prescriptions filled and 31.2% were diagnosed with OUD compared to a total of 5.2 months with opioids filled for Group 4 and 9.2% diagnosed with OUD.

Conclusions: We identified two trajectories associated with elevated risk for persistent opioid receipt and for OUD diagnosis within 12 months following first opioid prescription. Differences in rates of OUD and opioid fills persisted beyond the first year. Higher risk trajectories are characterized by increased mental health comorbidities, older age at time of first prescription, and longer and more potent first prescriptions.
RACIAL AND GENDER IDENTITY AND VIOLENCE INVOLVEMENT: PERSPECTIVES FROM MALE ADOLESCENTS IN MARGINALIZED NEIGHBORHOODS

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Purpose: In racially-segregated communities, youth are exposed to racism and other forms of violence, which impacts developmental experiences, shapes gender-inequitable attitudes, and increases risk for violence involvement. Understanding links between masculinity, racism, and experiences of violence is crucial for designing violence prevention interventions. The purpose of this study was to explore male youths’ conceptions of manhood, influences on manhood, and challenges in navigating the pressure of becoming men in the context of neighborhood disadvantage and structural racism.

Methods: We conducted semi-structured interviews among a purposive subsample of predominantly African American male youth, ages 13 to 19, participating in a community-partnered sexual violence prevention trial across 20 neighborhoods with concentrated disadvantage in Pittsburgh, PA from 2015-2017 (n=52). Interviews explored youths’ definitions of manhood, influences on manhood, and intersections with racial identity and racism. We used an iterative coding process to identify developing themes. The lead analyst and research assistant dual-coded 14 interviews to refine themes and develop the final codebook. Research team members met regularly to ensure coherence of the codebook and discuss identified themes.

Results: The dominant definitions of manhood described men as responsible (“taking care of all of your responsibilities”) and as providers, “to be a man you have to be strong, you have to be [a] hard worker, caring, care for your family, provide for your family.” Growing into manhood was often viewed as a journey by the participants—both as a process of overcoming life’s challenges, “I have a big influence from my grandfather. He’s been through a lot in his life and it takes a man to go through that and keep pushing,” and as a process of becoming a moral agent, “as a man you have to know the right from wrong.” Many participants related this process to their racial identity—with one participant specifying that for him being an African American man meant to be proud in the face of racism, “I am Black but I am a proud Black African American. I am proud of my skin tone and ain’t nobody ever gonna take that from me.” Others described unique obstacles that they faced due to racist stereotypes, “people are like, they are always like ‘oh he’s Black, he’s gonna try and hurt us or be a gangster or something.’” In the process of growing into manhood, Black participants at times felt that the stakes were especially high for them—with negative stereotypes and encounters with police creating a risk-laden process.

Conclusions: These stories suggest that the process of entering manhood comes with unique challenges for adolescents who do so in the context of racism. The ability to take risks while exploring masculinity is fraught with the danger of being viewed through a lens of racist stereotypes and having to grapple with the consequences of racism. Being mindful of intersections between masculinity and racial injustice can
inform violence prevention programs that address the lived experiences of minority male youth in neighborhoods with concentrated disadvantage.

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EXPLORING SHIFTS IN PARENTAL SUPPORT BEHAVIORS FOR TRANS AND NON-BINARY ADOLESCENTS
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Purpose: Trans and non-binary adolescents consistently report higher rates of adverse mental health outcomes compared to their cisgender peers. Parental support is a recognized adolescent protective factor; however, little is known about how or why parents may shift their behaviors from non-supportive to more supportive over time. We qualitatively explored trans and non-binary adolescents’ perceptions about the factors that they feel have motivated their parents’ behaviors towards them to shift from initially rejecting to more supportive.

Methods: Twenty-four ethnically diverse trans and non-binary adolescents (ages 16 to 20) from New York City and the San Francisco Bay Area participated in the study. Qualitative data were gathered using two methods: “Lifeline interviews,” in which participants created visual representations of life histories from birth to present and plotted major stressors and sources of support related to their gender identity (including parental attitudes and behaviors), and photo elicitation, where participants provided photographs representing parental support and/or rejection. All interviews were audio-recorded, transcribed verbatim, and analyzed using inductive thematic analysis.

Results: Participants described five themes related to shifts in their parents’ support behaviors: 1) Increased awareness of the adverse consequences of gender-related minority stressors on their child (e.g., “[My mom] realized that I kept trying to kill myself and was just like, ‘Well, I would rather have you alive as my son, than a dead daughter’”); 2) Realization that their child’s gender identity is real and not “just a phase” (e.g., “[My parents] became more accepting when I started presenting [as female] at work...they realized they weren’t gonna be able to stop me and I’ve already made up my mind”); 3) Becoming more informed about gender diverse identities through interactions with health care providers and other trans individuals and families (e.g., “[My mom] started meeting a lot of older trans people - I think that helped her. She was like, ‘Oh, you can grow up and be happy like this. It’s not like the end of the world’”); 4) Social pressure from others (e.g., “[My mom’s] friends talked to her about it and asked her what was her problem for not accepting me...Like, ‘What are you doing? He’s obviously unhappy, just accept your son’”); 5) Increased levels of parental trust in child as they age (e.g., “I’m a pretty responsible kid. I get A’s and I don’t smoke or drink or party...I think [over time] they were starting to be like, ‘Alright, well, our kid is not horrible, so I guess they can kind of have their own thought process’”).

Conclusions: This research is one of the first studies to explore shifts in parental support behaviors from the perspective of trans and non-binary adolescents. The processes underlying improved parental
behaviors identified here may help mental health practitioners support parents in their path towards greater acceptance of their trans and non-binary children.

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22.

CHARACTERISTICS OF ADOLESCENT-SERVING ADDICTION TREATMENT FACILITIES IN THE UNITED STATES
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Purpose: Adolescents with opioid use disorder (OUD) or who experience opioid overdose are significantly less likely than adults to receive medications for opioid use disorder (MOUD). The extent to which addiction treatment facility characteristics contribute to this differential access is unknown. This study’s objectives were to describe the quantity and characteristics of adolescent-serving addiction treatment facilities in the U.S., and examine associations between facility characteristics and offering maintenance MOUD.

Methods: We performed a cross-sectional study using the 2017 National Survey of Substance Abuse Treatment Services (N-SSATS), a survey of all U.S. addiction treatment facilities. We compared characteristics of facilities that offered specialized adolescent programs versus those that did not (“adult-focused facilities”), including ownership, payments accepted, accreditation/licensure, location, and services. We used logistic regression to identify facility characteristics associated with offering maintenance MOUD (opioid agonist maintenance with buprenorphine or methadone, or extended-release naltrexone), and included interaction terms to test whether MOUD availability differed between facilities with specialized adolescent programs and adult-focused facilities.

Results: Among 13,585 addiction treatment facilities in the U.S., 3,537 (26.0%) offered specialized adolescent programs. These facilities were more likely than adult-focused facilities to accept insurance or be owned by a non-profit or state/local/tribal government (p<0.001 for all). Of the 3,537 facilities with adolescent programs, 92.4% (3,267) offered outpatient treatment, 11.7% (413) offered residential treatment, and 3.6% (129) offered inpatient treatment. Among facilities with adolescent-programs, 23.1% (816) offered maintenance MOUD, compared to 35.9% (3,612) of adult-focused facilities (odds ratio [OR], 0.53; 95% confidence interval [CI], 0.49-0.58). While facilities with adolescent-programs and adult-focused facilities were equally likely to offer naltrexone as their only MOUD (OR, 0.92; 95% CI, 0.79-1.08), facilities with adolescent-programs were only half as likely to offer opioid agonist maintenance MOUD (OR, 0.51; 95% CI, 0.46-0.57). Among facilities with adolescent programs, non-profits were more likely than for-profits to offer maintenance MOUD (OR, 1.38; 95% CI, 1.08-1.75). Facilities that accepted any kind of insurance were significantly more likely to provide maintenance MOUD than those not accepting insurance or providing free/reduced-fee services. Cash-only facilities with adolescent-programs had the lowest rate of providing maintenance MOUD (13.2%), whereas cash-only adult-focused facilities had the highest rate of providing maintenance MOUD (41.5%). Facilities
(both adult-focused and with adolescent programs) that offered inpatient services, or were licensed/accredited by a national authority were more likely to offer maintenance MOUD. Facilities in the Midwest, South, and West were less likely to provide maintenance MOUD than facilities in the Northeast; this negative association was strongest among facilities with adolescent-programs in the South (OR, 0.24; 95% CI 0.19-0.30; interaction term p<0.001) and West (OR, 0.15; 95% CI 0.12-0.19; interaction term p<0.001).

Conclusions: Only one-quarter of U.S. addiction treatment facilities offer specialized adolescent-programs, and these facilities are half as likely to offer maintenance MOUD as adult-focused facilities. This disparity may be even greater in the U.S. South and West. This may explain why adolescents are less likely to receive MOUD than adults by demonstrating that the facilities that serve them are also less likely to provide MOUD.

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23.

FOOD INSECURITY AND HEALTH OUTCOMES IN YOUNG ADULTS
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Purpose: Nearly one fifth of US children and adolescents live in food-insecure households, with limited or uncertain access to food resulting from inadequate financial resources. Little is known about the association between food insecurity and health in young adulthood, an important developmental period when educational and economic transitions may increase risk for food insecurity. The purpose of this study was to determine the association between food insecurity and physical, mental, and sexual health outcomes in a nationally representative sample of US young adults.

Methods: Cross-sectional nationally representative data of US young adults ages 24-32 years old from Wave IV (2008) of the National Longitudinal Study of Adolescent to Adult Health were analyzed. Multiple logistic regression analyses were conducted with food insecurity as the independent variable and self-reported poor general health; physical health (diabetes, hypertension, hyperlipidemia, obesity, obstructive airway disease, and migraine); mental health (depression, anxiety, suicidality, and sleep disturbance); and sexual health (chlamydia, gonorrhea, any sexually transmitted infections, and sex work) as the dependent variables, adjusting for age, sex, race/ethnicity, education, income, household size, smoking, and alcohol.

Results: Of the 14,800 young adults in the sample, 11% were food insecure. Food-insecure young adults had greater odds of self-reported poor general health (2.65, 95% CI 1.62-4.35) and poor physical health including diabetes (1.67, 95% CI 1.19-2.40), hypertension (1.50, 95% CI 1.22-1.84), “very overweight” (1.21, 95% CI 1.01 – 1.45), obstructive airway disease (1.44, 95% CI 1.18-1.74), and migraine (1.68, 95% CI 1.39-2.04) compared to young adults who were food secure. Food-insecure young adults had greater odds of mental health problems including depression (1.86, 95% CI 1.55-2.23), anxiety or panic disorder
(1.60, 95% CI 1.26-2.02), suicidal ideation (2.90, 95% CI 2.27-3.71), trouble falling asleep (1.69, 95% CI 1.43-2.00), and trouble staying asleep (1.81, 95% CI 1.55-2.11). In terms of sexual risk, food-insecure young adults had greater odds of chlamydia (1.81, 95% CI 1.24-2.62), gonorrhea (1.86, 95% CI 1.12-3.08), any sexually transmitted infection (1.49, 95% CI 1.19-1.87), and engaging in sex work (1.84, 95% CI 1.16-2.93).

**Conclusions:** Food insecurity is a significant social determinant of health in young adulthood across physical, mental, and sexual health domains. Mechanisms linking food insecurity to poor health outcomes may include chronic stress, stigmatization, disempowerment, and poor nutritional quality. Health care providers should screen for food insecurity in young adults and provide referrals when appropriate. Future research should examine the association between food insecurity and health outcomes over the life course, and develop early food insecurity interventions to prevent downstream effects on health in later adulthood.

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