Integrated Infant Mental Health: an innovative model for partnering with OB/GYN's with Infant Mental Health

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PROJECT DESCRIPTION

The purpose of this proposal is to continue implementation and evaluation of a model program called the **Integrated Infant Mental Health Program in OB/GYN** for Medicaid eligible, pregnant women, delivered through obstetric clinics. The proposal is based on a university-community partnership between the University of Michigan Department of Psychiatry (UM) and Starfish Family Services (SFS) in Inkster. This evaluation began in 2017 with a pilot implementation to establish infrastructure within SFS's OB partners, and has continued since FY18 with rigorous testing of the I-IMH model effectiveness across four levels of inquiry (patient outcomes, patient/provider satisfaction, system implementation, and cost effectiveness) between those women and offspring in the intervention (I-IMH) and those in non-treatment (delayed implementation) groups.

The implementation to date was successful with 11 clinic sites now operational for data collection across Wayne County. At the conclusion of FY20, we plan to achieve adequate saturation, enrolling 160 mothers and their offspring. We continue to follow these participants, gathering mental and physical health outcomes data across 5 time points in pregnancy and postpartum. This study also collects data on patient satisfaction, clinic implementation, and cost effectiveness.

In addition, in the final year of the project, we propose additional interviews and/or focus groups with staff and providers who work at these OB clinics (with and without integrated care) to learn more about possible challenges for implementation, as we consider how to scale-up this intervention. From site meetings with treatment as usual clinic directors, nurse managers, doctors, and nurses, research staff hear about both the need for and barriers to full and systematic implementation of integrated infant mental health services. Feedback from providers will aid us in achieving **the final goal of this study, which is to create a replicable model for Medicaid-eligible women in OB/GYN care across the state of Michigan to promote positive maternal-fetal/infant outcomes.**

BACKGROUND AND SIGNIFICANCE

The Need for Integrated Mental Health in OB/GYN

The proposed Integrated IMH model seeks to understand both practical and psychological barriers that prevent OB/GYN patients from seeking professional mental health support within the OB/GYN clinics.

Providing standardized screenings to pregnant women for toxic stress--including exposure to trauma environments, substance misuse/addiction, and/or mental health problems--before a child's birth promotes early detection of toxic risk and immediate interventions to mitigate the risk to children. Both early detection and quick intervention of stress and trauma can mitigate toxic stress for infants and young children. In 2016, the U.S. Preventive Services Task Force recommended more attention to depression screenings for pregnant women and new mothers (Siu et al.). They stated that "[D]epression is the leading cause of disease-related disability in women around the world" (ibid.). Furthermore, babies and toddlers with mothers who experience depression are vulnerable to difficulties including being difficult to console, being less interactive, and having more trouble sleeping. According to the task force, "[S]creening should be implemented with adequate systems in place to ensure accurate diagnosis, effective treatment, and appropriate follow-up" (ibid**.). Clinics, however, often forgo these early assessments because they do not have the staffing and/or resources to address the results**. Therefore, risk factors in pre-conception and pregnant women may go undetected and untreated, increasing the risk for long-term adverse outcomes.

Both untreated substance use and intimate partner violence (IPV) can also have negative consequences for both pregnant women and their babies. The use of alcohol, tobacco, and recreational drugs is harmful during pregnancy, as fetuses have not yet developed the barrier of cells adults have to protect the brain from chemicals. Alcohol has the most damaging effects of all substances during pregnancy, with strong links to delayed development, reduced emotional control, and problems with both attention and hyperactivity (National Scientific Council on the Developing Child, 2006). Research shows that exposure to IPV during pregnancy associates with more than twice the risk for preterm birth and low birth weight, both of which are associated with increases in attentional, behavioral, and psychological disorders in children (Bailey, 2010). For the mother, exposure to IPV has been associated with increased likelihood of abdominal trauma, health problems, mood and anxiety disorders, and symptoms of posttraumatic stress disorder (Van Parys, Verhamme, Temmerman, & Verstraelen, 2014). Research also links high levels of stress, anxiety, and depression during pregnancy to preterm birth and low birth weight (Brandlistuen, Ystrom, Nulman, Koren, & Nordeng, 2013), and to detrimental impacts on the maternal-fetal unit (Muzik & Hamilton, 2016; Muzik et al., 2016b).

Despite the known need for early detection in ameliorating risk, referral and treatment initiation to prevent harm to mother and fetus/infant often do not occur. Epidemiologic and qualitative research studies show that there are many barriers to treatment seeking and utilization, illustrated in Table 2 (Armstrong, Ishike, Heiman, Mundt, & Womack, 1984; Muzik, Kirk, Alfafara, Jonika & Waddell, 2016a).

Table 2. Barriers to behavioral health treatment for pregnant women

External Barriers	Internal Barriers
• Cost • Lack of insurance • Limited time and competing priorities • Loss of pay from missing work • Inconvenient or inaccessible clinic locations Limited clinic hours • Lack of reliable transportation • Child care difficulties	• Perceived stigma about depression and mental illness • Negative thoughts about shame • Low perceived agency around feeling empowered and deserving to be helped • Distrust of medical systems

In particular, women with trauma histories do not easily engage in treatments, as trauma exposure can affect appraisals of what constitutes safe and trustworthy relationships, which may include health-seeking behaviors (Liang, Goodman, Tummala-Narra, & Weintraub, 2005). Despite these challenges, results of qualitative studies with high-risk, trauma exposed mothers also suggest that women desire both mental and physical health care services, and appreciate respectful providers and welcoming communication (Muzik et al., 2013; Muzik, et al., 2016a).

What is the Infant Mental Health Model (IMH) and why integrated in OB?

There is a missing link between both the need for and access to services for high-risk maternal-infant units. To address these gaps, this project proposes a model called Integrated Infant Mental Health (I-IMH). This model stems from the Infant Mental Health Home Visiting (IMH-HV) model, which is a needs-driven, relationship-focused, multi-faceted intervention serving Medicaid-eligible mothers from pregnancy through the child's age 3. In 2014, Michigan provided IMH-HV services to more than 1700 of the state's most vulnerable families. The program delivers services designed to ameliorate serious mental health issues during the critical period of infancy with the aim of preventing long-term costs to both individuals and society. While program data demonstrates success, often the patients who would most benefit from the services do not utilize them. Patients may get lost in the referral process, or lack the time and resources to access care. Thus, the I-IMH model integrates the IMH therapist in the OB office, which may lead to a more streamlined and successful referral process. The purpose of this project is to evaluate the benefits and costs integrating IMH in OB practices.

The I-IMH model provides mental health screenings, brief interventions, psycho-education, referrals and resources on-site at the OB/GYN clinic with a safe, soft, "one visit, one location" philosophy to enter care. Patients can meet with this embedded social worker, or Behavioral Health Consultant (BHC), for up to five follow-up visits at the OB/GYN clinic to increase engagement into mental health services. If appropriate, a patient can access additional support in the form of a referral to IMH-HV services that can be delivered by the same clinician who offers in-office services, or by warm referrals to community clinicians.

The BHC consults with the OB/GYN on mental health issues, and helps the medical team see the patient through an IMH lens. The embedded BHC has an additional IMH endorsement. The IMH-BHC shares insights on attachment, the importance of the maternal-fetal/infant bond, and maternal wellness during pregnancy with both the providers and patients. The IMH-BHC provides trainings to the medical team and encourages a whole body health and wellness approach to patient care through patient education on IMH and Integrated Health Care. Ultimately, the program serves to mitigate risks in order to help women have healthier pregnancies, deliver at full term and to decrease infant mortality through the early detection via screenings, brief intervention, psycho-education, resources and referrals provided by the embedded IMH clinician in partnership with the OB/GYN. The proposed Integrated Mental Health in OB/GYN model has the potential to impact not only the health and wellness of the mother, but also the health and wellness of her current and future infants. It does this by accessing women at risk for poor maternal-fetal health outcomes (based on historical and current adversity and mental illness/substance misuse) for screening and treatment provision in a safe and non-stigmatizing manner, ultimately reducing infant mortality and poor outcomes (e.g., low birth weight).

Wayne County Program Implementation Need

According to both the Robert Wood Johnson Foundation and the Wisconsin Population Health Institute, Wayne County has poor maternal-fetal health outcomes, ranking 82 of 83 counties in Michigan (See www.countyhealthrankings.org). SFS began embedding IMH-BHCs into Wayne County OB/GYN clinics that serve Medicaid-eligible women at heightened risk for adverse outcomes in 2013. Beginning with two IMH-BHCs, this program includes ten in 2019. This study seeks to evaluate this innovative service model, examining outcomes at the individual, clinical, and systemic levels. To that end, we partnered with eleven OB/GYN clinics in Wayne County, eight of which have implemented the I-IMH model, and three of which may do so at a later date. We are enrolling both patients and service providers at each of these sites to measure the costs and benefits of implementing integrated care at OB/GYN clinics.

CURRENT STUDY DESIGN AND METHODS

The aim of this study is to complete a ***rigorous implementation evaluation of the I-IMH model (versus control delayed implementation of model) between SFS and their OB partners in collaboration with UM researchers (n=160)***. In order to do so, our goals are as follows:

1. Work with community partner SFS to gather systematic feedback of their program implementation at OB/GYN clinics in Wayne County, including three major health systems: Integrated Healthcare Associates (IHA), Beaumont Health System, and Henry Ford Health System.
2. Enroll a total of 160 pregnant women and their babies at OB/GYN clinics that either currently utilize the I-IMH intervention, or are interested in doing so in the future.
3. Gather feedback from clinic staff and providers, including doctors, nurses, medical assistants and BHCs through focus groups and longitudinal surveys.
4. Maintain strong relationships with community partner sites, by providing regular workflow check-ins, psycho-education, and ongoing communication.

RELEVANCE FOR MEDICAID

The proposed evaluation, ***Integrated Infant Mental Health,*** will continue follow up visits with Medicaid-eligible pregnant women and infants in Wayne County, Michigan OB/GYN clinics. The project strives to establish an evidence base for a treatment program that provides services to many of Michigan's most vulnerable individuals. This program proposes a sustainable intervention aiming to increase access to care for these high risk women and their children in the following ways:

- Improve stress management and coping skills for handling life stressors during the reproductive years
- Decrease maternal anxiety and depression symptoms in pregnancy
- Decrease barriers to bonding between mother and child
- Reduce adverse fetal and infant outcomes that are costly to both families and society

This evaluation focuses on early intervention and aims to compare costs and benefits of implementing the I-IMH model, at both the individual and system levels. The intervention has the potential to reduce Medicaid costs by enhancing treatment access during pregnancy, reduce repeat pregnancies through inter/post pregnancy care, and to reduce costly medical care due to poor pregnancy and infant outcomes. This model has the potential to improve infant immunization rates, reduce emergency room

usage, and enhance overall adherence to recommended preventative medical services among mothers and children. Long-term, this model aims to reduce Medicaid costs through early intervention and reducing expensive, long-term care (e.g. extended NICU stays and emergency room visits).

As this I-IMH model supports Medicaid mothers, infants, and families during fetal and early stages in child development, it bears the potential to be preventive, ameliorating serious mental health issues at later developmental stages. Research finds that childhood poverty relates to risks for obesity, substance use, and depression (Pascoe et al., 2016). Each of these conditions can affect an individual's health and healthcare costs throughout life. Thus this project may also alleviate personal and societal burdens longer term.

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