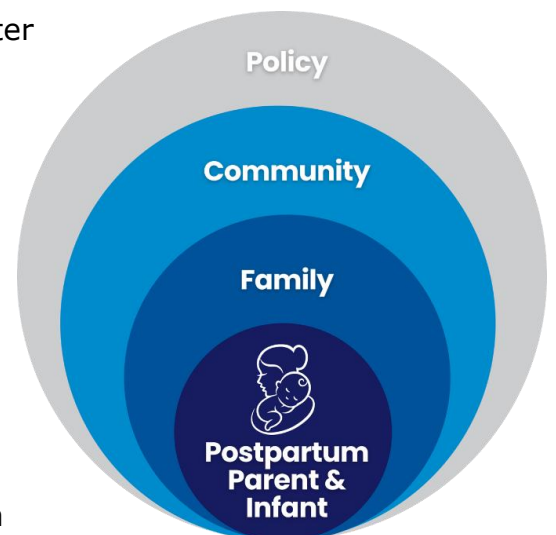


# Creating a Path towards Economic Viability

## Executive Summary

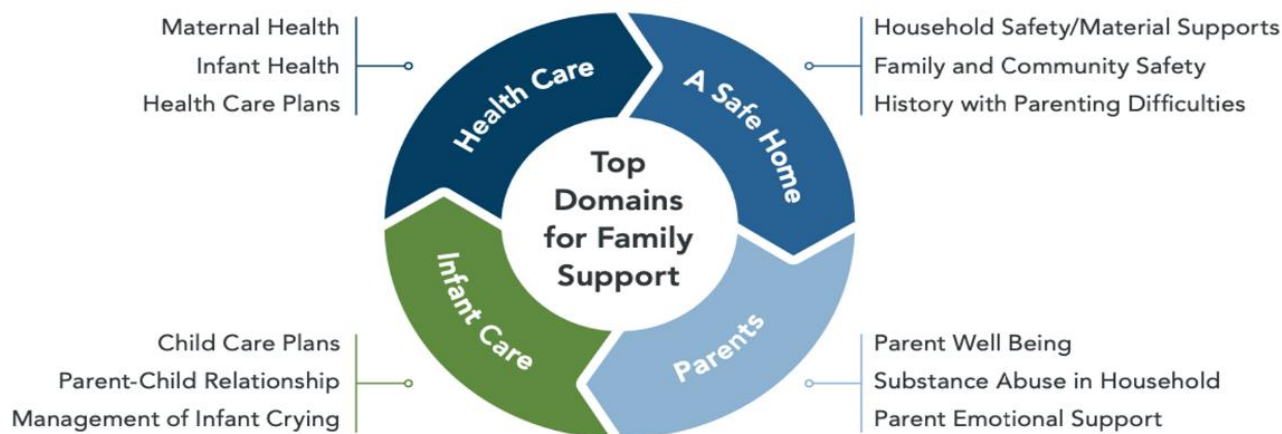
The fourth trimester, which refers to the first 12 weeks after childbirth, is a crucial period for parents as they adapt to physical and emotional changes after delivery while learning to care for their newborn. Postpartum complications, both physical and mental, can impose a significant economic burden, affecting individuals, families, and the larger healthcare system and economy. These costs come from factors like increased healthcare use, lost productivity, and long-term effects on the postpartum parent and their family when complications are untreated or treatment is delayed.

Social determinants of health (SDOH) also significantly impact the postpartum period, influencing maternal health outcomes and overall well-being. Failing to address SDOH leads to serious economic consequences, including increased healthcare costs, reduced workforce productivity, and stunted economic growth.



## The Family Connects Model

Family Connects is an evidence-based, universally offered model of care designed to support all families with newborns by integrating a nurse visit to assess the health and well-being of the mother and newborn about 3 weeks after birth. With its public health approach, Family Connects nurses assess newborns and postpartum parents, provide health information, and offer warm connections to community and medical services when needed, avoiding costs associated with pregnancy-related and postpartum complications. Family Connects nurses also connect families with resources relevant to their specific needs, including those related to family economic self-sufficiency, such as job training, education, financial literacy programs, and childcare assistance.



## The Cost of Inaction

The estimated total maternal morbidity costs for all U.S. births in 2019 reached \$32.3 billion from conception through the child’s fifth birthday, which amounts to \$8,624 in additional costs to society for each maternal–child pair.

The most common medical complication during and after childbirth, affecting at least one in every seven women, is perinatal mood and anxiety disorders (PMADs), including prenatal and postpartum depression. National economic costs of untreated PMADs are \$14.2 billion, or an average of \$32,000 for every mother–child pair affected. Mothers with postpartum depression incur seven times higher costs in emergency units, five times higher costs in inpatient days care, and eleven times higher costs in mental health counselling than mothers without postpartum depression. More than half of the costs occur within the first year and are associated with pregnancy and birth complications, including preterm birth and preeclampsia.

Postpartum depression is often overlooked during postnatal visits, missing the critical window for early intervention. The early identification of postpartum depression significantly decreases the chances of an employee struggling in the workplace. The annual costs per person attributed to presenteeism, absenteeism, and unemployment related to productivity loss among women with untreated PMADs (including depression) was \$2,871, \$888, and \$40,478 respectively.

Moreover, maternal postpartum depression can have detrimental effects on infants' emotional, social, and cognitive development. They may display behavioral and feeding problems, sleep disturbances, experience delays in reaching developmental milestones, and have a higher risk of forming insecure attachments with their mothers. In the long term, this can increase the likelihood of mental health disorders and negatively impact their well-being.

The Deloitte Center for Health Solutions and US actuaries estimate that the direct medical expenses stemming from unmet needs (SDOHs) totaled \$320 billion for the health care



system and could exceed \$1 trillion by 2040. Tackling SDOHs would create significant economic value, including a gain in gross domestic product (GDP) and benefits for businesses. By 2040, potential GDP gains could reach \$2.8 trillion.

## **Proven Results to Save Money and Build Strong, Supported Families**

Results from three ongoing evaluations published in peer-reviewed journals demonstrate that the Family Connects model positively impacts children, families, and communities in several key areas:

- Primary caregivers were 30% less likely to report possible clinical depression or anxiety at infant age 6 months.
- Total child emergency room visits, and hospital overnights were reduced by 50% through age 12 months and 37% through age 2 years resulting in a \$3.17 reduction in total hospital billing costs for every \$1.00 in program costs.
- Total child maltreatment investigations reduced by 44% through child age 2.
- Primary caregivers reported more positive parenting behaviors and were more responsive to their baby at infant age 6 months.
- Home environments were safer, and homes had more materials to support learning and development at infant age 6 months.
- Families reported more connections to community resources and services at infant age 6 months.
- Primary caregivers were more likely to complete their 6-week postpartum health check.
- Families reported more connections to community resources and more frequent use of those services at infant age 6 months.
- Primary caregivers reported greater overall rates of social support.
- Primary caregivers reported their infants were significantly more likely to sleep on their backs.

## **Conclusion**

Family Connects achieves a positive economic impact by lowering healthcare costs and strengthening communities. Family Connects significantly decreases healthcare costs associated with emergency room visits and hospital admissions for infants and their families and fosters collaboration and coordination among local support services, leading to better identification of community needs and resource barriers and gaps. The program's universal approach ensures that resources are used efficiently and effectively, and the success of Family Connects in various communities has demonstrated its potential for scalability and widespread implementation.



The program's evidence-based model and focus on community-level impact make it a promising solution for improving family well-being and reducing healthcare costs on a larger scale. Family Connects is not only a valuable tool for supporting families during the crucial postpartum period but also a cost-effective investment in the health and well-being of communities.

---

## REFERENCES

- So O'Neil et al., The High Costs of Maternal Morbidity Show Why We Need Greater Investment in Maternal Health (Commonwealth Fund, Nov. 2021). <https://doi.org/10.26099/nz8s-4708>.
- Dagher RK, McGovern PM, Dowd BE, Gjerdingen DK. Postpartum depression and health services expenditures among employed women. *J Occup Environ Med*. 2012 Feb;54(2):210-5. doi: 10.1097/JOM.0b013e31823fdf85. PMID: 22267187.
- Epperson CN, Huang MY, Cook K, Gupta D, Chawla A, Greenberg PE, Eldar-Lissai A. Healthcare resource utilization and costs associated with postpartum depression among commercially insured households. *Curr Med Res Opin*. 2020 Oct;36(10):1707-1716. doi: 10.1080/03007995.2020.1799772. Epub 2020 Aug 7. PMID: 32696705.
- Luca DL, Margiotta C, Staatz C, Garlow E, Christensen A, Zivin K. Financial toll of untreated perinatal mood and anxiety disorders among 2017 births in the United States. *American journal of public health*. 2020 Jun;110(6):888-96. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7204436/>.
- Saharoy R, Potdukhe A, Wanjari M, Taksande AB. Postpartum Depression and Maternal Care: Exploring the Complex Effects on Mothers and Infants. *Cureus*. 2023 Jul 4;15(7):e41381. doi: 10.7759/cureus.41381. PMID: 37546054; PMCID: PMC10400812.
- Deloitte Center for Health Solutions. (2024). The US \$2.8 trillion opportunity: How better health for all can drive US economic growth. Deloitte Insights. [https://www2.deloitte.com/content/dam/insights/articles/us176817\\_chs-health-equity-economics/DI\\_US176817\\_CHS\\_Health-equity-economics.pdf](https://www2.deloitte.com/content/dam/insights/articles/us176817_chs-health-equity-economics/DI_US176817_CHS_Health-equity-economics.pdf).
- Luca DL, Margiotta C, Staatz C, Garlow E, Christensen A, Zivin K. Financial Toll of Untreated Perinatal Mood and Anxiety Disorders Among 2017 Births in the United States. *Am J Public Health*. 2020 Jun;110(6):888-896. doi: 10.2105/AJPH.2020.305619. Epub 2020 Apr 16. PMID: 32298167; PMCID: PMC7204436.
- Dodge KA, Goodman WB, Murphy RA, O'Donnell K, Sato J, Guptill S. Implementation and randomized controlled trial evaluation of universal postnatal nurse home visiting. *Am J Public Health*. 2014 Feb;104 Suppl 1(Suppl 1): S136-43. doi: 10.2105/AJPH.2013.301361. Epub 2013 Dec 19. PMID: 24354833; PMCID: PMC4011097.
- Goodman WB, Dodge KA, Bai Y, O'Donnell KJ, Murphy RA. Randomized controlled trial of Family Connects: Effects on child emergency medical care from birth to 24 months. *Dev Psychopathol*. 2019 Dec;31(5):1863-1872. doi: 10.1017/S0954579419000889. PMID: 31477190; PMCID: PMC7061922.
- Goodman WB, Dodge KA, Bai Y, Murphy RA, O'Donnell K. Evaluation of a Family Connects Dissemination to Four High-Poverty Rural Counties. *Matern Child Health J*. 2022 May;26(5):1067-1076. doi: 10.1007/s10995-021-03297-y. Epub 2022 Jan 7. PMID: 34993754; PMCID: PMC9623422.

