

Maternal Mental Health in Home Visiting: Addressing Depression, Anxiety, and Stress

Introduction

Maternal depression, anxiety, and stress are prevalent and costly mental health concerns that often co-occur during pregnancy and the transition to parenting (Bauer et al., 2016; De Luca et al., 2017; Glover, 2014; Rogers et al., 2020). Approximately 39 percent of pregnant women experience high or clinical levels of depression (Meaney, 2018), while 20 percent of pregnant and postpartum women report one or more anxiety disorders (Fawcett et al., 2019). Additionally, 67 percent of pregnant women report moderate-to-high levels of perceived stress (Bergeron et al., 2024).

These concerns do not exist in isolation. Up to 75 percent of new mothers with depression also experience anxiety (Radoš et al., 2018), with anxiety both preceding and following depressive symptoms during pregnancy (Jacobson & Newman, 2017; Phua et al., 2020). When mothers experience anxiety, they are also more likely to experience rising stress over the prenatal and postpartum periods (Obrochta et al., 2020; Racine et al., 2019; Wang et al., 2023).

Home visiting programs can help prevent and treat maternal mental health challenges, with research finding positive impacts on depression, anxiety, and stress (Goldfeld et al., 2021; Roberti et al., 2022; Tabb et al., 2022; Vismara et al., 2020). The field has increasingly focused on addressing maternal depression (Tandon et al., 2020), while less emphasis has been historically placed on anxiety and stress. Following federal attention to mental health and substance use

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disorders and their connection to pregnancy-related deaths (Trost et al., 2002; U.S. Department of Health and Human Services [DHHS], 2024), this snapshot builds on a prior review of how home visiting can address depression. It broadens the scope of mental health to include anxiety and stress, reanalyzing the literature to describe strategies and home visiting models that provide mental health supports for a range of maternal mental health concerns. Research is summarized to provide insight into three questions:

- 1. How does maternal mental health affect child development?
- 2. What can home visiting programs do to address maternal mental health?
- 3. What are the implications for research and practice?

Defining Terms

Depression: Depression encompasses a range of symptoms, including prolonged sadness, emptiness, or irritability, often accompanied by disruptions in daily functioning. When these feelings and other related symptoms persist for at least 2 weeks, a person may meet the criteria for a major depressive disorder episode. If an episode occurs during pregnancy or within 4 weeks after delivery, it may be diagnosed as peripartum onset depression (American Psychiatric Association, 2022).

Anxiety: Anxiety is defined by excessive fear of real or perceived threats and worry over anticipated future threats. Anxiety can be accompanied by physical symptoms, such as shortness of breath, dizziness, and sleep disturbance. When these feelings and their related impacts on behavior are experienced for 6 months or more, a person may meet the criteria for an anxiety disorder (American Psychiatric Association, 2022). Pregnancy-related anxiety can include feelings of nervousness and fear about the baby's health, fetal loss, childbirth, and care for a newborn (Bayrampour et al., 2016).

Stress: Stress is a multidimensional concept that includes exposure to highly stressful experiences and the physiological, behavioral, and emotional responses needed to adapt and cope with them (Graignic-Philippe et al., 2014; Van Den Bergh et al., 2020). When encountering stressful events or experiences, people physiologically cope by activating the body's stress response system, provoking a fight, flight, or freeze response. When the stress response system is chronically activated, the risk of experiencing mental and physical health consequences increases (American Psychological Association, 2024). People may experience psychological distress when the challenges they face surpass their support systems and ability to cope. During pregnancy, mothers may face various psychosocial stressors, such as financial difficulties, exposure to violence, and social isolation (Bloom et al., 2013). They may also experience pregnancy-specific stress related to physical changes and symptoms, childbirth, and newborn care (Ibrahim & Lobel, 2020).

How Does Maternal Mental Health Affect Child Development?

Unaddressed maternal mental health challenges can have significant effects on child development. Prenatally, mothers' emotional and psychological well-being are important for optimal child development (Meaney, 2018; Vehmeijer et al., 2019). When a pregnant woman experiences depression, anxiety, and stress, the body's response can affect the developing brain and stress response system of the fetus. Clinically significant depression, anxiety, and exposure to high stress events (e.g., proximity to Hurricane Katrina) may lead to preterm birth and low birthweight (Vehmeijer et al., 2019; Xiong et al., 2008); impaired child cognitive, speech, language, and motor development; behavioral difficulties and social-emotional delays; and increased risk of neurodevelopmental disorders, such as autism spectrum disorder and attention deficit hyperactivity disorder (Graignic-Philippe et al., 2014; Jeličić et al., 2022; Kinney et al., 2008; O'Donnell & Meaney, 2017; Vehmeijer et al., 2019; Zhang et al., 2023). Prenatal mental health conditions are thought to influence child development by making infants more sensitive to their surroundings after birth (O'Donell & Meaney, 2017).

In the postpartum period, maternal mental health difficulties can affect child development outcomes. When parents experience high levels of stress in their parenting role, they may be less sensitive and attuned to their children's needs (Azhari et al., 2019; Periera et al., 2012), have lower parent-child relationship quality, and face increased family conflict (Crnic et al., 2005; Jones et al., 2021). High levels of parenting stress, depression, and anxiety can lead to child difficulties with internalizing (e.g., worry, withdrawal) and externalizing (e.g., aggression, impulsivity) behaviors (Dachew et al., 2021; Madigan et al., 2018; Song et al., 2022; Stone et al., 2016). As with prenatal impacts, social-emotional, motor, cognitive, and language delays may also be present (Araji et al., 2020; Glover, 2014; Rogers et al., 2020; Zhang et al., 2023).

Effects of the COVID-19 Pandemic

The COVID-19 pandemic intensified maternal mental health issues and widened disparities in treatment access. Mental health concerns more than doubled during this time, with up to 43 percent of mothers reporting clinically significant depressive symptoms and up to 72 percent reporting moderate or high levels of anxiety (Cameron et al., 2020; Davenport et al., 2020). However, access to mental health treatment declined, especially among Black and Latina mothers, who reported greater barriers such as transportation, financial constraints, and language challenges (Masters et al., 2021). Obstacles were compounded by systemic issues that exacerbate existing inequities, including socioeconomic disparities, underresourced health care systems and communities, and a shortage of providers who can address specific cultural needs.

What Can Home Visiting Programs Do to Address

Home visiting programs have used a range of strategies and approaches to support maternal

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strategies and approaches to support maternal mental health. Screening continues to be a primary strategy, as discussed by Peters and Genua (2018). Many home visiting programs are required to screen mothers for depression because it is one of the benchmarks for the Maternal, Infant, and Early Childhood Home Visiting (MIECHV) Program (Home Visiting Collaborative Improvement and Innovation Network, n.d.; Maternal and Child Health Bureau, 2023; Tandon et al., 2020).

Adverse experiences can contribute to increases in mental health symptoms. The following experiences increase the likelihood that mothers will exhibit mental health symptoms: poor physical health, low social support, traumatic experiences (including extreme poverty), abuse, and gender-based violence (Bryson et al., 2021; DHHS, 2024; Ponting et al., 2024).

Following a positive screening for depressive symptoms, home visitors can refer parents to community-based mental health treatment options, including therapeutic and medication management services. However, home visiting programs may encounter challenges successfully connecting enrolled mothers with community-based resources due to pervasive gaps in maternal mental health care and workforce shortages (DHHS, 2024). More than 70 percent of U.S. counties had an insufficient supply of maternal mental health providers and resources (Britt et al., 2023) and, in 2022, estimated wait times for an initial mental health appointment averaged 48 days (National Council for Mental Wellbeing, 2022),

This brief focuses on several research-informed (i.e., promising) strategies that can be implemented to address maternal mental health in home visiting and mitigate the effects of poor maternal mental health on child outcomes. Table 1 (see page 9) identifies models implementing research-informed strategies and includes information on practitioner qualifications, the dosage of the intervention, activities, evidence-based practices, and associated outcomes. These strategies include—

- Partnering with mental health providers to enhance mental health support
- Enhancing home visiting model curricula to include mental health components
- Using home visiting models that include therapeutic support by trained clinicians
- Using skills-based home visiting models that support parent mental health and reflective functioning

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Promising Strategy 1. Partnering With Mental Health Providers to Enhance Mental Health Support

Home visiting programs have partnered with mental health providers as a strategy to offer therapeutic support for enrolled mothers. Among therapeutic approaches, Cognitive Behavioral Therapy (CBT) has repeatedly demonstrated effectiveness in treating maternal depression, anxiety, and stress during pregnancy and postpartum (Pettman et al., 2023). CBT is a goal-oriented psychotherapy focused on identifying and changing problematic thoughts, beliefs, and behaviors. CBT seems effective for mothers when mental health providers deliver it in home-based settings (Huang et al., 2018), either individually or in collaboration with other professionals like community nurses (Pettman et al., 2023). Examples of program enhancements using CBT are described by Peters and Genua (2018).

Mental health partners have also enhanced home visiting services using Interpersonal Therapy and Family Therapy. For example, trained psychiatric nurses delivered Interpersonal Therapy to Latina mothers enrolled in Early Head Start, leading to a reduction in maternal depressive symptoms (Beeber et al., 2010). Licensed marriage and family therapists delivered virtual Family Therapy sessions to mothers enrolled in MIECHV-funded home visiting programs, significantly reducing depressive symptoms among participants (Cluxton-Keller et al., 2018).

In addition to the partnerships outlined in table 1, community partners may also directly support home visitors' capacity to identify and address maternal mental health needs. Home visitors broadly provide social support to new parents, including addressing <u>sensitive topics</u> like mental health that are challenging to address without training and support (National Home Visiting Resource Center, 2017; Price & Cohen-Filipic, 2013). Some programs have contracted with <u>Infant and Early Childhood Mental Health Consultants</u> to join team meetings, discuss challenging cases, provide insight, and even shadow home visitors to support their assessments of mental health concerns (Miles et al., 2023).

Promising Strategy 2. Enhancing Home Visiting Model Curricula to Include Mental Health Components

Some home visiting programs have embedded skills-based curricula targeting mental health into their programs to enhance model components. These enhancements often require specialized home visitor training. In one approach, home- and center-based Head Start providers delivered problem-solving education, a cognitive behavioral structured curriculum, to enrolled mothers with depressive symptoms or a history of depression (Silverstein et al., 2017). The intervention helped prevent depression among enrolled mothers with lower levels of baseline depression (Ammerman, 2017; Silverstein et al., 2017).

Other enhancements have addressed mental health concerns such as anxiety. A mental health intervention rooted in mindfulness and cognitive behavioral approaches—and delivered by Nurse-Family Partnership home visiting nurses—reduced anxiety among all enrolled mothers, including those with high mental health risk (Beeber et al., 2024).

Beyond the enhancements featured in table 1, Reach Out, Stay Strong, Essentials (ROSE, Women and Infants, n.d.) is another psychoeducational program with evidence of reducing depression among postpartum women (Zlotnick et al., 2016). ROSE includes a brief structured curriculum delivered in nine or fewer sessions to women in the prenatal and postpartum periods. While designed as a group-based program, ROSE can be adapted for use in home-based settings (Johnson et al., 2018).

Promising Strategy 3. Using Home Visiting Models That Include Therapeutic Support by Trained Clinicians

Several home visiting models directly provide therapeutic support as an integral core activity. These models aim to increase maternal capacity to provide sensitive and responsive care and create a secure mother-infant attachment (Erickson et al., 2019; Weatherston et al., 2020), processes that may be disrupted when mothers have poor mental health and a history of adversity (Seng et al., 2013).

The models reviewed typically employ master's-level mental health clinicians to deliver individualized dyadic therapeutic supports in the home setting. In some models, such as the Michigan Model of Infant Mental Health Home Visiting (IMH-HV) and Partnership For Families Mental Health Model (PFF-MHM), therapists provide therapeutic support alongside comprehensive case management (Reuter et al., 2016; Weatherston et al., 2020). In other models, including Child and Family Interagency, Resource, Support, and Training (Child FIRST) and Minding the Baby Home Visiting (MTB-HV), mental health and social work clinicians are members of interdisciplinary teams. Child FIRST clinicians are paired with care coordinators who facilitate family engagement with community resources (Lowell et al., 2011). MTB-HV clinicians are paired with nurses who deliver nonclinical services such as health promotion content and screening (Slade et al., 2020).

Clinicians in these home visiting models provide Infant-Parent and Parent-Child Psychotherapy that focuses on enhancing reflective functioning in mothers who have mental health needs, have experienced trauma, and face current stressors (Condon et al., 2022; Erickson et al., 2019). Reflective functioning describes a parent's ability to understand the meaning behind child behavior and to reflect on the child's experience, their reaction to their child, and past experiences that influence their present reactions (Weatherston et al., 2020).

PFF-MHM, MTB-HV, Child FIRST, and IMH-HV have been linked to reductions in depressive symptoms (Lowell et al., 2011; Reuter et al., 2016; Rosenblum et al., 2020; Slade et al., 2020). Child FIRST and IMH-HV have been associated with reductions in parental stress (Lowell et al., 2011; Rosenblum et al., 2020). Child FIRST has also been associated with reductions in psychological distress, and IMH-HV with reductions in child abuse potential, a construct including emotional distress (Julian et al., 2021).

Promising Strategy 4. Using Skills-Based Home Visiting Models That Support Parent Mental Health and Reflective Functioning

Some home visiting models provide direct support to mothers experiencing high stress or mental health needs using skills-based approaches and trained paraprofessionals. Promoting First Relationships (PFR), for example, aims to increase parent reflective functioning using a structured, 10-session, skills-based approach focused on video coaching (Oxford et al., 2021). Video-based interactions are reviewed to increase parent awareness and understanding of the needs, feelings, and behaviors of themselves and their child. PFR providers use structured strategies to provide individualized, strengths-focused feedback such as reflective questions and comments (Booth-LaForce et al., 2023). PFR has reduced maternal depression among pregnant women receiving mental health treatment and women living in a Native American community (Booth-LaForce et al., 2023; Oxford et al., 2021).

Several home visiting models (e.g., Family Spirit, Healthy Families America [HFA]), incorporate skill building (e.g., problem solving, stress management, parental resilience, coping) into their curricula to help mothers address their mental health symptoms. Lecroy and Lopez (2018) found HFA effective in supporting general maternal mental health, and Barlow and colleagues (2015) found that Family Spirit reduced depressive symptoms, risky behavior, and substance use among Native American adolescent mothers (Barlow et al., 2015).

What Are the Implications for Practice and Research?

Screening and Treatment Access. Home visiting programs can update and expand their screening practices as needed to identify when mothers are experiencing an array of mental health symptoms. To help secure services for mothers, home visitors should consider partnering with community-based mental health providers to account for shortages in the mental health workforce, long waits, and other systemic treatment barriers. Partnerships may be especially important when serving populations with the highest risk for maternal mental health challenges due to domestic violence, poverty, unintended pregnancy, and social isolation (Britt et al., 2023).

Leveraging of Community Resources. Programs leaders should gauge their access to a clinical workforce, either directly or via partnerships, when considering models and enhancements focused on mental health. In communities with gaps in the mental and behavioral health care workforce, leaders may wish to implement evidence-informed, well-designed, and tested enhancements designed for staff without mental health certification or credentialing. Family Spirit, for example, was created for implementation by bilingual Indigenous paraprofessionals on rural reservations. This approach honored community preferences and acknowledged pervasive workforce shortages in a diverse cultural context with high mental health risk (Barlow et al., 2015).

Reflective Supervision. Home visitors may benefit from ongoing training, support, and <u>reflective supervision</u> to recognize and address the signs of maternal mental health symptoms. Reflective

supervision can facilitate a collaborative space for providers to process their experiences and feelings from their work with families (West et al., 2022). In addition to being a required component of some therapeutic home visiting models (e.g., IMH-HV), reflective supervision is a best practice for early childhood professionals operating outside of clinical settings and may be particularly important when supporting mothers with high levels of stress.

Future Research. Ongoing research is needed to explore how some home visiting models impact maternal mental health and support mothers with various levels of psychological distress and historical or current adversity. For example, IMH-HV has demonstrated significant effects on maternal sensitivity among caregivers with a history of adversity, but there is limited published evidence on how this model may impact maternal mental health. Study results also vary based on the severity of maternal mental health symptoms, with some models demonstrating stronger success when mothers have greater mental health symptoms (Oxford et al., 2023) and others when mothers have more mild or moderate symptoms (Ribaudo et al., 2022).

Precision home visiting research is needed to explore which models work best for whom and under what circumstances to clarify the contexts in which mothers with high psychological distress may experience the greatest benefit. Research investment is needed to examine how home visiting programs can effectively identify and treat maternal mental health needs in populations with greater barriers to access, including women of color (Miller et al., 2024) and those living in areas with limited mental health services.

Conclusion

Maternal mental health concerns, including depression, anxiety, perceived stress, and exposure to high-stress events, are implicated in a wide range of maternal and child health outcomes. To date, the home visiting field has emphasized maternal depression without focusing heavily on anxiety or stress. However, home visiting programs have successfully integrated strategies to address a wider range of maternal mental health needs. Some home visiting models seek to directly address maternal mental health needs or support mothers with a history of trauma or poor mental health. Some models are delivered by mental health clinicians equipped to provide individualized assessment and treatment with a focus on parent-child relationships. Home visiting programs have additionally opted to partner with mental health providers or offer skills-based psychoeducation and coaching delivered by nonclinical home visiting staff. More research and practice-based efforts are needed to increase supports for a comprehensive range of mental health needs and to work toward equitable, positive outcomes for mothers and children.

Table 1. Home Visiting Models, Enhancements, and Partnerships to Support Maternal Mental Health

Home visiting model	Provider qualifications	Dosage	Activities	Evidence-based practices	Outcomes		
Promising Strate	Promising Strategy 1. Partnering With Mental Health Providers to Enhance Mental Health Support						
Interpersonal Therapy enhancement with Early Head Start	Master's-level, English-speaking psychiatric nurses and project-trained Spanish language interpreters	Eleven home visiting sessions with nurses and interpreters and five booster sessions with the interpreter alone	Four skill sheets developed for interpersonal problem areas and one skill sheet for combatting depressive symptoms	Interpersonal Psychotherapy	Reduced maternal depressive symptoms at 4 weeks post- intervention (Beeber et al., 2010)		
Family Therapy enhancement with Maternal, Infant, and Early Childhood Home Visiting programs	Licensed marriage and family therapists	Ten, 30-minute, weekly sessions of video-delivered family therapy	A systemic treatment model focused on self-regulation; family therapy sessions including Dialectical Behavioral Therapy skills of mindfulness, distress tolerance, emotion regulation, and interpersonal effectiveness	Dialectical Behavior Therapy skills training for adolescents; General Systems Theory	Reduced maternal depressive symptoms at 2-month follow-up (Cluxton-Keller et al., 2018)		

Home visiting model	Provider qualifications	Dosage	Activities	Evidence-based practices	Outcomes		
Promising Strate	Promising Strategy 2. Enhancing Home Visiting Model Curricula to Include Mental Health Components						
Problem solving education enhancement with Head Start	Lay intervention providers that received workshop trainings	Six problem- solving sessions lasting 30–60 minutes over a duration of 6–8 weeks	One-on-one workbook-based problem-solving sessions; monitoring of depressive symptoms; linkage to formal mental health services when necessary in addition to usual Head Start social services	Adaptation of Problem- Solving Treatment for Primary Care	Preventive effect on depression among mothers with lower-level baseline symptoms at 12- month follow-up (Silverstein et al., 2017)		
Nurse-Family Partnership mental health intervention	b v p t	Weekly or biweekly home visits beginning in pregnancy through 21	Educational modules, clinical resources, and team conferencing materials for nurses	Mindfulness cognitive behavioral approaches	Reduced levels of depression among mothers with low mental health risk at intervention close;		
		months postpartum, then monthly home visits to close out services until the child's second birthday (O'Brien, 2005)	in addition to the Nurse-Family Partnership intervention		close; reduced levels of anxiety among all mothers, including those with mental health risk, at intervention close (Beeber et al., 2024)		

Home visiting model	Provider qualifications	Dosage	Activities	Evidence-based practices	Outcomes		
Promising Strate	Promising Strategy 3. Using Home Visiting Models That Include Therapeutic Support by Trained Clinicians						
Michigan Model of Infant Mental Health Home Visiting model	Master's-level licensed mental health clinicians	Average of 32 home visiting sessions over 12 months	Standardized and manualized needs-driven and relationship-based intervention; intervention strategies include developmental guidance, Infant-Parent Psychotherapy, and emotional and concrete support; reflective supervision for home visitors	Infant-Parent Psychotherapy	Reduced child abuse potential, a construct including emotional distress, through 12-month follow-up (Julian et al., 2021); reduced maternal depression and parenting stress at intervention close (Rosenblum et al., 2020)		
Partnership for Families Mental Health model	Master's-level mental health professionals with early childhood expertise	Weekly home visiting, typically 90 minutes per session, for approximately 9 months	Crisis intervention; comprehensive psychosocial assessment; counseling/dyadic therapy; parent education; case management	Child-Parent Psychotherapy; Interpersonal Psychotherapy; Seeking Safety; other therapeutic approaches to individual, family, and couples therapy as needed	Reduced depression and improvement in emotional stability/mood swings at intervention close (Reuter et al., 2016)		

Home visiting model	Provider qualifications	Dosage	Activities	Evidence-based practices	Outcomes
Minding the Baby Home Visiting model	Clinical social workers	Weekly home visiting beginning in pregnancy until the child's first birthday, then biweekly home visits for another year	Assessment of mental health needs, including trauma symptoms, depression, and anxiety; assessment and supports to enhance maternal reflective functioning; provision of concrete supports (Sadler et al., 2013)	Infant-Parent Psychotherapy; adult psychotherapy, family/couple counseling; support to experience, explore, and resolve the impact of trauma	Marginally less depression symptoms among mothers enrolled in treatment compared to control mothers at intervention close, but no difference in overall group (Slade et al., 2020)
Child and Family Interagency, Resource, Support, and Training model	Master's-level developmental/ mental health clinicians	Weekly home visiting sessions lasting 45–90 minutes over a duration of 6–12 months	Therapeutic assessment and dyadic psychotherapy within an integrated intervention team; provision of comprehensive services and supports	Child-Parent Psychotherapy and psychoeducational approaches	Reduced global mental health symptoms and prevention of new symptoms at 12-month follow-up; reduced depressive symptoms at 12-month follow-up; reduced parenting stress at 6-month follow up (Lowell et al., 2011)

Home visiting model	Provider qualifications	Dosage	Activities	Evidence-based practices	Outcomes		
Promising Strate	Promising Strategy 4. Using Skills-Based Home Visiting Models That Support Parent Mental Health and Reflective Functioning						
Promoting First Relationships model	Trained and certified providers	Weekly home visiting sessions over 10 weeks	Attachment theory- informed and strengths-based video coaching program that encourages reflective functioning and parent reflection on behaviors, feelings, and needs of themselves and their children	Attachment theory- informed manualized curriculum and consultation strategies (joining, positive feedback, instructive feedback, reflective questions and comments, discussion with handouts)	Marginal improvements in anxiety at 6 months post-intervention and in depression at 12-months post-intervention (Oxford et al., 2021) Reduced maternal depression in a Native community at 3-months post-intervention (Booth-LaForce et al., 2023)		
Family Spirit model	Native bilingual paraprofessionals with experience in health or human services	Forty-three structured lessons lasting until 12– 36 months postpartum	Content addressing maternal mental health problems, including externalizing and internalizing behavior; curriculum reflecting local native practices and respecting participants' cultural orientations	Skills-based curriculum including lessons on substance use prevention, problem solving, and coping skills (Walkup et al., 2009)	Reduced levels of depressive symptoms and externalizing problems post- intervention (Barlow et al., 2015)		

Home visiting model	Provider qualifications	Dosage	Activities	Evidence-based practices	Outcomes
Healthy Families America model	Paraprofessional home visitor practitioners	Weekly home visiting sessions for 6 months, followed by a tapered closing	Promotion of positive mental health, goal setting and problem solving, and referrals	Skills-based curriculum including content on managing stress, building protective buffers, and promoting parental resilience	Improvement in general reported mental health at 6 months post-intervention (not at 12 months but continued to show a small effect); marginal improvement in positive affect at 12-month follow-up (Lecroy & Lopez, 2018)

Note: To identify models and relevant literature, the team searched the research database maintained by the Home Visiting Evidence
of Effectiveness (HomVEE) project for evidence-based models that reported outcomes related to maternal mental health. The team also conducted a supplemental targeted literature review. Program models and approaches were included if they were designed to (1) serve caregivers with mental health needs or (2) directly address the mental health of caregivers. Our review led to the identification of four promising strategies. This table includes the home visiting models and approaches included and categorized within promising strategies for this review. It represents examples of home visiting model strategies, not an exhaustive list.

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Notes

- This brief defines maternal mental health to include depression, anxiety, and stress, unless otherwise specified. For a fuller discussion about the array of perinatal mental health concerns, see resources from the <u>American Psychiatric Association</u> and <u>The American College</u> of Obstetricians and Gynecologists.
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References

American Psychiatric Association. (2022). Depressive disorders. In *Diagnostic and statistical* manual of mental disorders (5th ed., text rev.).

https://doi.org/10.1176/appi.books.9780890425787

American Psychological Association. (2024). *How stress affects your health*. American Psychological Association. https://www.apa.org/topics/stress/health

Ammerman, R. T. (2017). Opportunities and challenges in addressing maternal depression in community settings. *JAMA Psychiatry*, 74(8), 775–776.

https://doi.org/10.1001/jamapsychiatry.2017.1173

Araji, S., Griffin, A., Dixon, L., Spencer, S.-K., Peavie, C., & Wallace, K. (2020). An overview of maternal anxiety during pregnancy and the post-partum period. *Journal of Mental Health & Clinical Psychology*, 4(4). https://www.mentalhealthjournal.org/articles/an-overview-of-maternal-anxiety-during-pregnancy-and-the-post-partum-period.html

Azhari, A., Leck, W. Q., Gabrieli, G., Bizzego, A., Rigo, P., Setoh, P., Bornstein, M. H., & Esposito, G. (2019). Parenting stress undermines mother-child brain-to-brain synchrony: A hyperscanning study. *Scientific Reports*, *9*, 1–9.

https://doi.org/10.1038/s41598-019-47810-4

- Barlow, A., Mullany, B., Neault, N., Goklish, N., Billy, T., Hastings, R., Lorenzo, S., Kee, C., Lake, K., Redmond, C., Carter, A., & Walkup, J. T. (2015). Paraprofessional-delivered home-visiting intervention for American Indian teen mothers and children: 3-Year outcomes from a randomized controlled trial. *American Journal of Psychiatry*, 172(2), 154–162. https://doi.org/10.1176/appi.ajp.2014.14030332
- Bauer, A., Knapp, M., & Parsonage, M. (2016). Lifetime costs of perinatal anxiety and depression. *Journal of Affective Disorders*, 192, 83–90. https://doi.org/10.1016/j.jad.2015.12.005
- Bayrampour, H., Ali, E., McNeil, D. A., Benzies, K., MacQueen, G., & Tough, S. (2016). Pregnancy-related anxiety: A concept analysis. *International Journal of Nursing Studies*, 55, 115–130. https://doi.org/10.1016/j.ijnurstu.2015.10.023
- Beeber, L. S., Gasbarro, M., Knudtson, M., Ledford, A., Sprinkle, S., Leeman, J., McMichael, G., Zeanah, P., & Mosqueda, A. (2024). A mental health innovation for nurse home visiting program shows effectiveness in reducing depressive symptoms and anxiety. *Prevention Science*, 25(1), 126–136. https://doi.org/10.1007/s11121-023-01574-6
- Beeber, L. S., Holditch-Davis, D., Perreira, K. A., Schwartz, T., Lewis, V., Blanchard, H., Canuso, R., & Goldman, B. D. (2010). Short-term in-home intervention reduces depressive symptoms in Early Head Start Latina mothers of infants and toddlers. *Research in Nursing & Health*, 33(1), 60–76. https://doi.org/10.1002/nur.20363
- Bergeron, J., Avraam, D., Calas, L., Fraser, W., Harris, J. R., Heude, B., Mandhane, P., Moraes, T. J., Muckle, G., Nader, J., Séguin, J. R., Simons, E., Subbarao, P., Swertz, M. A., Tough, S., Turvey, S. E., Fortier, I., Rod, N. H., & Andersen, A.-M. N. (2024). Stress and anxiety during pregnancy and length of gestation: a federated study using data from five Canadian and European birth cohorts. European Journal of Epidemiology, 39, 773–783. https://doi.org/10.1007/s10654-024-01126-4
- Bloom, T., Glass, N., Curry, M. A., Hernandez, R., & Houck, G. (2013). Maternal stress exposures, reactions, and priorities for stress reduction among low-income, urban women. *Journal of Midwifery & Women's Health*, 58(2), 167–174. https://doi.org/10.1111/j.1542-2011.2012.00197.x
- Booth-LaForce, C., Oxford, M., O'Leary, R., & Buchwald, D. (2023). Promoting First Relationships for primary caregivers and toddlers in a Native community: A randomized controlled trial. *Prevention Science*, 24, 39–49. https://doi.org/10.1007/s11121-022-01415-y
- Britt, R., Burkhard, J., Murphy, C., & Childers, A. (2023). U.S. "maternal mental health dark zones" counties with the highest risk and lowest resources revealed. Policy Center for Maternal Mental Health. https://policycentermmh.org/maternal-mental-health-provider-shortages-population-risk-report/
- Bryson, H., Perlen, S., Price, A., Mensah, F., Gold, L., Dakin, P., & Goldfeld, S. (2021). Patterns of maternal depression, anxiety, and stress symptoms from pregnancy to 5 years postpartum in

- an Australian cohort experiencing adversity. *Archives of Women's Mental Health*, 24(6), 987–997. https://doi.org/10.1007/s00737-021-01145-0
- Cameron, E. E., Joyce, K. M., Delaquis, C. P., Reynolds, K., Protudjer, J. L. P., & Roos, L. E. (2020). Maternal psychological distress & mental health service use during the COVID-19 pandemic. *Journal of Affective Disorders*, 276, 765–774. https://doi.org/10.1016/j.jad.2020.07.081
- Cluxton-Keller, F., Williams, M., Buteau, J., Donnelly, C. L., Stolte, P., Monroe-Cassel, M., & Bruce, M. L. (2018). Video-delivered family therapy for home visited young mothers with perinatal depressive symptoms: Quasi-experimental implementation-effectiveness hybrid trial. *JMIR Mental Health*, 5(4). https://doi.org/10.2196/11513
- Condon, E. M., Tobon, A. L., Holland, M. L., Slade, A., Mayes, L., & Sadler, L. S. (2022). Examining mothers' childhood maltreatment history, parental reflective functioning, and the long-term effects of the Minding the Baby® Home Visiting Intervention. *Child Maltreatment*, 27(3), 378–388. https://doi.org/10.1177/1077559521999097
- Crnic, K. A., Gaze, C., & Hoffman, C. (2005). Cumulative parenting stress across the preschool period: Relations to maternal parenting and child behaviour at age 5. *Infant and Child Development*: An *International Journal of Research and Practice*, 14(2), 117–132. https://doi.org/10.1002/icd.384
- Dachew, B. A., Scott, J. G., Heron, J. E., Ayano, G., & Alati, R. (2021). Association of maternal depressive symptoms during the perinatal period with oppositional defiant disorder in children and adolescents. *JAMA Network Open*, 4(9), 1–14. https://doi.org/10.1001/jamanetworkopen.2021.25854
- Davenport, M. H., Meyer, S., Meah, V. L., Strynadka, M. C., & Khurana R. (2020). Moms are not ok: COVID-19 and maternal mental health. *Frontiers in Global Women's Health* 1(1), 1–6. https://doi.org/10.3389/fgwh.2020.00001
- De Luca, S. M., Yueqi, Y., & Padilla, Y. (2017). A longitudinal examination of how mothers' and fathers' mental health and thoughts of death are related to their child's self-reported levels of parental connectedness. *Children and Youth Services Review 79*, 235–241. https://doi.org/10.1016/j.childyouth.2017.06.025
- Erickson, N., Julian, M., & Muzik, M. (2019). Perinatal depression, PTSD, and trauma: Impact on mother–infant attachment and interventions to mitigate the transmission of risk. *International Review of Psychiatry*, 31(3), 245–263. https://doi.org/10.1080/09540261.2018.1563529
- Fawcett, E. J., Fairbrother, N., Cox, M. L., White, I. R., & Fawcett, J. M. (2019). The prevalence of anxiety disorders during pregnancy and the postpartum period: A multivariate Bayesian meta-analysis. *The Journal of Clinical Psychiatry*, 80(4). https://doi.org/10.4088/JCP.18r12527

- Glover, V. (2014). Maternal depression, anxiety and stress during pregnancy and child outcome; What needs to be done. *Best Practice & Research Clinical Obstetrics & Gynaecology*, 28(1), 25–35. https://doi.org/10.1016/j.bpobgyn.2013.08.017
- Goldfeld, S., Bryson, H., Mensah, F., Gold, L., Orsini, F., Perlen, S., Price, A., Hiscock, H., Grobler, A., Dakin, P., Bruce, T., Harris, D., & Kemp, L. (2021). Nurse home visiting and maternal mental health: 3-Year follow-up of a randomized trial. *Pediatrics*, 147(2), e2020025361. https://doi.org/10.1542/peds.2020-025361
- Graignic-Philippe, R., Dayan, J., Chokron, S., Jacquet, A.-Y., & Tordjman, S. (2014). Effects of prenatal stress on fetal and child development: A critical literature review. *Neuroscience & Biobehavioral Reviews*, 43, 137–162. https://doi.org/10.1016/j.neubiorev.2014.03.022
- Home Visiting Collaborative Improvement and Innovation Network. (n.d.). *Caregiver depression electronic playbook*. Health Resources and Services Administration, Maternal and Child Health Bureau. https://hv-coiin.edc.org/wp-content/uploads/CD.Playbook.Final.pdf
- Huang, L., Zhao, Y., Qiang, C., & Fan, B. (2018). Is cognitive behavioral therapy a better choice for women with postnatal depression? A systematic review and meta-analysis. *PLOS ONE*, 13(10), 1–16. https://doi.org/10.1371/journal.pone.0205243
- Ibrahim, S. M., & Lobel, M. (2020). Conceptualization, measurement, and effects of pregnancy-specific stress: review of research using the original and revised Prenatal Distress Questionnaire. *Journal of Behavioral Medicine* 43, 16–33. https://doi.org/10.1007/s10865-019-00068-7
- Jacobson, N. C., & Newman, M. G. (2017). Anxiety and depression as bidirectional risk factors for one another: A meta-analysis of longitudinal studies. *Psychological Bulletin*, 143(11), 1155– 1200. https://doi.org/10.1037/bul0000111
- Jeličić, L., Veselinović, A., Ćirović, M., Jakovljević, V., Raičević, S., & Subotić, M. (2022). Maternal distress during pregnancy and the postpartum period: Underlying mechanisms and child's developmental outcomes—A narrative review. *International Journal of Molecular Sciences*, 23(22), 13932. https://doi.org/10.3390/ijms232213932
- Johnson, J. E., Wiltsey-Stirman, S., Sikorskii, A., Miller, T., King, A., Blume, J. L., Pham, X., Moore Simas, T. A., Poleshuck, E., Weinberg, R., & Zlotnick, C. (2018). Protocol for the ROSE sustainment (ROSES) study, a sequential multiple assignment randomized trial to determine the minimum necessary intervention to maintain a postpartum depression prevention program in prenatal clinics serving low-income women. *Implementation Science*, 13(1), 115. https://doi.org/10.1186/s13012-018-0807-9
- Jones, J. H., Call, T. A., Wolford, S. N., & McWey, L. M. (2021). Parental stress and child outcomes: The mediating role of family conflict. *Journal of Child and Family Studies*, 30, 746–756. https://doi.org/10.1007/s10826-021-01904-8

- Julian, M. M., Muzik, M., Jester, J. M., Handelzalts, J., Erickson, N., Stringer, M., Brophy-Herb, H., Ribaudo, J., Huth-Bocks, A., Lawler, J., Stacks, A., Rosenblum, K., & The Michigan Collaborative for Infant Mental Health Research. (2021). Relationships heal: Reducing harsh parenting and child abuse potential with relationship-based parent-infant home visiting. *Children and Youth Services Review*, 128, 1–13. https://doi.org/10.1016/j.childyouth.2021.106135
- Kinney, D. K., Munir, K. M., Crowley, D. J., & Miller, A. M. (2008). Prenatal stress and risk for autism. *Neuroscience & Biobehavioral Reviews*, 32(8), 1519–1532. https://doi.org/10.1016/j.neubiorev.2008.06.004
- LeCroy, C. W., & Lopez, D. (2018). A randomized controlled trial of Healthy Families: 6-month and 1-year follow-up. *Prevention Science*, 21(1), 25–35. https://doi.org/10.1007/s11121-018-0931-4
- Lowell, D., Paulicin, B., Carter, A., Godoy, L., & Briggs-Gowan, M. (2011). A randomized controlled trial of Child FIRST: A comprehensive home-based intervention translating research into early childhood practice. *Child Development*, 82(1), 193–208. https://doi.org/10.1111/j.1467-8624.2010.01550.x
- Madigan, S., Oatley, H., Racine, N., Fearon, R. M. P., Schumacher, L., Akbari, E., Cooke, J. E., & Tarabulsy, G. M. (2018). A meta-analysis of maternal prenatal depression and anxiety on child socioemotional development. *Journal of the American Academy of Child & Adolescent Psychiatry*, 57(9), 645–657.e8. https://doi.org/10.1016/j.jaac.2018.06.012
- Masters, G. A., Asipenko, E., Bergman, A. L., Person, S. D., Brenckle, L., Moore Simas, T. A., Ko, J. Y., Robbins, C. L., & Byatt, N. (2021). Impact of the COVID-19 pandemic on mental health, access to care, and health disparities in the perinatal period. *Journal of Psychiatric Research* 137, 126–130. https://doi.org/10.1016/j.jpsychires.2021.02.056
- Maternal and Child Health Bureau. (2023). MIECHV data & continuous quality improvement. U.S. Department of Health and Human Services, Health Resources and Services Administration. https://mchb.hrsa.gov/programs-impact/programs/home-visiting/miechv-data-continuous-quality-improvement
- Meaney, M. J. (2018). Perinatal maternal depressive symptoms as an issue for population health. American Journal of Psychiatry, 175(11), 1084–1093. https://doi.org/10.1176/appi.aip.2018.17091031
- Miles, E. M., Bose, S., & Atukpawu-Tipton, G. (2023). *Infant and Early Childhood Mental Health Consultation in home visiting*. National Home Visiting Resource Center Innovation Roundup Brief. James Bell Associates and Urban Institute. https://nhvrc.org/brief/infant-early-childhood-mental-health-consultation/
- Miller, M. L., Dupree, J., Monette, M. A., Lau, E. K., & Peipert, A. (2024). Health equity and perinatal mental health. *Current Psychiatry Reports*, *26*, 460–469. https://doi.org/10.1007/s11920-024-01521-4

- National Council for Mental Wellbeing. (2022). Expanding access to comprehensive, integrated mental health & substance use care.
 - https://www.thenationalcouncil.org/resources/2022-ccbhc-impact-report/
- National Home Visiting Resource Center. (2017). Helping home visitors address sensitive topics with families: An overview of three professional development initiatives. Innovation Roundup Brief. https://nhvrc.org/brief/sensitive-topics/
- O'Brien, R. A. (2005). Translating a research intervention into community practice: The Nurse Family Partnership. *The Journal of Primary Prevention*, *26*(3), 241–257. https://doi.org/10.1007/s10935-005-3599-z
- Obrochta, C. A., Chambers, C., & Bandoli, G. (2020). Psychological distress in pregnancy and postpartum. *Women and Birth*, 33(6), 583–591. https://doi.org/10.1016/j.wombi.2020.01.009
- O'Donnell, K. J., & Meaney, M. J. (2017). Fetal origins of mental health: The developmental origins of health and disease hypothesis. *American Journal of Psychiatry*, 174(4), 319–328. https://doi.org/10.1176/appi.ajp.2016.16020138
- Oxford, M. L., Hash, J. B., Lohr, M. J., Bleil, M. E., Fleming, C. B., Unützer, J., & Spieker, S. J. (2021). Randomized trial of Promoting First Relationships for new mothers who received community mental health services in pregnancy. *Developmental Psychology*, *57*(8), 1228–1241. https://doi.org/10.1037/dev0001219
- Oxford, M. L., Hash, J. B., Lohr, M. J., Fleming, C. B., Dow-Smith, C., & Spieker, S. J. (2023). What works for whom? Mother's psychological distress as a moderator of the effectiveness of a home visiting intervention. *Infant Mental Health Journal*, 44, 301–318. https://doi.org/10.1002/imhj.22050
- Pereira, J., Vickers, K., Atkinson, L., Gonzalez, A., Wekerle, C., & Levitan, R. (2012). Parenting stress mediates between maternal maltreatment history and maternal sensitivity in a community sample. *Child Abuse & Neglect*, *36*(5), 433–437. https://doi.org/10.1016/j.chiabu.2012.01.006
- Peters, R., & Genua, D. (2018). Addressing maternal depression in the context of home visiting: Opportunities and challenges. National Home Visiting Resource Center Research Snapshot Brief. James Bell Associates and Urban Institute. https://nhvrc.org/brief/addressing-maternal-depression/
- Pettman, D., O'Mahen, H., Blomberg, O., Svanberg, A. S., von Essen, L., & Woodford, J. (2023). Effectiveness of cognitive behavioural therapy-based interventions for maternal perinatal depression: a systematic review and meta-analysis. *BMC Psychiatry*, 23(1), 208. https://doi.org/10.1186/s12888-023-04547-9

- Phua, D. Y., Kee, M. Z. L., & Meaney, M. J. (2020). Positive maternal mental health, parenting, and child development. *Biological Psychiatry*, 87(4), 328–337. https://doi.org/10.1016/j.biopsych.2019.09.028
- Ponting, C., Bond, M., Rogowski, B., Chu, A., & Lieberman, A. F. (2024). Childhood and adulthood trauma exposure: Associations with perinatal mental health and psychotherapy response. *Journal of Traumatic Stress*, 37(1), 178–186. https://doi.org/10.1002/jts.22989
- Price, S. K., & Cohen-Filipic, K. (2013). Daily life or diagnosis? Dual perspectives on perinatal depression within maternal child health home visiting. *Social Work in Public Health*, 28(6), 554–565. https://doi.org/10.1080/19371918.2011.592087
- Racine, N., Plamondon, A., Hentges, R., Tough, S., & Madigan, S. (2019). Dynamic and bidirectional associations between maternal stress, anxiety, and social support: The critical role of partner and family support. *Journal of Affective Disorders*, 252, 19–24. https://doi.org/10.1016/j.jad.2019.03.083
- Radoš, S. N., Tadinac, M., & Herman, R. (2018). Anxiety during pregnancy and postpartum: Course, predictors and comorbidity with postpartum depression. *Acta Clinica Croatica*, *57*(1), 39–51. https://doi.org/10.20471/acc.2018.57.01.05
- Reuter, K. E., Melchior, L. A., & Brink, A. M. (2016). An intensive mental health home visiting model for two at-risk early childhood populations. *Children and Youth Services Review*, 61, 22–30. https://doi.org/10.1016/j.childyouth.2015.11.027
- Ribaudo, J., Lawler, J. M., Jester, J. M., Riggs, J., Erickson, N. L., Stacks, A. M., Brophy-Herb, H., Muzik, M., & Rosenblum, K. L. (2022). Maternal history of adverse experiences and posttraumatic stress disorder symptoms impact toddlers' early socioemotional wellbeing: The benefits of Infant Mental Health-Home Visiting. *Frontiers in Psychology*, 12, 792989. https://doi.org/10.3389/fpsyg.2021.792989
- Roberti, E., Giacchero, R., Grumi, S., Biasucci, G., Cuzzani, L., Decembrino, L., Magnani, M. L., Motta, M., Nacinovich, R., Pisoni, C., Scelsa, B., & Provenzi, L. (2022). Post-partum women's anxiety and parenting stress: Home-visiting protective effect during the COVID-19 pandemic. *Maternal and Child Health Journal*, 26(11), 2308–2317. https://doi.org/10.1007/s10995-022-03540-0
- Rogers, A., Obst, S., Teague, S. J., Rossen, L., Spry, E. A., Macdonald, J. A., Sunderland, M., Olsson, C. A., Youssef, G., & Hutchinson, D. (2020). Association between maternal perinatal depression and anxiety and child and adolescent development. *JAMA Pediatrics*, 174(11), 1–11. https://doi.org/10.1001/jamapediatrics.2020.2910
- Rosenblum, K., Muzik, M., & Riggs, J. (2020). Infant Mental Health Home Visiting buffers the adverse impact of maternal adverse childhood experiences on toddler and parent outcomes. *Journal of the American Academy of Child & Adolescent Psychiatry*, *59*(10), 10.1016/j.jaac.2020.07.668

- Sadler, L. S., Slade, A., Close, N., Webb, D. L., Simpson, T., Fennie, K., & Mayes, L. C. (2013). Minding the Baby: Enhancing reflectiveness to improve early health and relationship outcomes in an interdisciplinary home-visiting program. *Infant Mental Health Journal*, 34(5), 391–405. https://doi.org/10.1002/imhj.21406
- Seng, J. S., Sperlich, M., Low, L. K., Ronis, D. L., Muzik, M., & Liberzon, I. (2013). Childhood abuse history, posttraumatic stress disorder, postpartum mental health, and bonding: a prospective cohort study. *Journal of Midwifery & Women's Health*, *58*(1), 57–68. https://doi.org/10.1111/j.1542-2011.2012.00237.x
- Silverstein, M., Diaz-Linhart, Y., Cabral, H., Beardslee, W., Hegel, M., Haile, W., Sander, J., Patts, G., & Feinberg, E. (2017). Efficacy of a maternal depression prevention strategy in Head Start: A randomized clinical trial. *JAMA Psychiatry*, 74(8), 781. https://doi.org/10.1001/jamapsychiatry.2017.1001
- Slade, A., Holland, M. L., Ordway, M. R., Carlson, E. A., Jeon, S., Close, N., Mayes, L. C., & Sadler, L. S. (2020). Minding the Baby®: Enhancing parental reflective functioning and infant attachment in an attachment-based, interdisciplinary home visiting program. *Development and Psychopathology*, 32(1), 123–137. https://doi.org/10.1017/S0954579418001463
- Song, Z., Huang, J., Qiao, T., Yan, J., Zhang, X., & Lu, D. (2022). Association between maternal anxiety and children's problem behaviors: A systematic review and meta-analysis. *International Journal of Environmental Research and Public Health*, 19(17), 11106. https://doi.org/10.3390/ijerph191711106
- Stone, L. L., Mares, S. H. W., Otten, R., Engels, R. C. M. E., & Janssens, J. M. A. M. (2016). The codevelopment of parenting stress and childhood internalizing and externalizing problems. *Journal of Psychopathology and Behavioral Assessment*, 38(1), 76–86. https://doi.org/10.1007/s10862-015-9500-3
- Tabb, K. M., Bentley, B., Pineros Leano, M., Simonovich, S. D., Nidey, N., Ross, K., Huang, W. D., & Huang, H. (2022). Home visiting as an equitable intervention for perinatal depression: A scoping review. *Frontiers in Psychiatry*, 13. https://doi.org/10.3389/fpsyt.2022.826673
- Tandon, D., Mackrain, M., Beeber, L., Topping-Tailby, N., Raska, M., & Arbour, M. (2020). Addressing maternal depression in home visiting: Findings from the Home Visiting Collaborative Improvement and Innovation Network. *PLOS ONE*, 15(4), e0230211. https://doi.org/10.1371/journal.pone.0230211
- Trost, S., Beauregard, J., Chandra, G., Njie, F., Berry, J., Harvey, A., & Goodman, D. A. (2022). Pregnancy-related deaths: Data from maternal mortality review committees in 36 U.S. states, 2017-2019. Centers for Disease Control and Prevention; U.S. Department of Health and Human Services.
 - https://www.cdc.gov/maternal-mortality/php/data-research/mmrc-2017-2019.html
- U.S. Department of Health and Human Services. (2024). The Task Force on Maternal Mental Health's Report to Congress. https://www.samhsa.gov/sites/default/files/mmh-report.pdf

- Van Den Bergh, B. R. H., Van Den Heuvel, M. I., Lahti, M., Braeken, M., De Rooij, S. R., Entringer, S., Hoyer, D., Roseboom, T., Räikkönen, K., King, S., & Schwab, M. (2020). Prenatal developmental origins of behavior and mental health: The influence of maternal stress in pregnancy. *Neuroscience & Biobehavioral Reviews*, 117, 26–64. https://doi.org/10.1016/j.neubiorev.2017.07.003
- Vehmeijer, F. O. L., Guxens, M., Duijts, L., & Marroun, H. E. (2019). Maternal psychological distress during pregnancy and childhood health outcomes: a narrative review. *Journal of Developmental Origins of Health and Disease*, 10(3), 274–285. https://doi.org/10.1017/S2040174418000557
- Vismara, L., Sechi, C., & Lucarelli, L. (2020). Reflective parenting home visiting program: A longitudinal study on the effects upon depression, anxiety and parenting stress in first-time mothers. *Heliyon*, 6(7). https://doi.org/10.1016/j.heliyon.2020.e04292
- Walkup, J. T., Barlow, A., Mullany, B. C., Pan, W., Goklish, N., Hasting, R., Cowboy, B., Fields, P., Baker, E. V., Speakman, K., Ginsburg, G., & Reid, R. (2009). Randomized controlled trial of a paraprofessional-delivered in-home intervention for young reservation-based American Indian mothers. *Journal of the American Academy of Child & Adolescent Psychiatry*, 48(6), 591–601. https://doi.org/10.1097/CHI.0b013e3181a0ab86
- Wang, Y., Gu, J., Gao, Y., Lu, Y., Zhang, F., & Xu, X. (2023). Postpartum stress in the first 6 months after delivery: a longitudinal study in Nantong, China. *BMJ Open*, 13(10), e073796. https://doi.org/10.1136/bmjopen-2023-073796
- Weatherston, D. J., Ribaudo, J., & The Michigan Collaborative for Infant Mental Health Research. (2020). The Michigan Infant Mental Health Home Visiting model. *Infant Mental Health Journal*, 41(2), 166–177. https://doi.org/10.1002/imhj.21838
- West, A., Madariaga, P., & Sparr, M. (2022). *Reflective supervision:* What we know and what we need to know to support and strengthen the home visiting workforce (OPRE Report No. 2022-101). Office of Planning, Research, and Evaluation; Administration for Children and Families; U.S. Department of Health and Human Services.

 https://www.acf.hhs.gov/opre/report/reflective-supervision-what-we-know-and-what-we-need-know-support-and-strengthen-home
- Women and Children (n.d.) What is the ROSE Program? Women and Children. https://www.womenandinfants.org/rose-program-postpartum-depression
- Xiong, X., Harville, E. W., Mattison, D. R., Elkind-Hirsch, K., Pridjian, G., & Buekens, P. (2008). Exposure to Hurricane Katrina, Post-traumatic stress disorder and birth outcomes. *The American Journal of the Medical Sciences*, 336(2), 111–115. https://doi.org/10.1097/MAJ.0b013e318180f21c
- Zhang, T., Luo, Z.-C., Ji, Y., Chen, Y., Ma, R., Fan, P., Tang, N., Li, J., Tian, Y., Zhang, J., & Ouyang, F. (2023). The impact of maternal depression, anxiety, and stress on early neurodevelopment

in boys and girls. *Journal of Affective Disorders*, 321, 74–82. https://doi.org/10.1016/j.jad.2022.10.030

Zlotnick, C., Tzilos, G., Miller, I., Seifer, R., & Stout, R. (2016). Randomized controlled trial to prevent postpartum depression in mothers on public assistance. *Journal of Affective Disorders*, 189, 263–268. https://doi.org/10.1016/j.jad.2015.09.059