# Addressing the Maternal Mental Health Crisis Through a Novel Tech-Enabled Peer-to-Peer Perinatal Collaborative Care Model

#### Bridget McKinney\*

## ABSTRACT

Suicide and overdose, associated with perinatal mental health conditions, are the leading causes of maternal mortality in the United States. Experts in the field of perinatal mental health are using perinatal mood and anxiety disorders (PMAD) as an umbrella term that includes many mental health conditions and bring to light the lack of screening and treatment for perinatal mental health in the United States. There is a growing need to equip Obstetricians and Gynecologist (OB-GYN) providers with better tools to screen, triage, and refer to mental health services that are equitable and immediately accessible to their patients. Integrating a tech-enabled perinatal collaborative care model with peer-to-peer coaching as the driver of behavior change is a novel approach to addressing the maternal mental health crisis by improving outcomes, reducing disparities, and lowering costs.

#### Keywords: Maternal Mortality, Psychiatric Collaborative Care Model, Obstetrics, Mental Health

### INTRODUCTION

Over the past two decades, maternal mortality and other maternal health outcomes have worsened in the United States disproportionately to those in other developed countries.<sup>1</sup> In 2021, 1,205 pregnant women died in the US, representing a 40 percent increase in maternal death from 2020 and the highest rise in rates since the 1960s.<sup>2</sup> Suicide and overdose associated with perinatal mental health conditions are the leading causes of maternal mortality.<sup>3</sup> Mental health-related deaths are most likely to occur after six weeks postpartum.<sup>4</sup> Despite the postpartum period representing a higher risk for mental health conditions, historically, only a single postpartum visit is performed between 4 and 6 weeks after delivery. 40 percent of women do not attend a postpartum visit.<sup>5</sup>

Recent data from Maternal Mortality Review Committees reveal that 80 percent of maternal deaths are preventable. The maternal mental health crisis represents a unique ethical dilemma. For perinatal women,

\* Bridget McKinney, Doctorate in Bioethics Loyola University Chicago

© 2023 Bridget McKinney. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction, provided the original author and source are credited.

the current healthcare system is unjust. There is a growing need to equip obstetricians and gynecologists (OB-GYNs) with the tools to screen, triage, and refer patients to mental health services that are equitable and immediately accessible to their patients.

This paper will analyze the current state of perinatal mental healthcare in America. It will introduce the Psychiatric Collaborative Care Model and demonstrate its effectiveness. I highlight research performed using the Psychiatric Collaborative Care Model in obstetrics as well as barriers to real-world implementation. Lastly, this paper will argue that the integration of a tech-enabled perinatal collaborative care model with peer-to-peer coaching as the driver of behavior change would improve outcomes, reduce disparities, and lower costs.

I. Scope of the Problem

Prior to the COVID-19 pandemic, the prevalence of postpartum depression ranged from 13.2 percent, to as high as 23.5 percent, of births in the US.<sup>6</sup> The COVID-19 pandemic has exacerbated this issue, with studies revealing up to 1 in 3 postpartum women experiencing postpartum depression.<sup>7</sup> Although postpartum depression has been the focus of perinatal mental health conditions, it is just the tip of the iceberg. Experts in the field of perinatal mental health are now using perinatal mood and anxiety disorders as an umbrella term that includes perinatal depression, anxiety, obsessive-compulsive disorder, post-traumatic stress disorder, bipolar disorder, and psychosis from the prenatal period through the first year postpartum. Socio-economically disadvantaged women are at increased risk of experiencing perinatal mood and anxiety disorders and face greater barriers to high-quality mental health care.<sup>8</sup>

The American College of Obstetricians and Gynecologists (ACOG) recommends that physicians perform postpartum depression screenings during pregnancy. The Health Resources and Services Administration provides Healthy Start Initiative Grants to communities with high rates of adverse perinatal outcomes. Yet, the Healthcare Effectiveness Data and Information Set (HEDIS) reveals that screening in both pregnancy and the postpartum period occurs in fewer than 20 percent of patients.<sup>9</sup> Furthermore, in the US, if screening does occur, only 22 percent of women who are deemed positive in their screening receive mental health care.<sup>10</sup> The United States is currently experiencing a shortage of mental health providers that is expected to worsen in the upcoming years.<sup>11</sup> Nearly half of all Americans currently live in a mental health professional desert.<sup>12</sup> Waitlists for therapists and psychiatrists average 48 days, and individuals report not seeking mental health care due to cost or lack of insurance coverage.<sup>13</sup>

Given the significant mental health provider shortage, obstetric providers have a unique opportunity to care for the "whole patient" during and after pregnancy by addressing not only their physical health but also their mental health. Approximately one-third of women consider their OB-GYN their primary care provider during and after pregnancy, and over 50 percent of OB-GYNs perceive themselves as primary care providers for women, supporting primary, specialty, and preventive care.<sup>14</sup> Medicaid covers 42 percent of all births in the US, and more than half of all births in some states, thus OB-GYNs provide a disproportionate amount of care for poor and minority women as compared to other specialties.<sup>15</sup> Yet, OB-GYN providers commonly feel hesitant to screen for depression due to the shortage of therapists and psychiatrists to address the mental health needs of their patients, particularly in the Medicaid population.<sup>16</sup> As a result, fewer than 10 percent of pregnant women with mental health conditions receive adequate treatment.<sup>17</sup> A recent study of 288 obstetrics fellows revealed that 84 percent prescribed SSRIs to their patients; obstetricians are filling the mental health provider gap and taking ownership over their patients' mental health.<sup>18</sup>

Despite ACOG's recommendations that obstetrics providers screen for and treat mental health conditions in the perinatal period, OB-GYNs do not receive formal mental health training during residency or fellowship and do not typically use validated tools such as the Diagnostic and Statistical Manual of Mental Disorders-Forth Edition (DSM-IV) for diagnosis of depression or prior to prescribing antidepressants. Their lack of a standard reference can lead to misdiagnoses.<sup>19</sup> In fact, 22 percent of women screened and found to have postpartum depression are later diagnosed with bipolar disorder.<sup>20</sup>

Screening and treatment for perinatal mood and anxiety disorders are further impacted by patients' lack of trust in healthcare providers. Distrust between patients, particularly those receiving Medicaid, and their OB-GYNs in the US is high and strongly associated with worse self-reported health outcomes.<sup>21</sup> Notably, women with Medicaid coverage reported being treated unfairly and with disrespect by providers because of their race and insurance status. They reported a loss of decision-making autonomy during labor and delivery and less postpartum emotional and practical support at home.<sup>22</sup> Many women do not feel comfortable discussing mental disorders with a healthcare provider.<sup>23</sup> Connecting perinatal women to a person with shared lived experiences, known as peer-to-peer engagement or coaching, may be a simple solution.

#### II. Collaborative Care Model

The Psychiatric Collaborative Care Model (collaborative care), developed by the University of Washington in 2002, is an integrated behavioral health approach designed to treat common mental health conditions such as depression and anxiety that require measurement-based follow-up due to their chronic nature.<sup>24</sup> Centers for Medicare and Medicaid Services issued billing codes for the Psychiatric Collaborative Care Model in 2016. Medicare adopted them in 2017, and they were widely operationalized in the primary care field.<sup>25</sup> As of 2022, the collaborative care billing codes have been adopted by 19 state Medicaid plans.<sup>26</sup> The collaborative care model facilitates the integration of a behavioral health care manager, typically a licensed therapist or care worker, in the primary care setting. The behavioral health care manager can provide inperson or virtual care and facilitate mental health screenings, symptom monitoring, psychiatric consultations, and care coordination.<sup>27</sup> A psychiatric consultant, typically a board-certified psychiatrist or psychiatric consultants do not see patients one on one. Rather, they review complex or treatment-resistant cases and provide psychiatric management recommendations to the primary provider. Thus, the primary care team is expanded by two members who provide behavioral health expertise to the primary care provider, who is ultimately the prescribing provider if any psychoactive medications are indicated.<sup>28</sup>

This model has been tested in over 90 randomized clinical trials evaluating efficacy for the treatment of depression and anxiety across multiple medical specialties.<sup>29</sup> Data from the primary care setting indicate that this integrated behavioral health approach is both successful and more cost-effective than usual care for patients with behavioral health conditions.<sup>30</sup> Studies show that the collaborative care model improves clinical outcomes and lowers costs, returning \$6.50 for every dollar spent on treatment of depression. Furthermore, the model is effective across diverse patient populations.<sup>31</sup>

### III. Evidence for Collaborative Care in Obstetrics

The success of the collaborative care model for identifying anxiety and depression in the primary care setting and its potential for cost savings suggest that implementation of perinatal collaborative care for perinatal mood and anxiety disorders is a feasible approach.<sup>32</sup> Randomized clinical trials showed significant improvement in quality care, depression severity, and remission rates from before birth to 18 months

postbaseline for socioeconomically disadvantaged women.<sup>33</sup> In addition, collaborative care is associated with mitigating racial disparities in antenatal depression care; it may be an equity-promoting intervention for maternal health.<sup>34</sup> The trials faced limitations, including the inability to establish causality, and the researchers recommended further research. Although further research is warranted, the collaborative care model in obstetrics programs has indicated improved depression outcomes.

#### IV. Barriers to Adoption of a Collaborative Care Model in Obstetrics

Despite promising results, implementation is limited, and collaborative care is billable under Medicaid in only 19 states. <sup>35</sup> Large health systems have difficulty operationalizing a collaborative care model in obstetrics due to implementation costs, mental health provider shortages, and administrative burdens. More evidence of financial benefits to obstetrics clinics, hospitals, and health systems is needed. Additionally, obstetric practices must adapt to updated care plans, and obstetricians must be motivated to become involved in behavioral health issues and potentially broaden their scope of practice.<sup>36</sup> As this is a major ask from practices and providers, there is a lack of robust evidence to show that a perinatal collaborative care model can be applied without the resources and infrastructure of a randomized trial.

## V. Peer-to-Peer Engagement

Peer support in healthcare is growing. Peer support is defined as help and support that people with lived experiences can give one another.<sup>37</sup> Effective examples of peer support or engagement are found in addiction, mental health services, and the workforce. Regarding addiction recovery support, a systematic review concluded that peer support interventions have a beneficial effect on participants and positively contribute to substance use outcomes.<sup>38</sup> Peer support is highly used in medicine and other professions when attending physicians or skilled professionals train new colleagues. The nursing profession uses peer support to help deliver quality care and reduce symptoms of burnout.<sup>39</sup> Peer support has been well described in literature, and programs differ in their methodology and delivery. The feasibility and maintenance of peer support programs are possible through collaboration with all healthcare stakeholders.<sup>40</sup> Understanding that shared experiences establish a foundation of trust may help obstetricians see peers as a way to bridge the gap. A peer coach may be valuable in the collaborative care model.

#### VI. Integrating Peer-to-Peer into the Collaborative Care Model for Obstetrics

Currently, a start-up based in Boston and Philadelphia, FamilyWell, has piloted tech-enabled peer-to-peer engagement into a collaborative care model for obstetric patients. The company strives to solve the perinatal mental health crisis and close the health equity gap in the US by applying a text messaging platform to connect expecting and newly postpartum mothers with peer coaches. Peer coaches are trained to support perinatal mothers, defined as third-trimester pregnancy through 12 months postpartum, by providing quality support based on the latest research. Coaches have their own unique birth and postpartum stories, making them relatable and equipped to support mothers through the ups and downs of parenthood.<sup>41</sup> Increased education, screening, and treatment for perinatal mood and anxiety disorders co-occur as connections are being made through texting and virtual visits with coaches. On demand texting with coaches ensures no mother feels alone and that mothers have a safe space to ask questions and process emotions. If needed, enrolled moms can request longer virtual coaching sessions of 50 minutes with certified perinatal mental health coaches, who focus on current issues and how to move forward and feel better, accomplished through cognitive behavioral coaching techniques.<sup>42</sup> The platform schedules automated text messages containing educational content. Individual care plans are developed in

collaboration with an individual's OB and include monthly mental health screenings during and postpregnancy. Notably, at three-week postpartum, participants are sent the Edinburg postnatal depression scale 3 (EPDS-3) questions via text messages.<sup>43</sup> This screening is three weeks prior to the national six-weeks postpartum screening recommendation and focuses on antepartum anxiety, which represents a risk factor for depression.<sup>44</sup> If an individual needs more mental health support compared to coaching, virtual therapy sessions are available through the platform, giving access to licensed therapist, specializing in perinatal mental health without extensive waitlist. Therapists can diagnosis and provide medication management if needed.

FamilyWell CEO and founder, Jessica Gaulton, revealed that preliminary data collected during the first two months of the company's launch, limited to the Philadelphia, PA region and three clinics, indicated that 24 postpartum mothers consented to the program. A total of 3,000 texts were exchanged, and 44.2 percent of those texts came from participants to peer coaches.<sup>45</sup> The platform expediates appropriate referrals, creates individualized maternal wellness treatment plans, and serves as a resource for navigating the medical system.

#### VII. Providing Justice in the Maternal Healthcare System

The well-being of mothers is a bellwether for the well-being of society; every injustice in our society shows up in maternal health.<sup>46</sup> Earlier, broader, and more frequent screening combined with direct mental health access is essential to address perinatal mood and anxiety disorders and ultimately the maternal mortality rate. Integrating collaborative care with peer-to-peer coaching provides new mothers with direct support and follow-up care. This simple yet novel integration begins to close the gap by providing equitable care.

The tech-based platform's research and success highlight that a broader focus on screening is critical. Limiting mental illness to depression fails to serve women adequately. Expanding criteria to screen for indicators of future depression, such as anxiety, is a simple, proactive step. A relatable peer may be a critical factor in helping perinatal women feel comfortable openly discussing problems they are facing and beginning conversations not otherwise occurring in a perinatal or postpartum visit. Companies like FamilyWell can contribute to making collaborative care feasible in the OB-GYN setting. Having an outside organization with peer-coaches building a foundation of trust and championing the collaborative care model reduces the burden for overworked obstetricians. Furthermore, the tech-based platform can organize and facilitate interprofessional communications, which rarely take place in the current system.<sup>47</sup> The texting and telehealth approach brings compassion, care, and more frequent contact directly to the patient, which is critical for socioeconomically disadvantaged women as they are the demographic not properly accessing care now. As the coaches and behavior care coordinator make the referrals for mental health services that align with a mother's insurance coverage, they reduce stress for new mothers who might not know where to begin when navigating the mental health care system. Additionally, obstetricians may feel more comfortable performing mental health screenings knowing their patients can access mental health care.

#### CONCLUSION

The perinatal mental health crisis is significant. Women are currently experiencing injustice in the healthcare system due to a lack of trust, screening, and effective, accessible care. The psychiatric collaborative care model has been proven effective in the primary care setting, and randomized clinical trials conclude it is also effective in obstetrics, but barriers exist. Integrating peer-to-peer coaching through a tech-enabled platform into obstetrics collaborative care may eliminate barriers and build trust between

#### MCKINNEY, MATERNAL HEALTH CRISIS, VOICES IN BIOETHICS, VOL. 9 (2023)

patients and the healthcare system. More research is needed to show the efficacy of a tech-enabled model, and more research is critical to demonstrate that this model can be financially sustainable and revenuegenerating for hospitals and obstetrics departments. However, this simple novel step may begin to generate equitable care for women and potentially save lives.

<sup>1</sup> Collier, A. R. Y., & Molina, R. L. (2019). Maternal mortality in the United States: updates on trends, causes, and solutions. *Neoreviews*, *20*(10), e561-e574.

<sup>2</sup> Hoyert, D. L. (2023). Maternal Mortality Rates in the United States, 2021.*Health E-Stats. National Center for Health Statistics. Centers for Disease Control.* https://dx.doi.org/10.15620/cdc:124678

<sup>3</sup> Miller, E. S., Grobman, W. A., Ciolino, J. D., Zumpf, K., Sakowicz, A., Gollan, J., & Wisner, K. L. (2021). Increased depression screening and treatment recommendations after implementation of a perinatal collaborative care program. *Psychiatric Services*, *72*(11), 1268-1275.

<sup>4</sup> Trost, S. L., Beauregard, J. L., Smoots, A. N., Ko, J. Y., Haight, S. C., Moore Simas, T. A., ... & Goodman, D. (2021). Preventing Pregnancy-Related Mental Health Deaths: Insights From 14 US Maternal Mortality Review Committees, 2008–17: Study examines maternal mortality and mental health. *Health Affairs*, 40(10), 1551-1559.

<sup>5</sup> Blenning, C. E., & Paladine, H. L. (2005). An approach to the postpartum office visit. *American Family Physician*, 72(12), 2491-2496; ACOG Committee Opinion No. 736: Optimizing Postpartum Care. *Obstetrics and gynecology*, *132*(3), 784–785. https://doi.org/10.1097/AOG.00000000002849

<sup>6</sup>Bauman, B. L., Ko, J. Y., Cox, S., D'Angelo Mph, D. V., Warner, L., Folger, S., Tevendale, H. D., Coy, K. C., Harrison, L., & Barfield, W. D. (2020). Vital Signs: Postpartum Depressive Symptoms and Provider Discussions About Perinatal Depression - United States, 2018. *MMWR. Morbidity and mortality weekly report*, *69*(19), 575–581. https://doi.org/10.15585/mmwr.mm6919a2

<sup>7</sup> Shuman, C.J., Peahl, A.F., Pareddy, N. (2022) Postpartum depression and associated risk factors during the COVID-19 pandemic. *BMC Res Notes* 15, 102. https://doi.org/10.1186/s13104-022-05991-8

<sup>8</sup> Grote, N. K., Katon, W. J., Russo, J. E., Lohr, M. J., Curran, M., Galvin, E., & Carson, K. (2015). Collaborative care for perinatal depression in socioeconomically disadvantaged women: a randomized trial. *Depression and Anxiety*, *32*(11), 821-834.

<sup>9</sup> HESI Annual Report. *HESI*. (2022, November). Retrieved April 30, 2023, from Special-Report-Nov-2022-Results-for-Measures-Leveraging-Electronic-Clinical-Data-for-HEDIS.pdf (ncqa.org)

<sup>10</sup> Byatt, N., Levin, L. L., Ziedonis, D., Moore Simas, T. A., & Allison, J. (2015). Enhancing Participation in Depression Care in Outpatient Perinatal Care Settings: A Systematic Review. *Obstetrics and Gynecology*, *126*(5), 1048–1058. https://doi.org/10.1097/AOG.00000000001067

<sup>11</sup> Satiani, A., Niedermier, J., Satiani, B., & Svendsen, D. P. (2018). Projected Workforce of Psychiatrists in the United States: A Population Analysis. *Psychiatric Services (Washington, D.C.)*, 69(6), 710–713. https://doi.org/10.1176/appi.ps.201700344

<sup>12</sup> Bureau of Health Workforce Health Resources and Services Administration (HRSA) U.S. Department of Health & Human Services. (April 27, 2023) Designated Health Professional Shortage Areas Statistics, Second Quarter of Fiscal Year 2023 Designated HPSA Quarterly Summary. https://data.hrsa.gov/Default/GenerateHPSAQuarterlyReport

<sup>13</sup> Coward, K. (2021). New data shows CCBHCs improve behavioral health access, reduce wait times. Behavioral Health Business. <u>https://bhbusiness.com/2021/05/25/new-data-shows-ccbhcs-improve-behavioral-health-access-reduce-wait-times;</u> The United States Government. (2022, June 17). *Reducing the economic burden of unmet mental health needs - CEA*. The White House. Retrieved April 30, 2023, from <u>https://www.whitehouse.gov/cea/written-materials/2022/05/31/reducing-the-economic-burden-of-unmet-mental-health-needs/</u> <sup>14</sup> LaRocco-Cockburn, A., Reed, S. D., Melville, J., Croicu, C., Russo, J. E., Inspektor, M., ... & Katon, W. (2013). Improving depression treatment for women: integrating a collaborative care depression intervention into OB-GYN care. *Contemporary clinical trials*, *36*(2), 362-370.

<sup>15</sup> Raney, L. (2020). Cracking the codes: State Medicaid approaches to reimbursing psychiatric collaborative care. *Oakland, California Health Care Foundation*.

<sup>16</sup> Hansen, M. E. D., Tobón, A. L., Haider, U. K., Simas, T. A. M., Newsome, M., Finelli, J., ... & Byatt, N. (2023). The role of perinatal psychiatry access programs in advancing mental health equity. *General Hospital Psychiatry*.

<sup>17</sup> Cox, E. Q., Sowa, N. A., Meltzer-Brody, S. E., & Gaynes, B. N. (2016). The perinatal depression treatment cascade: baby steps toward improving outcomes. *The Journal of clinical psychiatry*, *77*(9), 20901.

<sup>18</sup> Taouk, L. H., Matteson, K. A., Stark, L. M., & Schulkin, J. (2018). Prenatal depression screening and antidepressant prescription: obstetrician-gynecologists' practices, opinions, and interpretation of evidence. *Archives of women's mental health*, *21*(1), 85–91. https://doi.org/10.1007/s00737-017-0760-7

<sup>19</sup> Garbarino, A. H., Kohn, J. R., Coverdale, J. H., & Kilpatrick, C. C. (2019). Current Trends in Psychiatric Education Among Obstetrics and Gynecology Residency Programs. *Academic psychiatry : the journal of the American Association of Directors of Psychiatric Residency Training and the Association for Academic Psychiatry*, 43(3), 294–299. https://doi.org/10.1007/s40596-019-01018-w\_i

<sup>20</sup> Wisner, K. L., Sit, D. K., McShea, M. C., Rizzo, D. M., Zoretich, R. A., Hughes, C. L., & Hanusa, B. H. (2013). Onset timing, thoughts of self-harm, and diagnoses in postpartum women with screen-positive depression findings. *JAMA psychiatry*, *70*(5), 490-498

<sup>21</sup> Armstrong, K., Rose, A., Peters, N., Long, J. A., McMurphy, S., & Shea, J. A. (2006). Distrust of the health care system and self-reported health in the United States. *Journal of general internal medicine*, *21*(4), 292–297. https://doi.org/10.1111/j.1525-1497.2006.00396.x

<sup>22</sup> Declercq, E., & Zephyrin, L. (2020). *Maternal mortality in the United States: A Primer*. Commonwealth Fund.

<u>https://www.commonwealthfund.org/publications/issue-brief-report/2020/dec/maternal-mortality-united-states-primer</u> <sup>23</sup> Scholle, S. H., & Kelleher, K. (2003). Preferences for depression advice among low-income women. *Maternal and child health journal*, 7(2), 95–102. https://doi.org/10.1023/a:1023864810207https://doi.org/10.1023/a:1023864810207

<sup>24</sup> AIMS Center. (n.d.). Collaborative care. https://aims.uw.edu/collaborative-care

<sup>25</sup> Press, M. J., Howe, R., Schoenbaum, M., Cavanaugh, S., Marshall, A., Baldwin, L., & Conway, P. H. (2017). Medicare payment for behavioral health integration. *n Engl j Med*, *376*(5), 405-407.

<sup>26</sup> Chang, D., Morrison, D. J., Bowen, D. J., Harris, H. M., Dusic, E. J., Velasquez, M. B., & Ratzliff, A. D. H. (2023). Making It to Sustainability: Evaluating Billing Strategies for Collaborative Care. *Psychiatric services (Washington, D.C.)*, appips20220596. Advance online publication. https://doi.org/10.1176/appi.ps.20220596

<sup>27</sup> Miller, E. S., Jensen, R., Hoffman, M. C., Osborne, L. M., McEvoy, K., Grote, N., & Moses-Kolko, E. L. (2020). Implementation of perinatal collaborative care: a health services approach to perinatal depression care. *Primary health care research & development*, *21*, e30.

<sup>28</sup> Raney, L. (2020). Cracking the codes: State Medicaid approaches to reimbursing psychiatric collaborative care. *Oakland, California Health Care Foundation*.

<sup>29</sup> Unützer, J., Katon, W., Callahan, C. M., Williams, J. W., Jr, Hunkeler, E., Harpole, L., Hoffing, M., Della Penna, R. D., Noël, P. H., Lin, E. H., Areán, P. A., Hegel, M. T., Tang, L., Belin, T. R., Oishi, S., Langston, C., & IMPACT Investigators. Improving Mood-Promoting Access to Collaborative Treatment (2002). Collaborative care management of late-life depression in the primary care setting: a randomized controlled trial. JAMA, 288(22), 2836–2845. <u>https://doi.org/10.1001/jama.288.22.2836</u>

<sup>30</sup> Raney, L. (2020).

MCKINNEY, MATERNAL HEALTH CRISIS, VOICES IN BIOETHICS, VOL. 9 (2023)

<sup>31</sup> Unützer, J., Harbin, H., Schoenbaum, M., & Druss, B. (2013). The collaborative care model: An approach for integrating physical and mental health care in Medicaid health homes. *Health Home Information Resource Center*, 1-13.

<sup>32</sup> Raney, L. (2020). Cracking the codes: State Medicaid approaches to reimbursing psychiatric collaborative care. *Oakland, California Health Care Foundation*.

<sup>33</sup> Grote, N. K., Katon, W. J., Russo, J. E., Lohr, M. J., Curran, M., Galvin, E., & Carson, K. (2015). Collaborative care for perinatal depression in socioeconomically disadvantaged women: a randomized trial. *Depression and anxiety*, *32*(11), 821-834

<sup>34</sup> Miller, E. S., Grobman, W. A., Ciolino, J. D., Zumpf, K., Sakowicz, A., Gollan, J., & Wisner, K. L. (2021). Increased depression screening and treatment recommendations after implementation of a perinatal collaborative care program. *Psychiatric Services*, *72*(11), 1268-1275; Snowber, K., Ciolino, J. D., Clark, C. T., Grobman, W. A., & Miller, E. S. (2022). Associations Between Implementation of the Collaborative Care Model and Disparities in Perinatal Depression Care. *Obstetrics & Gynecology*, *140*(2), 204-211.

<sup>35</sup> Percent of People Covered By Medicaid/CHIP, 2022. (2022). *Medicaid State Fact Sheets*. KFF. Retrieved May 1, 2023, from https://www.kff.org/interactive/medicaid-state-fact-sheets/

<sup>36</sup> Miller, E. S., Grobman, W. A., Ciolino, J. D., Zumpf, K., Sakowicz, A., Gollan, J., & Wisner, K. L. (2021). Increased depression screening and treatment recommendations after implementation of a perinatal collaborative care program. *Psychiatric Services*, *72*(11), 1268-1275.

<sup>37</sup> Shalaby, R. A. H., & Agyapong, V. I. (2020). Peer support in mental health: literature review. JMIR mental health, 7(6), e15572.

<sup>38</sup> Bassuk, E. L., Hanson, J., Greene, R. N., Richard, M., & Laudet, A. (2016). Peer-delivered recovery support services for addictions in the United States: A systematic review. *Journal of substance abuse treatment*, *63*, 1-9.

<sup>39</sup> Eastburg, M. C., Williamson, M., Gorsuch, R., & Ridley, C. (1994). Social support, personality, and burnout in nurses. *Journal of Applied Social Psychology*, *24*(14), 1233-1250.

<sup>41</sup> FamilyWell. (2023.). https://familywellhealth.com/

<sup>42</sup> Patients, Family Well (2023). https://familywellhealth.com/patients

<sup>43</sup> Providers, Family Well (2023). https://familywellhealth.com/providers

<sup>44</sup> Patients, Family Well (2023). https://familywellhealth.com/patients

<sup>45</sup> Author interview with Jessica Gaulton, FamilyWell. (2023)

<sup>46</sup> Maven (2022). "If moms are unwell, society is unwell." Recapping our Q&A with Dr. Neel Shah. *Maven*. https://www.mavenclinic.com/post/if-moms-are-unwell-society-is-unwell-recapping-our-q-a-with-dr-neel-shah#!

<sup>47</sup> Klatter, C. K., van Ravesteyn, L. M., & Stekelenburg, J. (2022). Is collaborative care a key component for treating pregnant women with psychiatric symptoms (and additional psychosocial problems)? A systematic review. *Archives of Women's Mental Health*, *25*(6), 1029-1039.