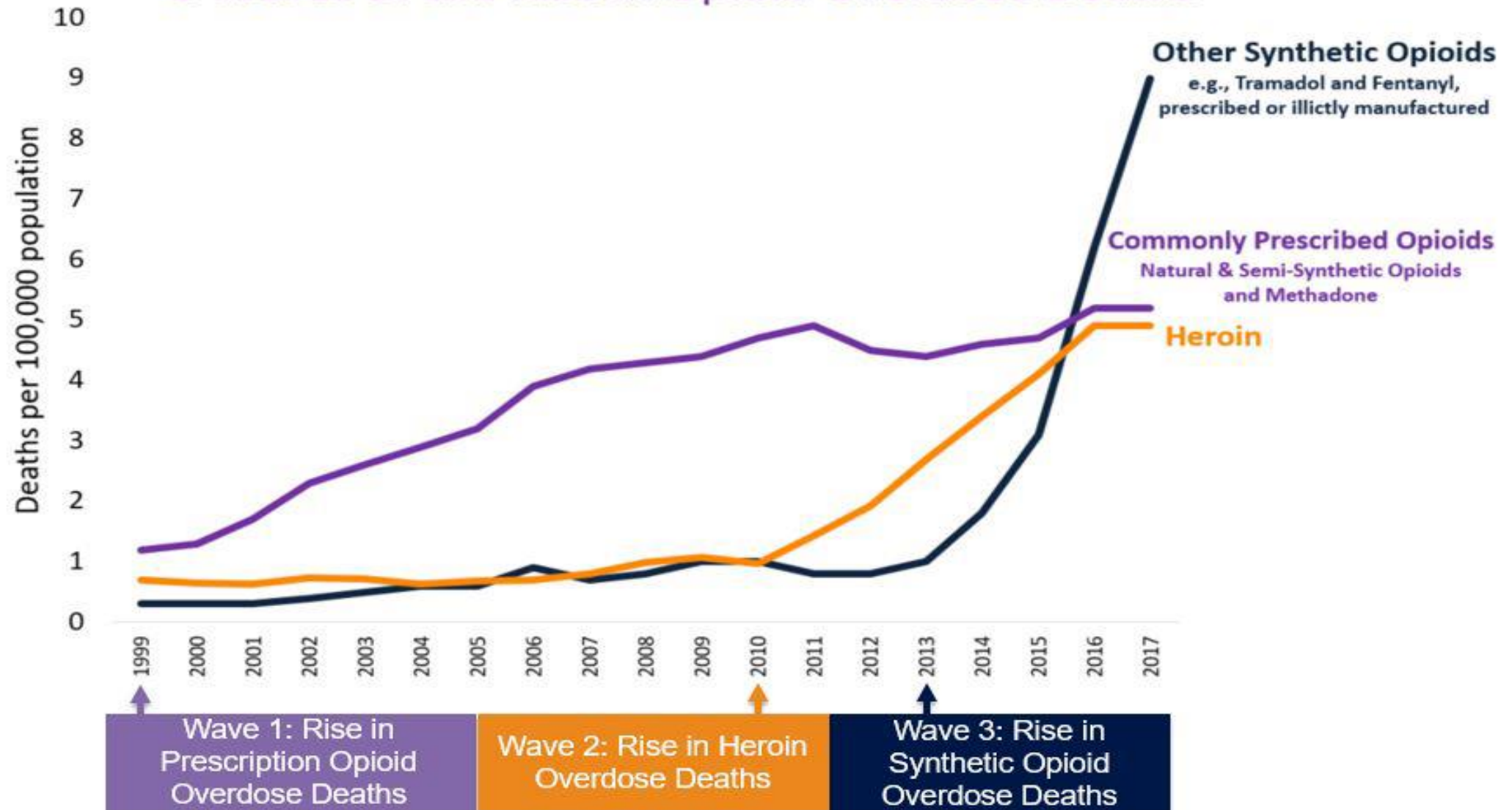


Adverse Childhood Experiences and Opioid Misuse

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January 22nd, 2019

3 Waves of the Rise in Opioid Overdose Deaths



Adverse childhood experiences

Abuse

- Emotional abuse
- Physical abuse
- Sexual abuse

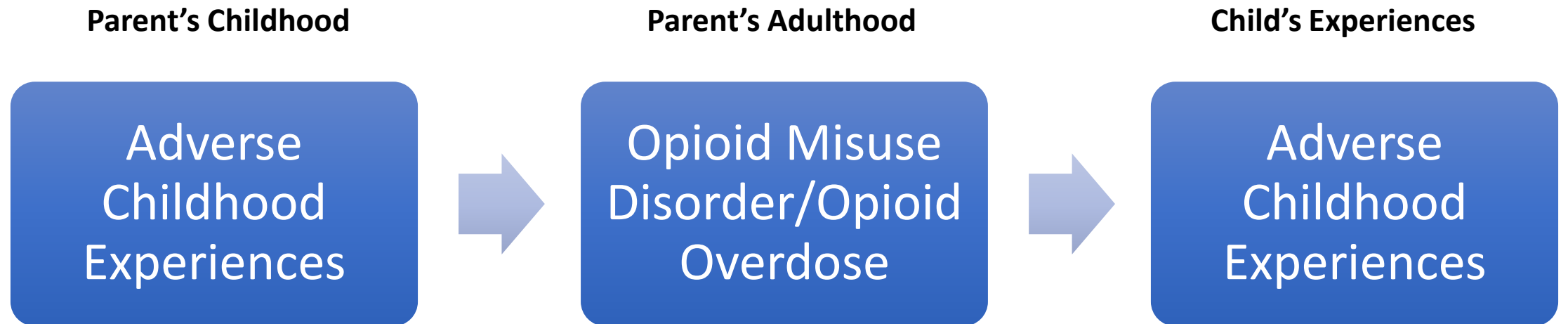
Neglect

- Emotional neglect
- Physical neglect

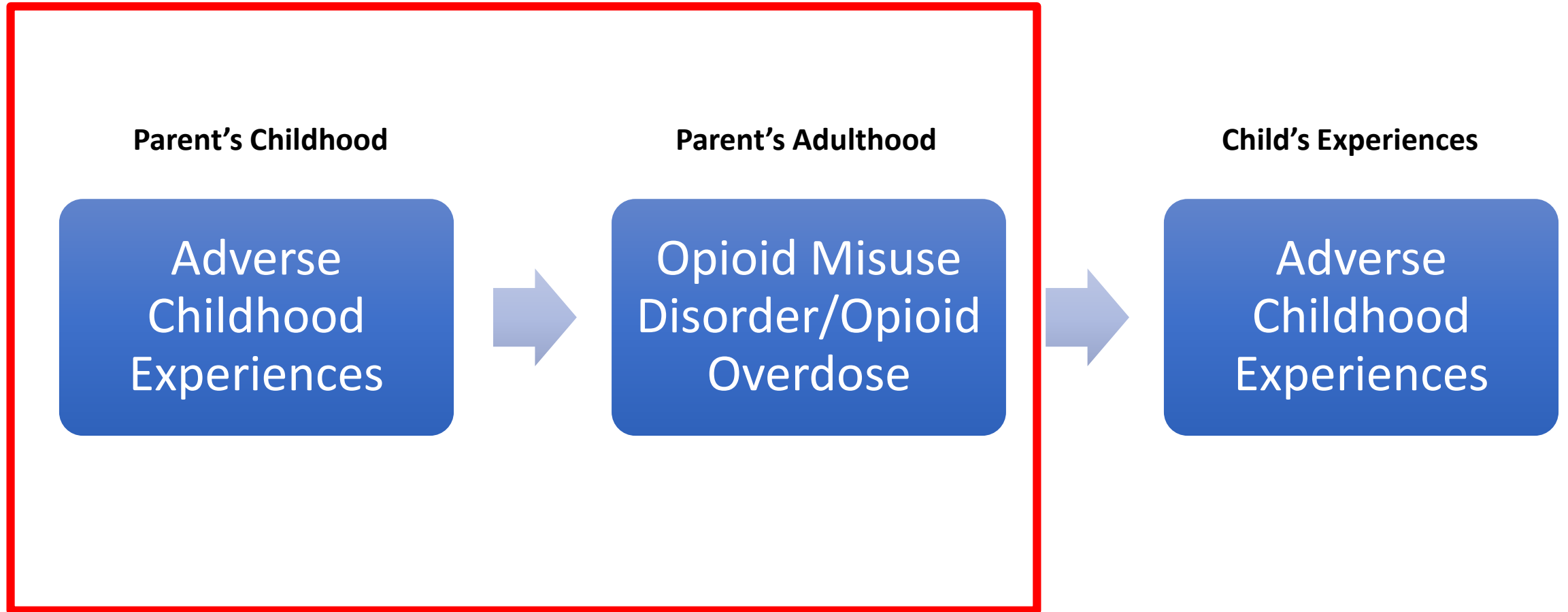
Household challenges

- Mother treated violently
- Household substance use
- Mental illness in household
- Parental separation or divorce
- Criminal household member

Life course Perspective



Life course Perspective



ACEs and substance misuse disorders

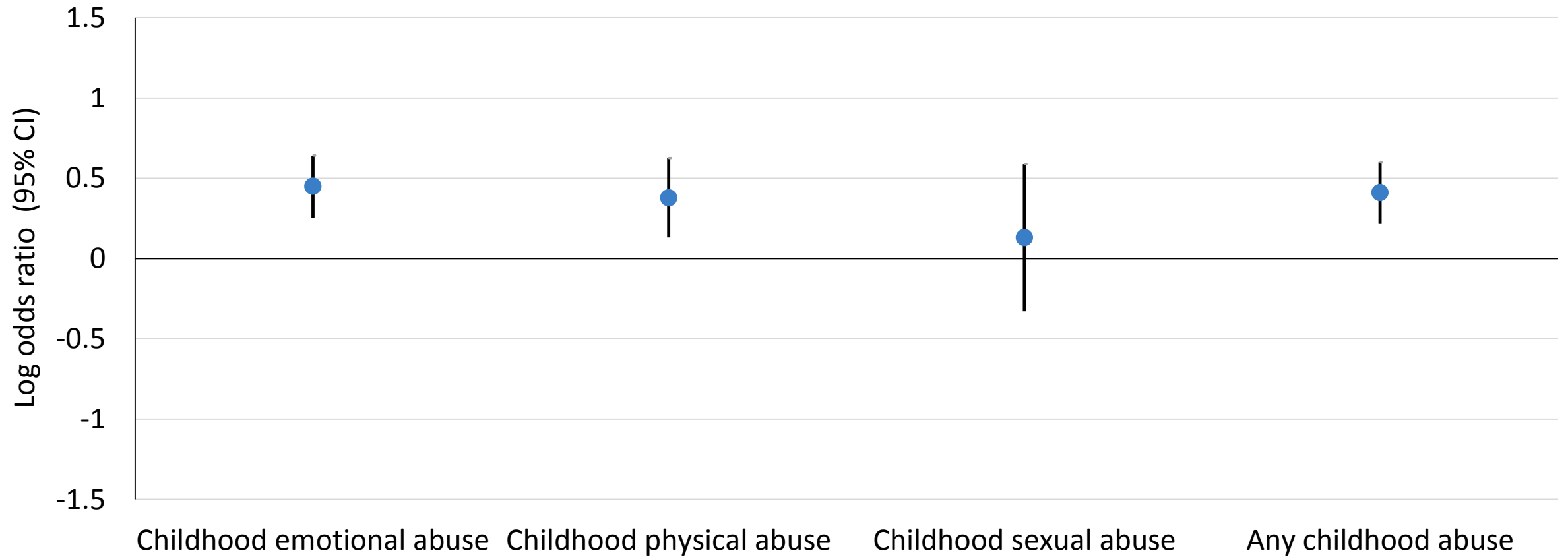
Table 1: Health and social problems shown to have a graded relationship to the ACE Score

Type of Problem	Outcomes Associated with Adverse Childhood Experiences
Prevalent Diseases	Ischemic heart disease ^{6,7} cancer, ⁶ chronic lung disease, ⁶ skeletal fractures, ⁶ sexually transmitted diseases, ^{6,32,33} and liver disease ^{6,11}
Risk Factors for Common Diseases/Poor Health	Smoking, ^{3,6,31,32} alcohol abuse, ^{1,2,31,32,34} promiscuity, ^{6,31,32,35} obesity, ^{2,6,31} illicit drug use,^{6,31,32,36} injected drug use, ^{6,31,36} multiple somatic symptoms, ³¹ poor self-rated health, ⁶ high perceived risk of AIDS ³³
Poor Mental Health	Depressive disorders, ^{6,31,32,37} anxiety, ³¹ hallucinations, ^{31,38} panic reactions, ³¹ sleep disturbances, ³¹ memory disturbances, ^{31,39} poor anger control, ³¹ risk of perpetrating or being a victim of domestic violence ³¹
Sexual and Reproductive Health	Early age at first intercourse, ^{31,35} sexual dissatisfaction, ³¹ teen pregnancy, ⁴⁰ unintended pregnancy, ⁴¹ teen paternity, ⁴² fetal death ⁴⁰
General Health and Social Problems	High perceived stress, ³¹ difficulty with job performance, ⁴³ relationship problems, ⁴³ marriage to an alcoholic ³⁴

ACEs and Opioid Dependence

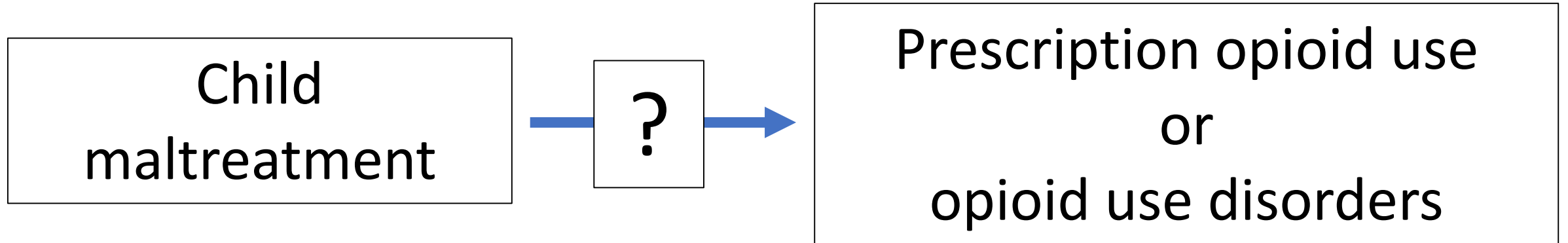
- Case-control study
 - 967 individuals with opioid dependence
 - 346 individuals without opioid dependence
- Results:
 - Among women
 - Multiple incidents of sexual abuse (OR 3.3; 95%CI 1.8, 6.2)
 - Known perpetration (OR 3.0; 95%CI 1.5, 5.9)
 - Parental separation < 7yrs (OR 1.9; 95%CI 1.1-3.1)
 - Among men
 - Physical abuse (OR 1.6; 95%CI 1.0-2.4)
 - Emotional abuse (OR 1.9; 95%CI 1.0-3.4)

Child maltreatment and prescription opioid use

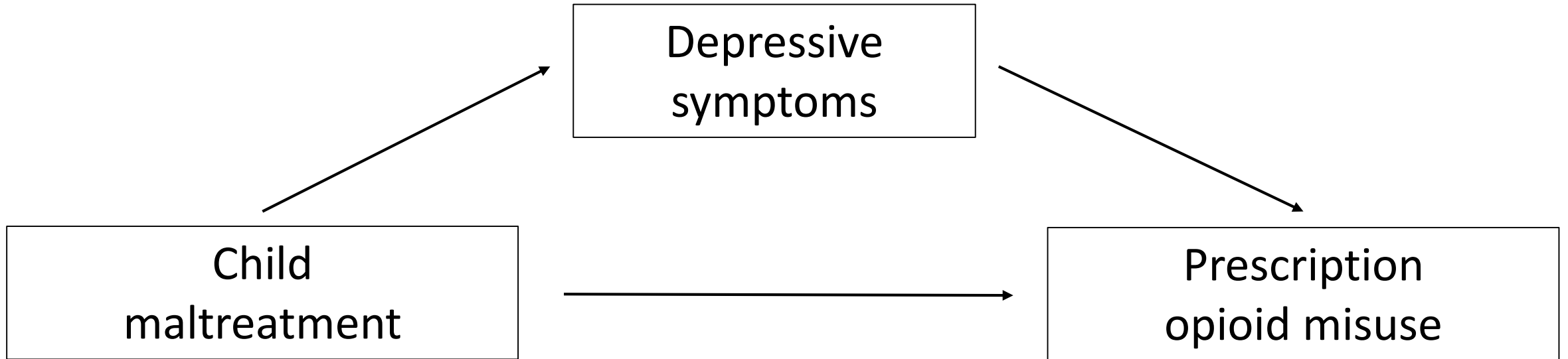


Adjusted for respondent sex, age, race/ethnicity, and resident parent receipt of public assistance

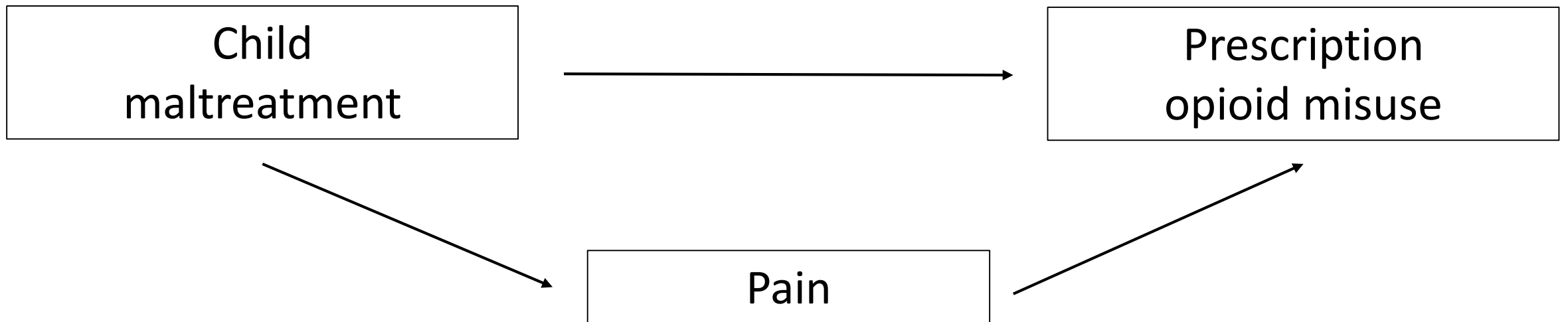
Underlying mechanisms



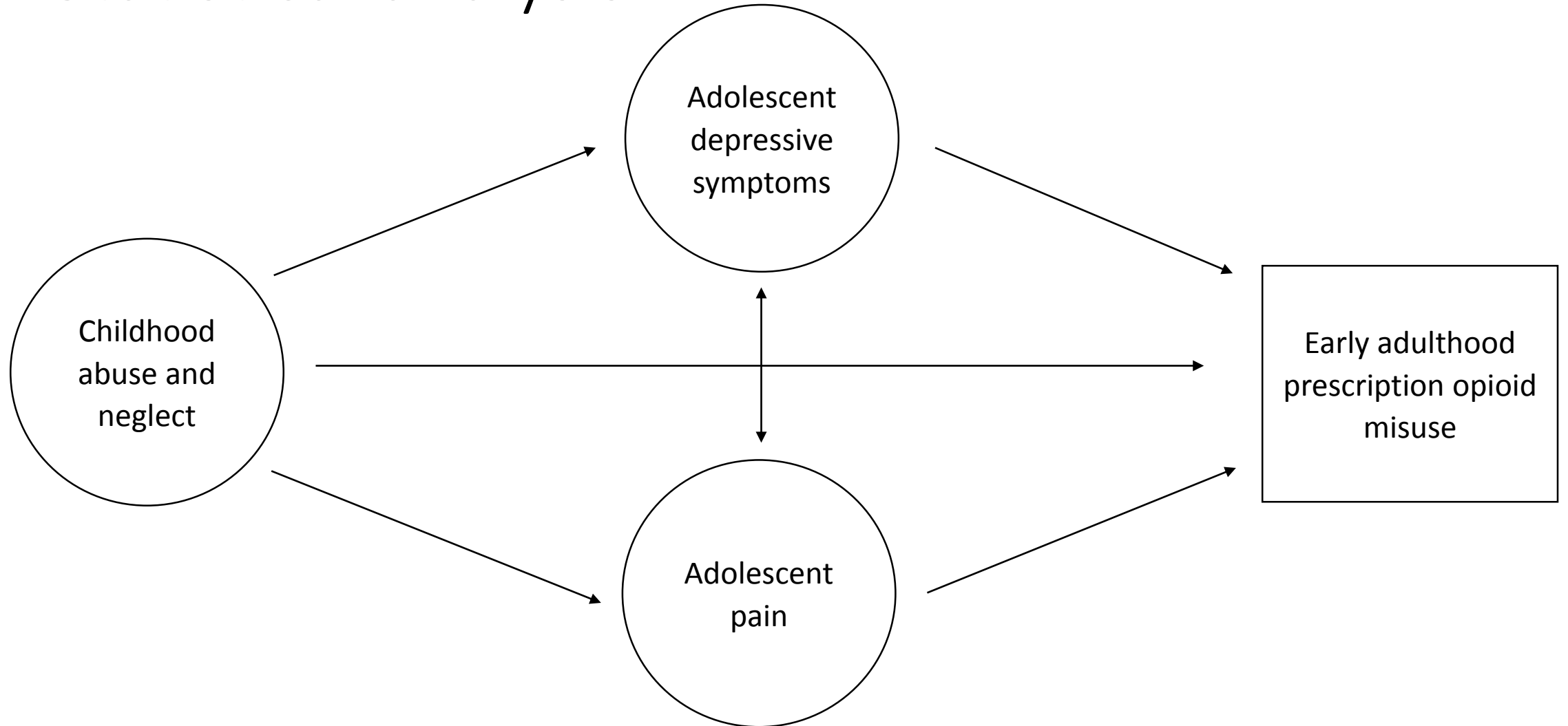
Self-medication hypothesis



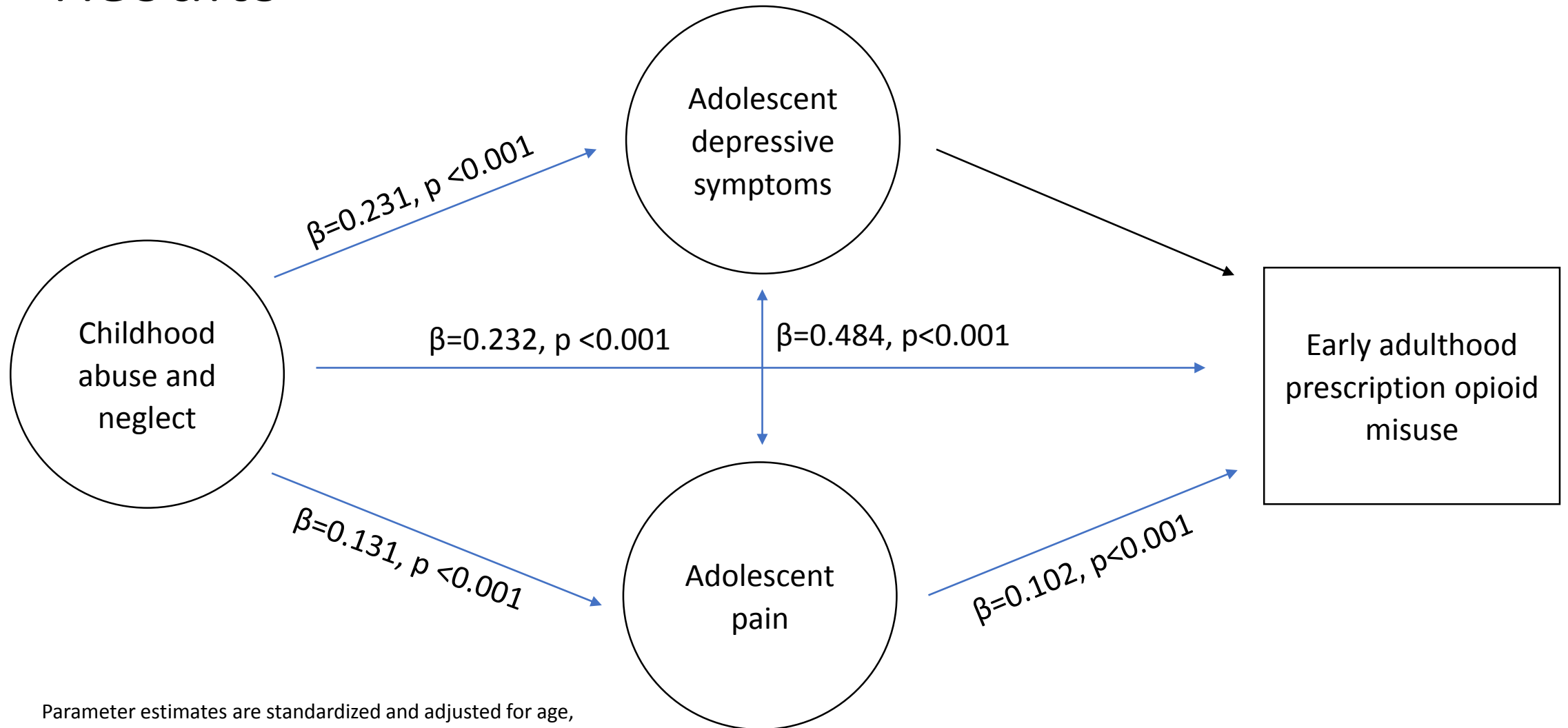
Self-medication hypothesis



Statistical analysis

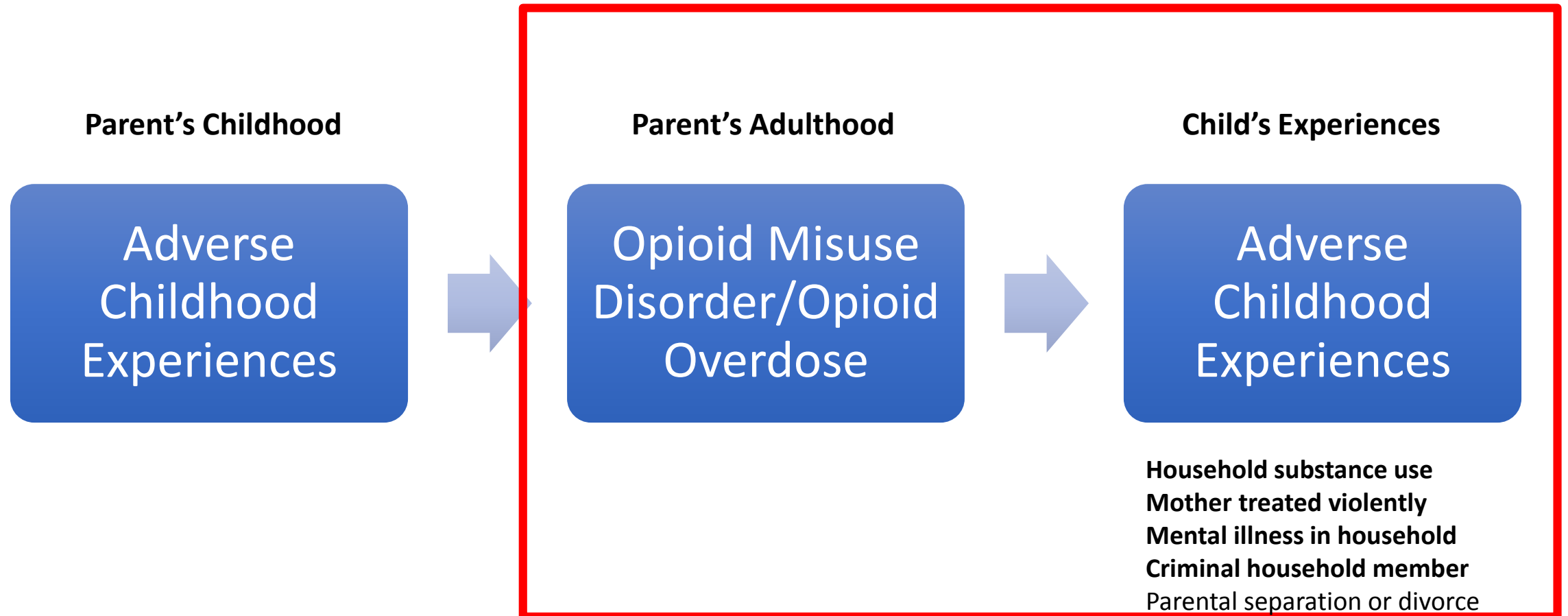


Results

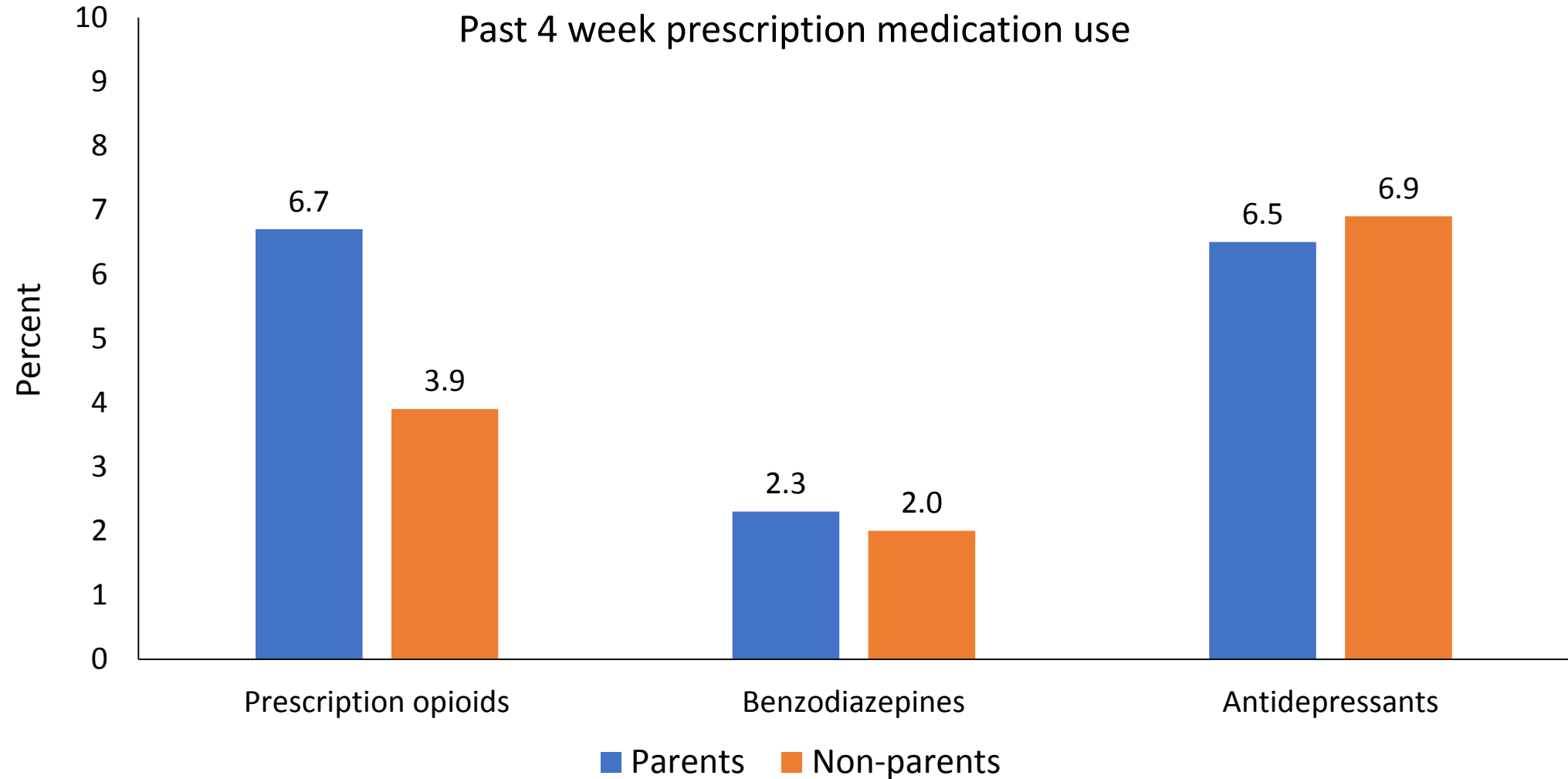


Parameter estimates are standardized and adjusted for age, sex, race/ethnicity, and receipt of public assistance.

Life course Perspective

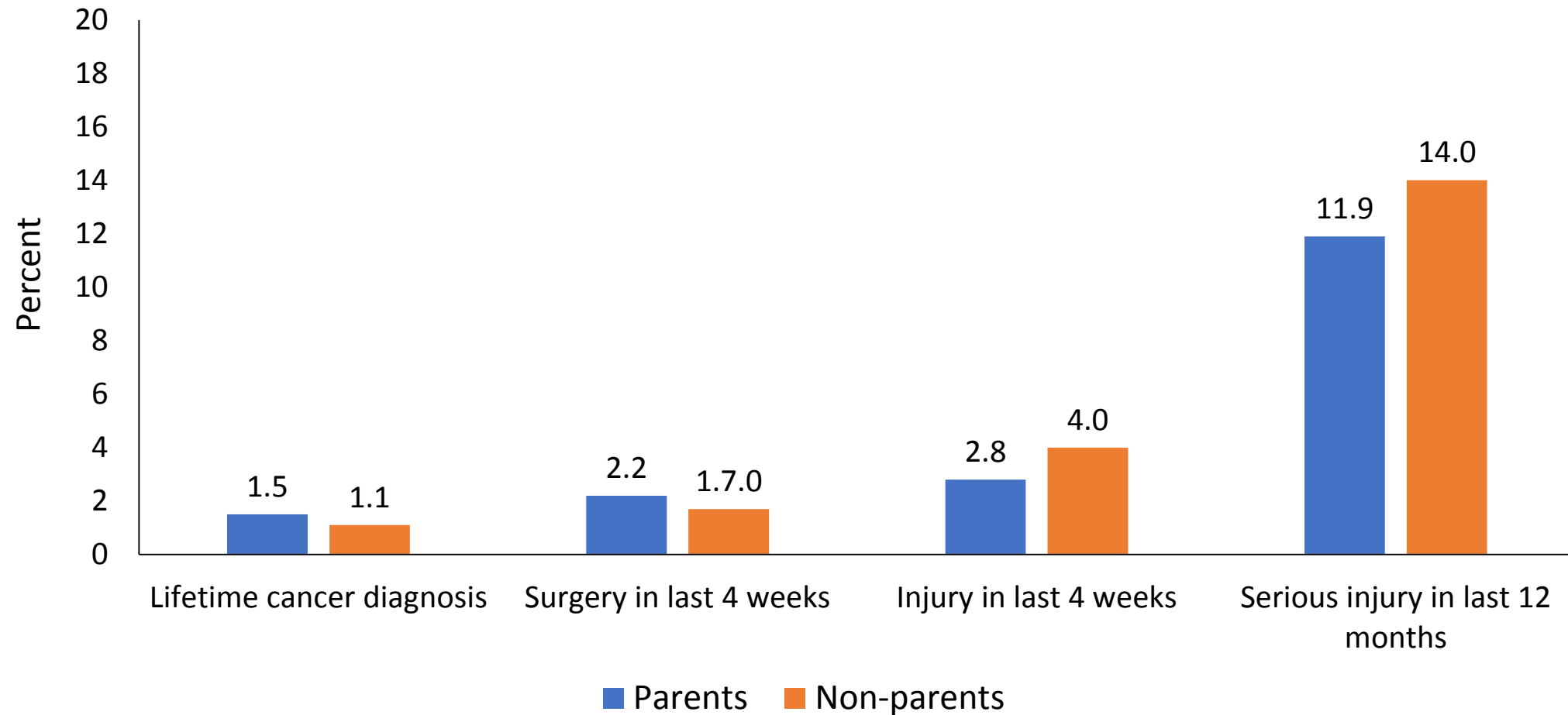


Parents use of opioids

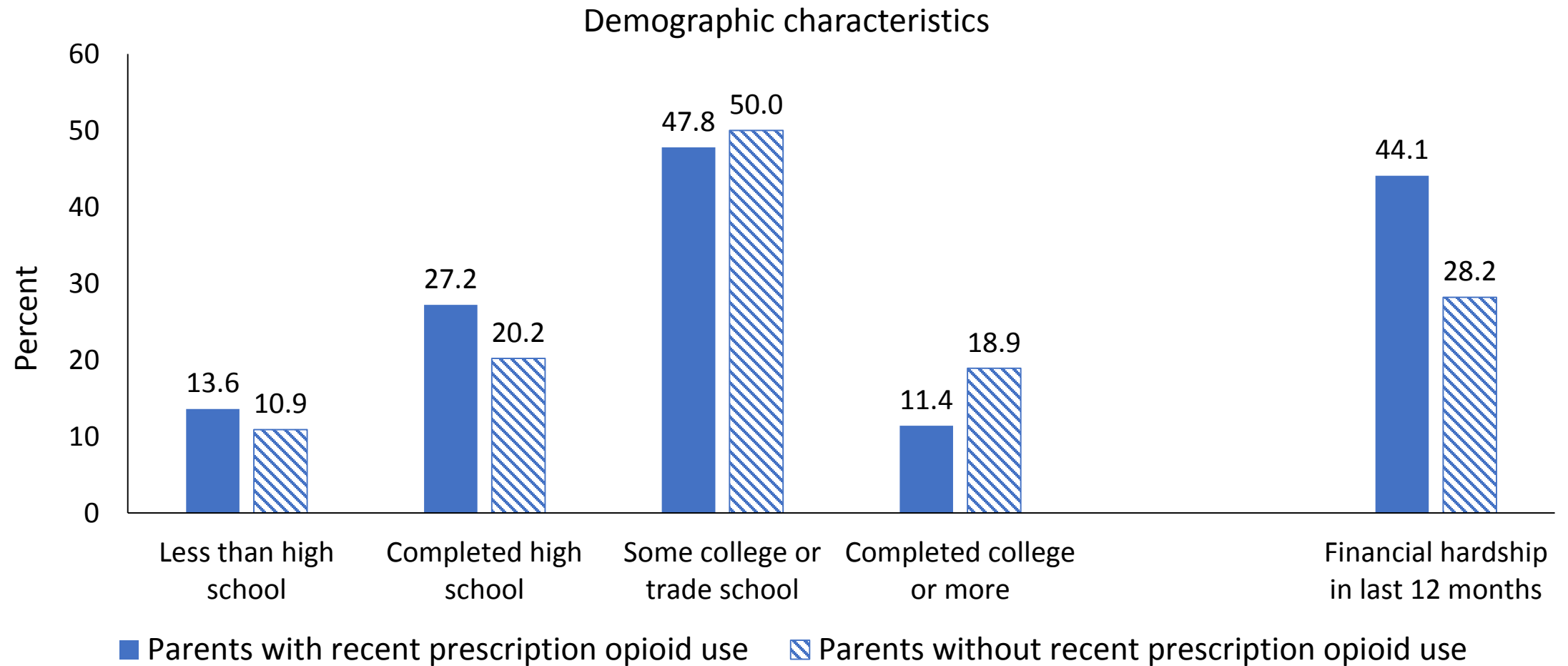


Parents use of opioids

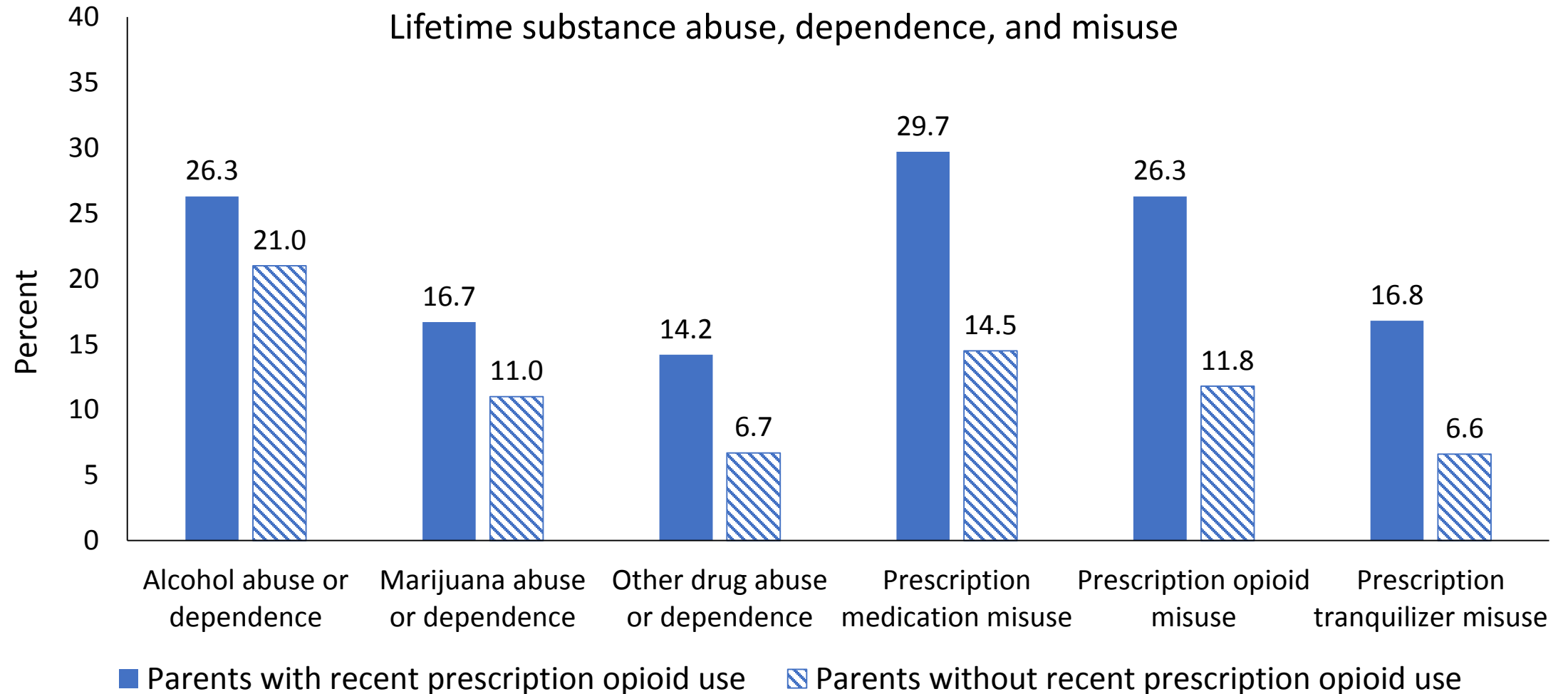
Medical conditions potentially precipitating prescription opioid use



Parents use of opioids



Parents use of opioids



Conclusions

- Significantly higher percent of parents had recent prescription opioid use compared to non-parents
 - Parents did not report a higher prevalence of conditions with the potential to precipitate prescription opioid use
- Significantly higher percent of parents with recent prescription opioid use reported financial hardship and substance misuse or dependence compared to parents without such use
 - Implications for parent and child wellbeing

Opioid dependence and parenting

- Recent review 12 studies
- Children of parents with opioid dependence demonstrate:
 - Greater disorganized attachment
 - More avoidance
- Mothers with opioid dependence demonstrate:
 - More irritability, ambivalence, disinterest
 - Greater difficulty interpreting cues

Romanowicz et al. The effects of parental opioid use on the parent-child relationship and children's developmental and behavioral outcomes: a systematic review of published reports. *BMC Child and Adolescent Psychiatry and Mental Health* 2019;13:5.

Opioid overdose and child welfare reports

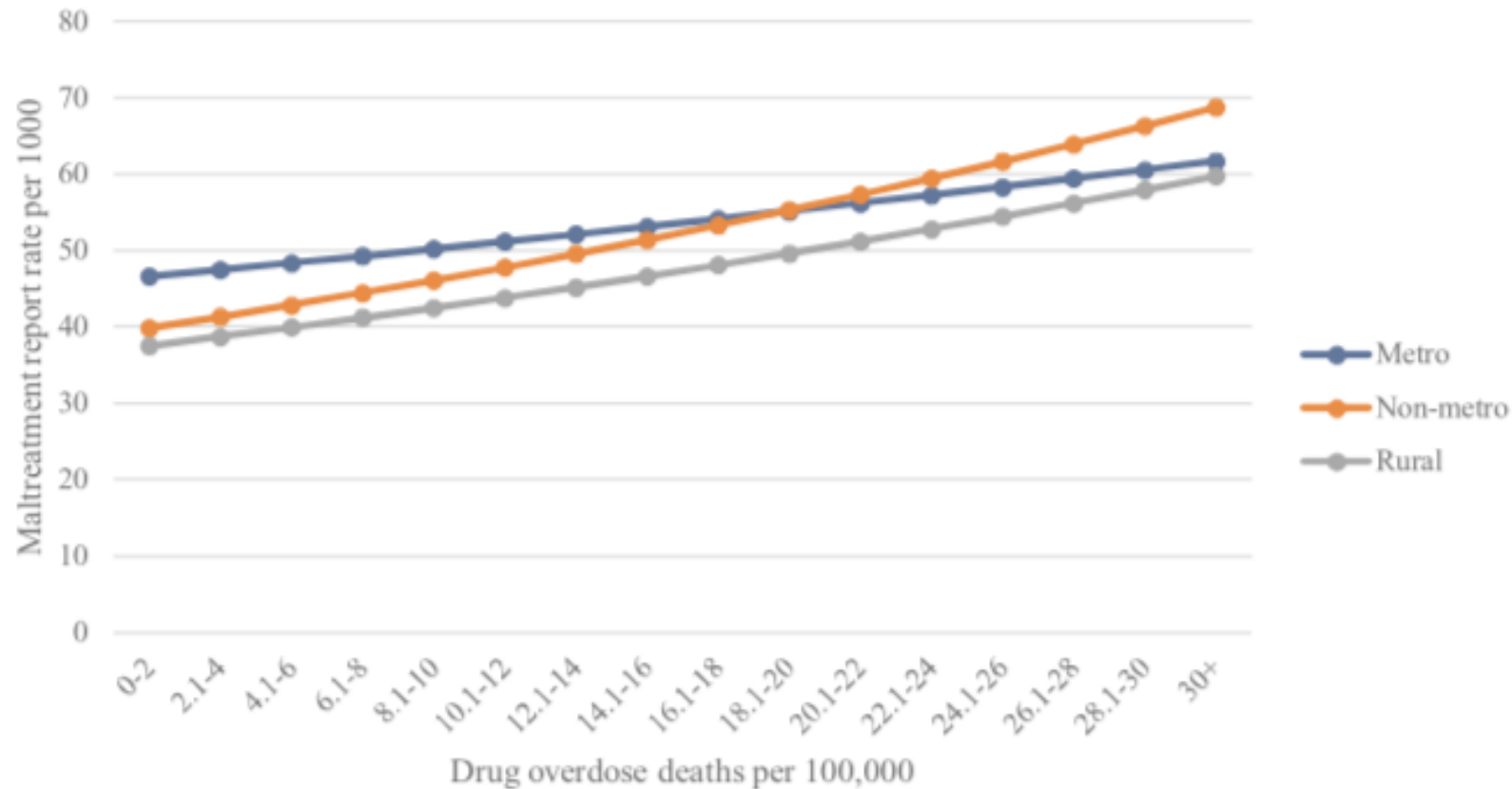
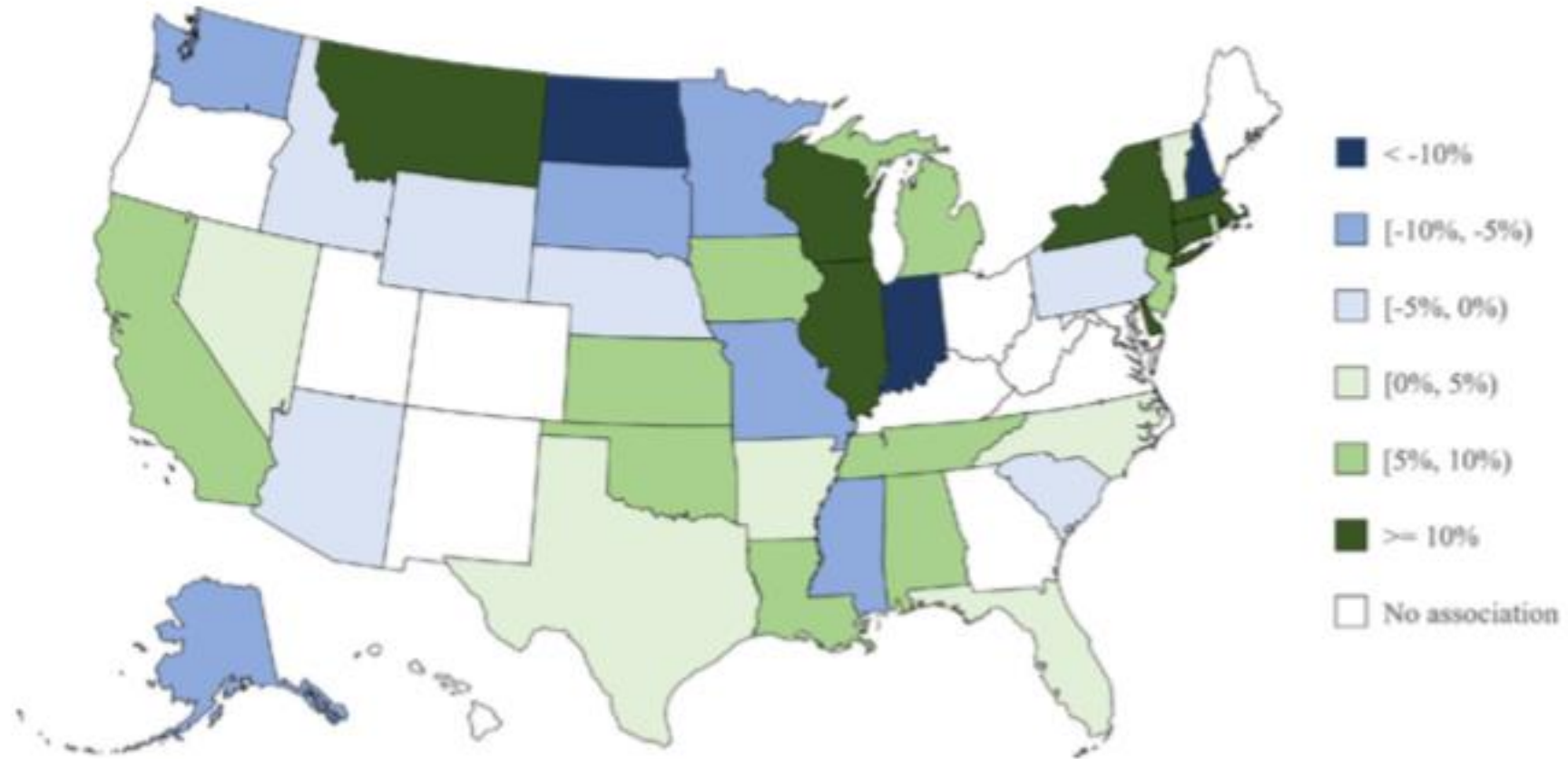


Fig. 2. Modeled mean maltreatment reports and overdose deaths for all available US counties (n=2963), controlling for median income, percent non-Hispanic white population, percent children in single parent households, percent owner occupied housing and violent crime rate.

Opioid prescriptions and child removals



Conclusions

- Adverse childhood experiences are associated with substance use disorders, and opioid use disorders specifically
- Opioid use disorders are associated with concurrent adverse experiences for the children of individuals with the disorders
- Opioid use disorders impact parenting behaviors
- Opioid use is associated with child welfare involvement