Integrating a Program for Parents with Opioid Use Disorder into Home-Based Child Services

We interviewed Lili Peacock-Chambers, MD, MSc, a Pediatrician and Fellow in the Institute for Healthcare Delivery and Population Science (IHDPS), about her recent KL2 Career Development Award from the Tufts Clinical and Translational Science Institute (CTSI). The two year grant enables early stage investigators to collect preliminary data to use in a subsequently larger grant. Dr. Peacock-Chambers’ KL2 award is supported by mentors from UMMS-Baystate (Drs. Friedmann and Lindenauer), UMMS-Worcester (Dr. Byatt), Yale (Dr. Suchman), and Boston University (Dr. Feinberg), and builds upon collaborative relationships with community partners in Springfield, primarily Behavioral Health Network (Tina Fioroni) and Early Intervention programs (Colleen O’Brien and Michael Hutton).

Tell us a little about the impact of opioid use disorder on parents and young children

The number of infants born to women with opioid use disorder (OUD) has more than tripled in the past 15 years. Here in Western Massachusetts, the rate is nearly triple the national average. We have learned that the first year after a child is born is an incredibly high-risk time for relapse, overdose, and death for mothers with OUD. This is partially related to heightened stress that mothers with OUD can experience as parents. In addition, many parents with OUD may struggle in developing healthy interactions with their newborns for a variety of reasons, thus leading to long-term developmental and behavioral challenges for the children. This study seeks to address this high-risk time for both the parent and child by making an evidence-based parenting program for mothers with OUD available through child developmental services, called Early Intervention.

What are the goals of your study?

The goals of this study will be to engage parents and providers in designing the implementation strategies for delivering the parenting program, called “Mothering from the Inside Out,” through Early Intervention services. Mothering from the Inside Out has previously been delivered in addiction treatment clinics by addiction counselors. We propose training child development Early Intervention providers to deliver the program in the home beginning shortly after the birth of the child. In the first phase of the grant, we will conduct focus groups with parents and providers to get their feedback on the program. In the second phase, we will convene an Advisory Panel and partner with Baystate Patient Safety Specialist (Shannon Dillard) to make recommendations about the process of delivery and to identify potential challenges. Finally, we will pilot the program by training a small group of providers and will deliver the intervention to a small group of families, to iteratively improve the delivery as we go. At the end, we will have a well informed and adapted program to test in a pilot randomized controlled trial.
Upcoming events
Weekly seminar, 12-1pm, MM5

Oct 24: Gwenael Layec, PhD
Peripheral dysfunction in patients with COPD: BH4 as a possible remedy?

Oct 31: Andrew Artenstein, MD
The Evolution of Emergency Care – DispatchHealth

Nov 7: Benjamin Burns, MS
Predictive modeling analysis of acute admission risk at a Connecticut ACO

Nov 14: John Zeber, PhD
Establishing a Health Services Research Center: Experiences from a Learning Healthcare System

For a full listing of events, see here

IHDPS in the News
September 18, 2018
Healio CardiologyToday featured an interview with Dr. Quinn Pack about his recent publication in JAHA.

For other IHDPS news stories, see here

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How will this study improve the care that postpartum women and infants affected by OUD receive at Baystate Health?
It is clear that we need better approaches for supporting postpartum women and infants affected by OUD. Through this work we seek to learn if child-focused Early Intervention providers can deliver a program for parents with addiction in a similarly effective manner as it has been delivered in addiction treatment clinics. Ultimately we want to learn how adding the Mothering from the Inside Out program to Early Intervention improves outcomes more than Early Intervention services alone, including parent-child relationships and rates of relapse compared. We will also learn how to best address the needs of this heterogeneous population by involving parents and community members through our research process. While we do not know if this intervention will be effective, we hope to learn a great deal in the process about how to better support families affected by OUD.

Recent IHDPS publications:

What was the motivation for this study?
Latina women are at increased risk for antenatal depressive disorders which, in turn, increases the risk of poor maternal and birth outcomes. These disorders are common, with some studies estimating that up to 18% of pregnant women experience them. Women with a previous depressive episode are at particularly high risk: relapse rates during pregnancy are estimated to be as high as 43%. As demonstrated in our previous research and other studies, antenatal depression increases risk for poor maternal and birth outcomes. Physical activity has been shown to have some beneficial effects during pregnancy (e.g., reduced risk of abnormal glucose tolerance with high levels of moderate intensity physical activity), yet it is unclear how physical activity may reduce risk for depressive disorders during pregnancy in a population of Latina women at high-risk for depression.

What were the main findings?
In our analysis of 820 Latina prenatal care patients participating in Proyecto Buena Salud, a prospective cohort study conducted at Baystate Medical Center, 25.9% of women had elevated depressive symptoms indicative of at least probable minor depression or probable major depression (Figure 1).

Household/caregiving physical activity accounted for the majority of women’s physical activity energy expenditure (56.0%) and sports/exercise activity the least (6.4%), as assessed by the Pregnancy Physical Activity Questionnaire. No significant associations were observed between total, domain-specific (household/caregiving, occupational, sports/exercise, transportation), or...
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moderate/vigorous intensity physical activity in early pregnancy and at least probable minor depression or probable major depression in mid-late pregnancy. High levels of household/caregiving activity was nonstatistically significantly associated with increased risk of probable major depression (4th Quartile vs 1st Quartile OR=1.51, 95% CI=0.93, 2.46). Among women who did not have elevated depressive symptoms in early pregnancy, there was a nonsignificant protective effect observed for sport/exercise activity and probable major depression in adjusted analysis (OR=0.63, 95% CI=0.30, 1.33).

How do these results apply to our patients at Baystate?
The prevalence of antenatal depressive disorders was high among Latina patients who likely experience numerous socioeconomic stressors (e.g. low income levels, cultural barriers, institutional racism). We did not find an association between physical activity in early pregnancy and probable depressive disorders in late pregnancy despite a protective effect observed among women in the general public. The majority of participants’ physical activity was from household/caregiving activity which may be stressful. Sports/exercise or leisure time activity has been most consistently found to be associated with a reduction in depressive symptoms in the general population, however, sports/exercise activity was low in this population reducing our power to assess effects. Additional research is needed to understand how exercise during pregnancy may prevent/reduce depressive symptoms depending on baseline level of depressive symptoms and amount of sports/exercise activity.

Population Health Snapshot: Prescription Opioids in Western Massachusetts

The opioid epidemic began, in part, because of the liberal prescribing of legal opioid medications to patients presenting with painful conditions. In response, Massachusetts became one of the first states to enact legislation to limit legal opioid prescriptions, as well as to implement safeguards, such as the Prescription Monitoring Program, to identify patients at high risk of opioid misuse or diversion. Since that time, overall rate of opioid prescribing has decreased by 30%, from 850,000 prescriptions in Q1 of 2015 to 550,000 prescriptions in Q2 of 2018 (Figure 1).

Although the total number of opioid prescriptions has decreased, variability in opioid prescribing patterns remains high. As a percent of the census population, Franklin County has the highest percent of individuals receiving Schedule II Opioid prescriptions (5.2%), followed by Hampden, Berkshire, Bristol, and Barnstable counties at 4.9%. In comparison, the statewide average percent of individuals receiving an opioid prescription is 3.8%, with Suffolk County issuing the fewest at 2.7%.
Dr. William Soares, through his NIDA K award, is currently evaluating the impact of the 2016 Massachusetts opioid legislation on emergency providers’ prescribing patterns as well as patient healthcare utilization and adverse events. The goal of the research is to better understand the impact of the legislation on provider practice and patient centered outcomes in the state. Upon completion of his research, Dr. Soares will be able to share the most comprehensive evaluation of the 2016 Massachusetts opioid legislation to date, contributing to future efforts to decrease variability in opioid prescribing at the hospital, county, and state level.

References


Recent IHDDS Publications: August-Sept


