

OVERALL CENTER: PREVENTION RESEARCH CENTER: PARENTING AMONG WOMEN WHO ARE OPIOID USERS SPECIFIC AIMS

The U.S. is experiencing an opioid epidemic of historic significance. It is estimated that the total economic burden of prescription opioid misuse alone in the U.S. is \$78.5 billion a year, including healthcare, lost productivity, addiction treatment, and criminal justice involvement costs.¹ Rural areas in Oregon are particularly hard-hit,² with prescription fills per 1000 residents between 200-300 in rural Oregon counties.³ Most relevant to the current application, *many opioid users are parents⁴ and their opioid-using behaviors can have significant detrimental effects on their parenting abilities, and downstream effects on child brain development, health, and subsequent risk for drug use.* However, to date, **there is no national resource focused on increasing scientific understanding, prevention, and providing interventions to mothers who are opioid users.** This is a gap of enormous consequences given the well-established effects of substance use on parenting skills,⁵⁻⁷ and the known effects of maternal opioid use on infant development.⁸ Our team is optimally suited to serve as a national resource on this topic given our 20-year history of research, intervention, dissemination, and training activities on family-based interventions for populations affected by substance use, our focus on interventions for females, and our seminal translational prevention research on neurocognitive functioning in the context of exposure to substance use and other forms of early adversity. This work includes a current NIDA P50 (MPIs: Fisher and Chamberlain) and over a dozen NIDA-funded grants by members of our Steering Committee. Our team has collectively studied and served over 2000 families and produced well over 400 manuscripts since 2013, alone. Through our NIDA-funded work, we have developed and tested a range of effective family-focus intervention strategies for the prevention of drug use for vulnerable populations and furthered the understanding of neurocognitive mechanisms in drug-using populations. The proposed Center will serve as a national resource by integrating and extending our expertise to focus on a vulnerable and underserved population: women opioid users who are parenting. Consistent with NIH's HEAL initiative,⁹ the overall aim of our **Prevention Research Center: Parenting Among Women Who Are Opioid Users (PWO Center)** is to improve the well-being of individuals, families, and communities affected by the opioid crisis through a focus on behavioral (parental responsivity, warmth) and neurocognitive systems (e.g., executive functioning, reward responsiveness) that are underlying mechanisms common to both addiction issues and parenting challenges. Our anticipated long-term outcomes are to increase scientific understanding and public awareness of how opioid use impacts maternal parenting practices via underlying behavioral and neurocognitive mechanisms, the extent to which maternal and child outcomes can be mitigated via intervention during early childhood, and the viability of a scalable personalized prevention program designed to improve parent and child outcomes among mothers in rural communities with high opioid use rates. Our aims are:

Aim 1: Extend the scientific knowledge base about parenting in opioid-using mothers. Through our well-established network of community partnerships, we will launch an integrated set of Research Projects designed to: (a) test the efficacy of an innovative video-coaching parenting intervention for mothers of young children who are in treatment for opioid misuse (**Project 1**), and examine changes in parenting behavior, reward responsiveness, and executive functioning; (b) test the effectiveness of an evidence-based parenting intervention for opioid-using mothers in rural Oregon counties with opioid prescription rates >250 per 1000 residents using the Family Check-Up Online, an intervention that has previously been shown to improve parenting in substance-using populations (**Project 2**); and, (c) understand the effects of opioid use on parenting during the post-partum period (**Project 3**), by recruiting women with and without a history of opioid use disorder to examine maternal behavioral, reward, and stress regulation systems that have previously been linked to addiction and maladaptive parenting.

Aim 2: Launch the infrastructure to promote the Center as a national resource on parenting in the context of opioid use. An **Administrative Core** will (a) provide the administrative structure for the center, (b) support science communication and knowledge dissemination, including webinars for national audiences and workshops for community service providers to receive training in effective interventions for substance-using parents, and (c) coordinate training and career development activities across the Center's Cores and Projects.

Aim 3: Pilot innovative ideas. The Center includes a **Pilot & Training Core** that will (a) test and refine innovative ideas related to Center aims while (b) providing programmatic training for Early Career Scientists.

Aim 4: Promote data harmonization, data sharing, and innovative analysis methods. A **Data Science Core** will facilitate novel analytic approaches and data sharing within and external to the Center. The measures and methods for Research Projects have been selected to be harmonizable with other national resources, including NIH's ECHO program (PI Leve is an ECHO grantee) and NIDA's ABCD (Co-I Fair is an ABCD grantee), and data will be made available to external researchers for independent analysis and publication.