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RESEARCH REPORT

The Economic Cost of Perinatal Mental Health Problems in Thailand

Impacts on Mothers, Newborns, and Society, and Recommended Actions

USD 2.1bn	THB 68bn

ANNUAL BURDEN

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Care Policy and Evaluation Centre (CPEC), London School of Economics and Political Science

Perinatal Alliance for Mental Health
พันธมิตรเพื่อสุขภาพจิตแม่ตั้งครรภ์และหลังคลอด
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Editorial Coordination

Hamish Reginald Magoffin, Perinatal Alliance for Mental Health Thailand (PAM Thailand)
Associate Professor Annette Bauer, Care Policy and Evaluation Centre (CPEC), London School of Economics and Political Science
Shanon McNab, United Nations Population Fund (UNFPA) Thailand

Foreword by

Professor Martin Knapp, CBE, Care Policy and Evaluation Centre (CPEC), London School of Economics and Political Science

Lead Authors and Contributing Authors

Associate Professor Annette Bauer, Care Policy and Evaluation Centre (CPEC), London School of Economics and Political Science
Hamish Reginald Magoffin, Perinatal Alliance for Mental Health Thailand (PAM Thailand) and PAM Foundation
Mariam El Tobgy, University of Oxford
Rachel Cohen, Columbia University
Shanon McNab, United Nations Population Fund (UNFPA) Thailand
Suchaya Mokkhasen, United Nations Office on Drugs and Crime (UNODC)

Correspondence and Enquiries

Perinatal Alliance for Mental Health Thailand (PAM Thailand)
Website: www.pamthailand.org
Email: info@pamthailand.org

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1. Foreword

Economics and mental health are deeply intertwined, and over the past three decades the field of mental health economics has moved from relative marginality to a central position in informing policy, planning, and service design. What began as an “age of innocence”, with limited attention to resource constraints, has evolved into a mature and rapidly expanding discipline characterised by more rigorous methods, richer datasets, and increasing recognition that economic evidence is essential for decision-making in complex health systems.

This report on perinatal mental health (PMH) in Thailand sits squarely within this evolving tradition. It brings together epidemiological insight and economic analysis to address a question that is now of central importance to governments: how should scarce resources be allocated to maximise health, wellbeing, and long-term societal value? In doing so, it reflects a broader shift in global health policy, where economic evidence—particularly cost-effectiveness, cost-consequences, and broader burden analyses—is increasingly expected to accompany clinical and public health recommendations.

The findings presented here underline both the scale of the challenge and the opportunity for action. The estimated annual economic burden of PMH problems in Thailand—approximately USD 2.1 billion (THB 68 billion)—is substantial. However, its significance lies not only in its magnitude, but in what it represents: a combination of direct healthcare costs, lost productivity, and longer-term impacts on children and families. As the wider literature has consistently shown, perinatal mental health conditions generate spillover effects across generations, shaping cognitive, emotional, and economic trajectories long after the perinatal period itself has ended.

At the same time, Thailand has several important structural advantages that place it in a strong position to respond. Universal Health Coverage, high antenatal care utilisation, established maternal health systems, routine screening for depression in antenatal settings, and growing national awareness of mental health together provide a foundation that many countries do not yet have. From an economic perspective, this matters greatly: the existence of delivery platforms reduces the marginal cost of scaling up effective interventions and increases the likelihood that investments will generate measurable returns.

Yet, as this report documents, structural capacity does not automatically translate into effective coverage. Under-recognition and under-treatment remain persistent challenges, even where screening tools exist. Inconsistent referral pathways and variability in service quality weaken the efficiency of the system, limiting the extent to which early identification translates into improved outcomes. Workforce constraints and geographic inequities further compound these inefficiencies, particularly affecting women in rural areas, migrant populations, and those in informal employment. These are not only clinical or organisational issues; they are economic inefficiencies that result in avoidable downstream costs.

The broader lesson from mental health economics is that such gaps between evidence, policy design, and implementation are common. Even where interventions are demonstrably cost-effective—such as screening combined with treatment for perinatal depression—their impact depends on system capacity, incentives, and sustained investment. Economic evaluation therefore plays a critical role not only in identifying “what works”, but in clarifying “what is feasible”, “what is scalable”, and “what represents best use of scarce resources across competing priorities”.

Stigma and social barriers add another layer of complexity. While often framed as cultural issues, they have clear economic consequences by reducing help-seeking, delaying treatment, and increasing severity at presentation. Similarly, inequities in access reflect not only fairness concerns but also inefficiencies in human capital development and intergenerational wellbeing.

For government in Thailand, the implications are therefore twofold. First, the economic burden estimates presented in this report provide a compelling case for prioritising perinatal mental health within broader health and social policy. Second, and perhaps more importantly, the findings highlight the need for investment in system design—strengthening referral pathways, improving workforce distribution, and ensuring continuity of care—so that an emerging screening infrastructure can deliver its full potential.

Ultimately, this report reinforces a central conclusion from the wider field of mental health economics: that investment in mental health is not only a matter of health system improvement, but a foundation for long-term economic and social development. In the case of perinatal mental health, the returns to effective intervention extend across the life course and into the next generation. That makes the economic case not only compelling, but difficult to ignore.

Professor Martin Knapp, CBE
Care Policy and Evaluation Centre (CPEC), London School of Economics and Political Science

2. Acknowledgements

Advisory and Technical Contributors

Dr Alain Gregoire, Global Alliance for Maternal Mental Health (GAMMH)
Dr Chanika Liangcheep, Faculty of Medicine Siriraj Hospital, Mahidol University
Dr Chayanis Kositamongkol, Faculty of Medicine Siriraj Hospital, Mahidol University
Associate Professor Chonnakarn Jatchavala, Prince of Songkla University
Professor Jane Fisher, Monash University
Dr Kanpassorn Suriyasangpetch, Ooca
Dr Keerati Pattanaseri, Faculty of Medicine Siriraj Hospital, Mahidol University
Dr Napat Sittanomai, Faculty of Medicine Siriraj Hospital, Mahidol University
Dr Olarik Musigavong, Chaophya Abhaibhubejhr Hospital
Associate Professor Pattarawalai Talungchit, Faculty of Medicine Siriraj Hospital, Mahidol University
Associate Professor Phatta Kidruang, Thammasat University
Associate Professor Pochamana Phisalprapa, Faculty of Medicine Siriraj Hospital, Mahidol University
Assistant Professor Sasitorn Chantaratin, Faculty of Medicine Siriraj Hospital, Mahidol University
Simone Honikman, University of Cape Town
Dr Sirirat Ularntinon, Queen Sirikit National Institute of Child Health

Institutional and Network Partners

This report was developed through collaboration with the following institutional and network partners, who contributed to technical input, local coordination, and strategic development:

- Faculty of Medicine Siriraj Hospital, Mahidol University
- Care Policy and Evaluation Centre (CPEC), London School of Economics and Political Science
- PAM Foundation

Contents

3. Executive Summary

Perinatal mental health (PMH) problems, including depression, anxiety, and related conditions occurring during pregnancy and up to 12 months after childbirth, represent a major but under-recognised public health challenge globally. While the burden has increasingly been acknowledged internationally, PMH remains insufficiently integrated into maternal and child health systems in many low- and middle-income countries (LMICs), including Thailand.

This report presents one of the first consolidated analyses of the burden, policy landscape, and economic cost of untreated perinatal mental health problems in Thailand. Drawing on global evidence, Thai-specific research, and newly developed economic modelling, the report examines the impacts of PMH problems on mothers, infants, families, health systems, and wider society, alongside opportunities for policy and systems strengthening.

PREVALENCE

PMH problems affect at least **15% of women** in Thailand, with ~1 in 5 pregnant women showing depressive symptoms in early Siriraj Hospital data.

ECONOMIC BURDEN

Estimated at **USD 2.1 billion per year** (THB 68B) — largely invisible costs outside the healthcare system.

INTERGENERATIONAL IMPACT

46% of costs relate to children — linking untreated PMH to low birth weight, preterm birth, and impaired cognitive development.

IMPLEMENTATION GAPS

Thailand has screening tools and UHC infrastructure, but **inconsistent referral pathways, workforce shortages, and stigma** limit effective coverage.

The report shows that PMH problems are common in Thailand. Reported prevalence rates vary substantially across settings and populations, ranging from approximately 5% to over 40%, with particularly elevated rates observed among women facing psychosocial stress, socioeconomic vulnerability, migration-related challenges, or limited social support. Emerging evidence from an ongoing prospective cohort study at Siriraj Hospital similarly suggests that approximately one in five pregnant women experience depressive symptoms during pregnancy.

The consequences of untreated PMH problems extend well beyond maternal wellbeing. Evidence links PMH problems to adverse obstetric outcomes, impaired maternal functioning, reduced quality of life, suicidality, disrupted mother–infant bonding, and poorer long-term child developmental outcomes. These impacts carry significant intergenerational implications, affecting not only health outcomes, but also education, productivity, and long-term human capital development.

Drawing on evidence about prevalence and short- and long-term consequences, the economic modelling analysis presented in this report, which was led by the Care Policy and Evaluation Centre (CPEC), London School of Economics and Political Science, finds that the estimated costs of untreated PMH problems are USD 2.1 billion (THB 68 billion) annually per birth cohort through impacts on maternal health, child development, productivity, and quality of life (disability-adjusted life year, "DALY") losses. The overall figure equates to USD 3,253 (THB 105,000) per woman giving birth.

Of the total costs, maternal-related costs are estimated at USD 1.16 billion (THB 38 billion) (54%) and child-related costs are estimated at USD 0.94 billion (THB 30 billion) (46%).

> *Investment in mental health is not only a matter of health system improvement, but a foundation for long-term economic and social development. In the case of perinatal mental health, the returns to effective intervention extend across the life course and into the next generation.*
>
> **Professor Martin Knapp CBE, Care Policy and Evaluation Centre (CPEC), London School of Economics and Political Science**

Thailand possesses several important foundations for strengthening PMH care, including Universal Health Coverage, high antenatal care utilisation, validated screening tools, and integration of depression screening within maternal services. However, major implementation gaps remain. These include inconsistent screening practices, unclear referral pathways, workforce shortages, under-recognition of severe outcomes, limited specialist access outside urban centres, and persistent stigma surrounding mental illness and suicide.

The report identifies several priority areas for national action:

1. Development of a coordinated national PMH strategy
2. Standardisation of screening and referral systems
3. Expansion of task-sharing and workforce training approaches
4. Integration of PMH into maternal and child health services
5. Strengthening surveillance and research systems
6. Improved support for vulnerable and underserved populations
7. Increased cross-sector collaboration and policy alignment

Addressing PMH in Thailand will require coordinated action across health, social protection, labour, education, academia, and civil society sectors. Importantly, many effective interventions are feasible within existing maternal health infrastructure, particularly when integrated into routine antenatal and postnatal care systems.

This report is intended to support policymakers, healthcare leaders, researchers, professional societies, civil society organisations, and development partners in strengthening national dialogue and advancing evidence-informed action on maternal mental health in Thailand.

Ultimately, improving perinatal mental health is not only a healthcare priority, but also an investment in the wellbeing, development, and future prosperity of Thailand.

4. Introduction

Perinatal mental health (PMH) problems, including depression, anxiety, and related mental health conditions occurring during pregnancy and up to 12 months after childbirth, are increasingly recognised as a major public health issue globally. International evidence demonstrates that untreated PMH problems contribute to adverse maternal and child outcomes, including impaired maternal wellbeing, obstetric complications, suicidality, disrupted infant development, and long-term intergenerational impacts. Increasingly, PMH is also recognised as an economic and societal issue, with substantial long-term costs associated with reduced productivity, healthcare utilisation, and impacts on child development and future human capital.

Thailand has several important foundations for strengthening perinatal mental healthcare, including Universal Health Coverage, high antenatal-care utilisation, and routine depression screening within maternal health services. Nevertheless, PMH remains under-recognised and insufficiently integrated across the continuum of maternal and child healthcare. Existing evidence suggests that many women experiencing psychological distress during pregnancy and after childbirth remain unidentified, untreated, or unable to access appropriate support.

Research from Thailand indicates that PMH problems affect women across socioeconomic groups, with elevated risks associated with financial stress, limited social support, unintended pregnancy, migration-related vulnerability, and stigma surrounding mental illness. Despite growing awareness, Thailand currently lacks a comprehensive national perinatal mental health strategy. Screening practices vary across settings, referral pathways remain inconsistent, specialist services are concentrated primarily within urban centres, and evidence relating to intervention effectiveness and long-term outcomes remains limited.

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THAILAND

The Perinatal Alliance for Mental Health Thailand ("PAM Thailand") is being established to improve perinatal mental health throughout Thailand.

At the same time, momentum surrounding maternal mental health in Thailand is increasing. Ongoing work led by researchers at Siriraj Hospital, alongside collaboration between clinicians, academics, civil society organisations, and international partners, has contributed to growing recognition of PMH as a national policy priority.

This report accompanies wider national dialogue surrounding the "Mothers' Mental Health Matters" symposium convened by Perinatal Alliance for Mental Health Thailand (PAM Thailand). It draws from economic research conducted by the Care Policy and Evaluation Centre (CPEC), London School of Economics and Political Science (for more information: Global Economics of Maternal Mental Health project (GEMMH).

This report was developed to support evidence-informed dialogue and policy development on perinatal mental health in Thailand. It synthesises:

- Global evidence on PMH prevalence, risk factors, outcomes, and intervention approaches;
- Thailand-specific evidence relating to prevalence, screening, policy, and service delivery;
- Economic modelling estimating the societal costs of untreated PMH problems in Thailand; and
- Recommendations for strengthening national systems, policy, research, and implementation.

Improving perinatal mental health has the potential to improve outcomes not only for mothers, but also for children, families, communities, and society more broadly. Strengthening PMH systems in Thailand therefore represents both a public health imperative and an investment in future social and economic wellbeing.

5. Methods

a) Global Evidence

A literature review was conducted to summarise global evidence on perinatal mental health (PMH). Internet-based academic search engines (PubMed and Google Scholar) were utilised to identify influential and recent publications from the past 10 years (2015-2025), including systematic reviews, meta-analyses, multi-country studies, and global guidance documents.

Search terms included combinations of *perinatal mental health, maternal mental health disorders, global burden, risk factors, maternal and child outcomes, low- and middle-income countries, and integration of mental health into maternal and child health services*. Articles were selected based on relevance to the study objectives, recency, and quality. Findings were synthesised thematically to describe global patterns in prevalence, determinants, consequences, and models of care, in order to contextualise the Thailand-specific evidence that follows.

b) Thai-Specific Evidence

A targeted literature review was conducted to identify existing evidence on perinatal mental health (PMH) in Thailand, including prevalence, screening practices, service delivery models, and intervention approaches. Searches were performed using major electronic databases (PubMed, Scopus, Google Scholar), key Thai-language academic databases, and grey literature sources such as national policy documents and Ministry of Public Health reports.

Search terms included combinations of: *perinatal depression*, *maternal mental health*, *Edinburgh Postnatal Depression Scale*, *2Q screening*, *postpartum depression*, *Thailand*, and related terms in Thai[1]. Articles published between 2018 and 2025, in either English or Thai, were included to ensure relevance to the current national PMH context.

The number of articles initially identified across Google Scholar and PubMed totalled 1,068, of which 47 were reviewed for relevant, and 17 ultimately included. All sources are published in English, including those by Thai authors (Phoosuwan, Sornmayura, Tuksanawes, Petpornprapas, etc.), which are all published in English-language international or Thai-based English-language journals (e.g. J Med Assoc Thai, Academic Psychiatry and Psychology Journal).

Due to variability in study methodologies, screening thresholds, and population samples, findings should be interpreted with caution when comparing prevalence estimates across studies.

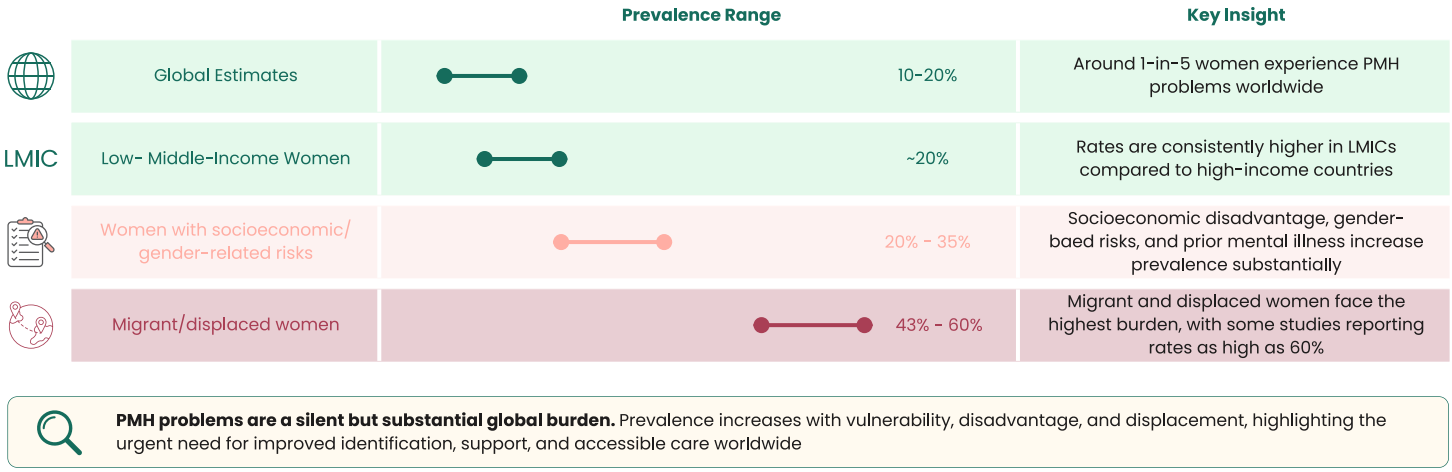
[1] ภาวะซึมเศร้าหลังคลอด, โรคซึมเศร้าหลังคลอด ประเทศไทย, สุขภาพจิตแม่หลังคลอด ไทย, ภาวะซึมเศร้าในมารดาหลังคลอด

6. Global Evidence on Perinatal Mental Health

a) Prevalence

Perinatal mental health (PMH) problems, often referred to as common perinatal mental health disorders (CPMDs), represent a substantial global burden, affecting both high-income and low- and middle-income countries (LMICs). These common conditions, often described in the literature as a 'silent burden,' are estimated to affect nearly 20% of pregnant and postpartum women in LMICs (McNab et al., 2022a). Prevalence varies substantially between countries, shaped by differences in definitions, screening, reporting, and service availability. Rates are consistently higher in LMICs, particularly among women facing socioeconomic disadvantage, gender-based risks, or a history of mental illness (McNab et al., 2022b). Certain populations, such as migrant or displaced women, experience a substantially higher prevalence of PMH symptoms, with some studies documenting rates of depressive symptoms in 43-60% of women (Rodriguez et al., 2024). PMH problems are associated with maternal morbidity and mortality as well as adverse neonatal outcomes, highlighting the importance of timely identification and intervention (Wilson et al., 2024).

GLOBAL PREVALENCE OF PERINATAL MENTAL HEALTH PROBLEMS



PMH problems are a silent but substantial global burden. Prevalence increases with vulnerability, disadvantage, and displacement, highlighting the urgent need for improved identification, support, and accessible care worldwide

b) Risk Factors

Risk factors for perinatal mental health problems are multifaceted and intersect across individual, social, and structural domains. Socioeconomic vulnerability, including low income, limited education, and unemployment, consistently emerges as a predictor of poor perinatal mental health (Wilson et al., 2024). Psychosocial stressors such as lack of social support, intimate partner violence, and migration-related challenges further increase the risk of perinatal mental health problems (Stevenson et al., 2023; McNab et al., 2022b). Medical and obstetric factors, including prior mental illness and complications during pregnancy, also contribute to vulnerability. Structural and cultural determinants, such as stigma surrounding

mental health and the absence of culturally adapted services, may further increase these risks, particularly in LMIC settings (Atif et al., 2015; McNab et al., 2022b). The persistent lack of integration of mental health into maternal and child health services contributes to ongoing under-recognition and undertreatment, leaving many women without access to appropriate care.

KEY RISK FACTORS IDENTIFIED IN THAI RESEARCH

Financial Stress

Low income, indirect care costs, exclusion from maternity leave (50% informal sector)

Limited Social Support

Insufficient partner/family support; strong predictor in the Charoenkrung Pracharak study

Unintended Pregnancy

27.7% of pregnancies in one study; significantly higher depressive scores

Migration Status

Legal insecurity, isolation, and service barriers elevate risk to 38–47%

Relationship Conflict

Low income, indirect care costs, exclusion from maternity leave (50% informal sector)

Stigma & Cultural Norms

Low income, indirect care costs, exclusion from maternity leave (50% informal sector)

Risk factors aren't confined to lower-income women. Higher-income women experiencing unintended pregnancy, pregnancy misaligned with expectations, or limited social support also face elevated risk — psychosocial factors cut across socioeconomic

c) Outcomes: Maternal Health Impacts and Newborn Impacts

The consequences of untreated perinatal mental health problems are wide-ranging. For mothers, these problems are associated with increased risk of chronic mental illness, impaired functioning, and elevated rates of suicide. Maternal mental health problems also negatively affect engagement with prenatal and postnatal care, adherence to health recommendations, and capacity for caregiving (Wilson et al., 2024). For children, perinatal mental health problems are linked to increased risk of low birth weight, preterm birth, and impaired cognitive and socio-emotional development (Surkan et al., 2011; Smith-Fawzi et al., 2019; Dadi et al., 2020). The intergenerational impact of these problems underscores their importance as a public health priority, extending beyond maternal health to child development and broader societal outcomes (Stevenson et al., 2023).

d) What Works: Global Guidance and Interventions

Global guidelines and implementation research provide a framework for integrating perinatal mental health into maternal and child health services. The World Health Organization (2022) recommends a systems-based approach that includes routine screening during antenatal and postnatal care, evidence-based psychosocial and pharmacological interventions, workforce capacity building, and continuous monitoring and evaluation. McNab et al., 2022 and others similarly emphasise that sustainable PMH integration is likely to require alignment with existing maternal health workflows, task-sharing models in which non-specialist providers deliver interventions such as cognitive behavioural therapy (CBT) and interpersonal psychotherapy (IPT), and strong referral pathways supported by trained personnel (Prina et al., 2023).

Community-based interventions, including peer support groups, home visits, and culturally tailored counselling programs, may improve access and acceptability, especially for women facing stigma or limited-service availability. Implementation science from LMIC settings reinforces that PMH programs should be contextually adapted and co-designed with local stakeholders to ensure feasibility and sustainability. Health system readiness, supportive leadership, and feedback mechanisms further strengthen implementation fidelity (WHO, 2022; McNab et al., 2022b).

Emerging evidence also supports digitally delivered psychosocial interventions in resource-constrained settings.

In sum, perinatal mental health problems represent a significant global health challenge, particularly in LMICs, but evidence indicates that integration into existing maternal and child health services is both feasible and effective. Effective interventions generally require attention to context, workforce capacity, and implementation strategies, providing a solid foundation for country-specific investment and program development. Understanding the global patterns of PMH prevalence, risk factors, outcomes, and intervention approaches provides a context for examining how these issues manifest in Thailand and highlights areas where country-specific data and tailored interventions are needed.

7. Thailand-Specific Evidence on Perinatal Mental Health Problems

The Thailand-specific evidence base remains comparatively limited, thus, the studies that are summarised below focus mainly on depression, not the wider spectrum of common perinatal mental health problems, as was done for the global literature review.

a) Prevalence

Perinatal depression prevalence in Thailand ranges widely from 5.3% to 41.7% (Hong & Buntup, 2023), with considerable variation across different populations, cultural contexts, and study methodologies. A pooled estimate suggests the national prevalence is approximately 12.5% (Tuksanawes et al., 2020), though this figure masks substantial regional and demographic differences.

Studies reveal considerable variation in antenatal depression prevalence:

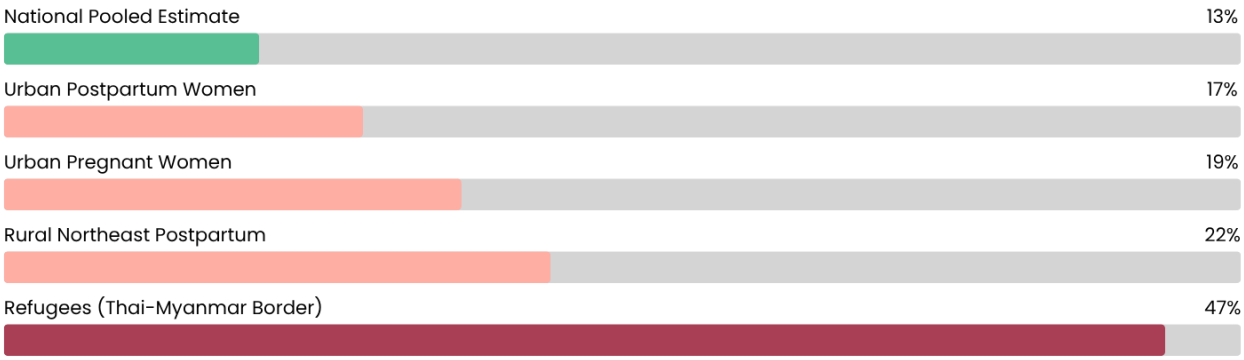
- Urban pregnant women show an 18.9% (Tuksanawes et al., 2020) prevalence rate;
- A northeastern province study found 46.8% (Phoosuwan et al., 2018) prevalence in late pregnancy; and
- A 2021 study in a northeastern province found 17.8% prevalence of depression among 112 pregnant women using the Ministry of Public Health's 2-question screening tool (Phoosuwan et al., 2021).

Postpartum Depression:

- Bangplee Hospital reported 13.1% prevalence at four weeks postpartum (Petpornprapas, 2020); and
- Recent research identified 17% prevalence at six weeks postpartum (Sornmayura et al., 2024), with higher rates of 22% in rural northeastern provinces of Thailand (Phoosuwan et al., 2020a).

Among migrant and refugee women on the Thai-Myanmar border, prevalence rates of perinatal depression were found to be significantly elevated at 38.6% for migrants and 47.3% for refugees (Fellmeth et al., 2021), suggesting an association between migration status and increased mental health vulnerability.

PREVALENCE OF PERINATAL MENTAL HEALTH PROBLEMS ACROSS THAI POPULATIONS



Research in Thailand is mixed with studies typically being single-site, cross-sectional, and with varied methodologies. However, in-line with global studies, prevalence increases with vulnerability, disadvantage, and displacement.

b) Risk Factors

Multiple sociodemographic, economic, and psychosocial factors contribute to perinatal mental health problems in Thailand. Several studies have shown that pregnant women in Thailand who have a low income, have limited social support, and report low psychological well-being are at increased risk for postpartum depression (Phoosuwan et al., 2021). Low personal monthly income serves as a risk factor for increased depressive symptoms at both 1 and 3 months postpartum (Phoosuwan et al., 2020a). Assistant Professor Pattanaseri from Department of Psychiatry, Mahidol University, Thailand further explains that financial constraints remain an important barrier to timely access to maternal mental healthcare—particularly for women in low-income households. Although treatment itself may cost as little as US $1 per session, indirect expenses such as transportation and the loss of daily wages often reduce care-seeking and can contribute to worsening symptoms of conditions such as postnatal depression (Resolve Global Health, 2025).

Despite this, higher-income women are not exempt from risk. Pattanaseri highlights that pregnancies misaligned with personal expectations—such as an unpreferred gender of the baby, unexpected timing, or ambivalence toward the pregnancy—can also be important psychosocial stressors contributing to perinatal mental health problems (Resolve Global Health, 2025). Regardless of income, relationship and social support factors play an important role in perinatal mental health risk factors in Thailand.

The Charoenkrung Pracharak study, a postpartum depression prevalence study conducted in the Charoenkrung Pracharak Public Hospital, identified insufficient social support as a strong predictor of elevated postpartum depression scores (Sornmayura et al., 2024). Unintended pregnancy was also significantly associated with higher depressive symptoms, with 27.7% of pregnancies in the study reported as unintended (Sornmayura et al., 2024). Additionally,

adverse relational environments—such as divorce, marital or family conflict, and difficulties with extended family—were associated with increased risk (Tuksanawes et al., 2020).

Psychosocial determinants similarly contribute to antenatal and postnatal mental health vulnerability. Low psychological well-being, reduced self-esteem, and a lack of confidence in the ability to manage stress during pregnancy and the postpartum period were also associated with increased vulnerability (Phoosuwan et al., 2018), (Phoosuwan et al., 2021).

Postpartum stressful life events, excluding childbirth-related stressors, were associated with elevated depression scores, affecting 71.7% of women in the high-depression group. Attitudes toward mental health during pregnancy were also identified as a predisposing factor; lower perceived importance of mental health was linked to higher likelihood of antenatal depression in the northeastern study.

Structural factors influence risk factors as well. Maternity leave of 90 days was found to be associated with lower reported depression scores, with substantially higher uptake among women without postpartum depression (71.1%) compared to those with high depression scores (50%) (Sornmayura et al., 2024). However, statutory maternity-leave entitlements apply only to formal-sector workers, excluding the informal sector, which employs nearly 50% (OECD, 2025) of the workforce in Thailand (Resolve Global Health, 2025).

INFORMAL SECTOR

~50%

Approximately half of Thailand's workforce is informally employed, excluding them from statutory maternity leave protections.

c) Outcomes: Maternal Health Impacts and Newborn Impacts

1. Adverse Obstetric Outcomes

Research from Thailand demonstrates that antenatal depression has adverse associations with obstetric outcomes and, if untreated, can lead to adverse complications (Tuksanawes et al., 2020). A Bangkok-based study at Vajira Hospital noted that there is evidence linking antenatal depression to foetal growth restriction, preterm delivery, and low birth weight among Thai pregnant women (Tuksanawes et al., 2020). The study emphasised that maternal depression remains under-recognised, under-diagnosed, and undertreated in Thailand, and that antenatal screening is an important strategy to support improved maternal and neonatal outcomes (Tuksanawes et al., 2020).

2. Maternal Mortality and Suicide

Suicide remains one of the most severe outcomes of perinatal mental health problems in Thailand. Evidence from northeastern Thailand indicates that antenatal depressive symptoms are associated with an increased risk of suicide, adverse infant developmental outcomes, and reduced long-term maternal quality of life (Phoosuwan et al., 2018). The Charoenkrung

Pracharak study further highlighted ongoing concerns regarding suicidality and infanticidal thoughts among women with postpartum depression.

However, stigma surrounding suicide and mental illness may contribute to under-recognition. Maternal deaths by suicide are frequently misclassified as accidental, resulting in underestimation of their true prevalence. In addition, despite WHO recommendations, suicides occurring during pregnancy or within 12 months postpartum are not classified as direct obstetric deaths in Thailand, limiting comprehensive surveillance of severe maternal mental health outcomes (Jatchavala et al., 2023).

3. Newborn and Child Impacts

Maternal mental health difficulties may influence both pregnancy experience and early child outcomes. Qualitative evidence from northeastern Thailand indicates that women with antenatal depressive symptoms frequently express heightened concerns about foetal health and the possibility of congenital abnormalities (Phoosuwan et al., 2020b), highlighting the psychological distress experienced during pregnancy. Postpartum depression may further impair the mother–infant relationship, with affected mothers reporting low mood, reduced enjoyment, and emotional detachment (Sornmayura et al., 2024), which may disrupt early bonding processes.

d) Current Practices and Policies

1. Policy Framework

Thailand has introduced measures to strengthen mental health governance through its Universal Health Coverage system and the Mental Health Act, first enacted in February 2008 and amended in July 2019[2]. The Department of Mental Health oversees implementation of the Act, including protection of service users' rights and coordination of mental health policy (Wannasewok et al., 2022).

Depression screening during pregnancy has been incorporated into routine antenatal care at all levels of the health system (Wannasewok et al., 2022). Pregnant women can access antenatal services free of charge at registered facilities, where maternal-depression screening is conducted using various validated instruments (Phoosuwan et al., 2018).

Although components of PMH care have been integrated into existing maternal health services, Thailand does not yet have a comprehensive national programme dedicated specifically to perinatal mental health.

Efforts are ongoing to further integrate mental health care into maternal and child health services, consistent with WHO guidance. This includes task-sharing approaches that support an expanded role of primary health-care workers in identification and basic management of

[2] Phiphopthatsanee. Mental health law in Thailand. BJPsych International. 2025. https://doi.org/10.1192/bji.2025.14

perinatal mental health problems, alongside initiatives to train non-specialist providers (Abdelghaffar et al., 2023).

To strengthen these developments, Pattanaseri suggested that future policy directions could prioritise the establishment of a national perinatal mental health strategy that embeds routine screening, early intervention, (and context-specific support mechanisms). Urban areas could benefit from expanded access to specialist services and workplace-based support, while rural regions are likely to require strengthened task-sharing models through community-based providers to address service-availability gaps (Resolve Global Health, 2025).

2. Measurement Challenges and Remaining Gaps

Although the Edinburgh Postnatal Depression Scale (EPDS) has been validated for use in Thailand, studies employ a wide range of cut-off scores, and screening practices differ across settings. The Ministry of Public Health's 2-Question Tool (2Q), which demonstrated acceptable sensitivity (73%) and specificity (90%) in the general population, is also used for antenatal depression screening (Phoosuwan et al., 2021).

Despite having a validated EPDS and a MOH 2Q tool accessible to providers, maternal depression remains under-recognised, under-diagnosed, and undertreated. Variation in screening instruments and thresholds (e.g., EPDS ≥6 to ≥13, differing forms of the 2Q) underscores continuing challenges in standardising screening procedures nationwide (Phoosuwan et al., 2021, and Sornmayura et al., 2024).

Current Thai research on perinatal mental health remains limited in scope. Most studies focus on prevalence and individual-level risk factors, while evidence on intervention effectiveness—particularly community-based models—remains scarce (Jatchavala et al., 2023). Additionally, the lack of clearly defined referral pathways for women identified with perinatal mental health needs may limit continuity of care (Jatchavala et al., 2023).

3. Resource Constraints

Mental health services in Thailand remain underfunded. In 2024, only 1.8% of the national health budget was allocated to the Department of Mental Health (Phiphopthatsanee, 2025), and mental health expenditure accounted for just 2.3% of total government health spending (Wannasewok et al., 2022).

BUDGET ALLOCATION

1.8%

Only 1.8% of the national health budget was allocated to the Department of Mental Health in 2024.

The country has slightly more than 800 psychiatrists, concentrated primarily in Bangkok and other major urban centres, contributing to access barriers for rural populations (Phiphopthatsanee, 2025). As reflected in the northeastern study, research in rural areas often relies on hospital-based sampling due to the limited availability of specialised perinatal mental health services (Phoosuwan et al., 2021).

SPECIALIST WORKFORCE

800+

Thailand has only slightly more than 800 psychiatrists, concentrated primarily in Bangkok and major urban centres.

4. Stigma and Barriers to Care

Stigma surrounding mental illness may inhibit early care-seeking. Cultural norms valuing emotional restraint and "saving face" may contribute to fear, shame, and hesitation to report psychological distress. Lack of public knowledge regarding the causes and manifestations of perinatal mental health problems may reinforce stigma (Resolve Global Health, 2025).

As a result, depressive symptoms such as fatigue, sleep disturbance, and low mood may be misinterpreted as typical postpartum adjustment, potentially contributing to delayed recognition and treatment. The Charoenkrung Pracharak study emphasised that postpartum depression may go undetected because common mood-related symptoms are attributed to normal maternal role changes and new mothers may be reluctant to disclose emotional difficulties (Sornmayura et al., 2024).

5. Policy Gaps

Recent amendments to Thailand's Labour Protection Act (effective December 2025) extend maternity leave to 120 days, with full wage coverage for 60 days, and introduce 15 days of paid paternity leave for spouses. However, eligibility remains limited to formal-sector workers. Given that a substantial share of women in Thailand's labour force are employed informally (50% according to one estimate by OECD, 2025), a large proportion of mothers are excluded from these protections. Persistent gaps in parental-leave coverage may therefore reinforce unequal caregiving responsibilities and increase psychosocial pressures on mothers.

e) Preliminary Prevalence Data from Siriraj Study

A landmark prospective cohort study is currently underway at Siriraj Hospital, Bangkok, titled "Prevalence and Factors Associated with Depression Among Pregnant Women of Siriraj Hospital, Bangkok". Led by Assistant Professor Keerati Pattanaseri with a multidisciplinary team of psychiatrists, obstetrician-gynaecologists, and paediatricians, this two-year study (launched 2025) represents one of Thailand's larger recent efforts to generate improved local data on perinatal mental health (PAM Foundation, 2025).

Early antenatal findings from the Siriraj study reveal high rates of positive screening, consistent with prior Thai urban studies reporting prevalence rates (Samranjit et al., 2025). These

preliminary results underscore the necessity for routine antenatal depression screening and integrated psychosocial support services, with final study outcomes expected to support evidence-based policy development and clinical practice guidelines for perinatal mental health care in Thailand.

8. The Economic Cost of Untreated Perinatal Mental Health Problems in Thailand

a) Cost Impact Analysis

Cost impact analysis provides a systematic framework to quantify the economic burden of diseases and health conditions, capturing their impact on individuals, health systems, and wider society (Drummond et al., 2015). Unlike cost-effectiveness analyses, which compare costs and benefits of alternative interventions, cost impact studies estimate the total costs associated with a condition. As such, they are particularly valuable for agenda-setting and priority-setting, helping policymakers understand the scale and distribution of economic impacts and identify areas where investment may yield substantial returns.

In the context of maternal mental health, cost impact studies are especially relevant because they can help to quantify the short- and long-term consequences, many of which extend beyond the health sector, affecting productivity, long-term human capital development, and intergenerational outcomes. By quantifying these broader societal costs, cost impact studies provide an important complement to clinical and epidemiological evidence.

b) Modelling Approach

Building on established approaches for estimating the costs for perinatal mental health problems in LMICs (Bauer et al., 2024a, b; 2025), the analysis was conducted for Thailand by CPEC in close collaboration with academic, clinical, and civil society partners in Thailand and internationally, including Prince of Songkla University, Thammasat University, Mahidol University, Chaophraya Abhaibhubejhr Hospital, the University of Cape Town, Monash University, and PAM Foundation (Bauer et al., 2026).

The analysis employed a modelling approach to estimate the long-term costs of untreated common mental health problems in Thailand, including both the costs for mothers and their children. Following established health economic evaluation standards (WHO, 2022; Chisholm al., 2016), the analysis adopts a societal perspective, incorporating costs borne across sectors, including healthcare expenditure, productivity losses, and health-related quality-of-life losses.

Health-related quality-of-life losses were quantified using disability-adjusted life years (DALYs) and monetised using a human capital approach, valued at 0.5 GDP per capita (Stenberg et al., 2017). Productivity losses were estimated based on reductions in labour force participation and earnings. Direct healthcare costs were derived from national reimbursement rates.

All costs were discounted at 3% in line with international recommendations (Haacker et al., 2020). The model simulated a birth cohort of women and their children, projecting outcomes over a 10-year horizon for mothers and up to 40 years for children. Adverse maternal and child outcomes linked to perinatal mental health problems were modelled, based on epidemiological evidence from birth cohort studies (Surkan et al., 2011; Smith-Fawzi et al., 2019; Dadi et al., 2020). Thailand-specific or regional data were used where available.

c) Estimated Aggregated and Disaggregated Costs

The findings indicate that perinatal mental health problems impose a substantial economic burden in Thailand in the absence of scaled-up treatment.

- Total cost per woman giving birth: USD 3,253 (THB 105,000)
- Aggregate cost (annual birth cohort): USD 2.1 billion (THB 68 billion)

TOTAL ANNUAL ECONOMIC BURDEN

USD 2.1 billon

THB 68 billion

Per annual birth cohort

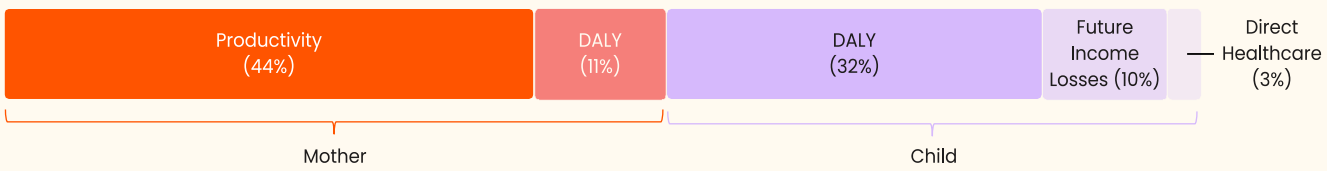
Costs were distributed across population groups as follows:

- Maternal costs: USD 1.16 billion (THB 38 billion) (54%)
- Child-related costs: USD 0.94 billion (THB 30 billion) (46%)

These estimates reflect discounted lifetime costs, capturing both immediate and long-term consequences for mothers and their children. The magnitude of child-related costs highlights the intergenerational transmission of economic burden associated with untreated perinatal mental health problems (Bauer et al., 2022; Bauer et al., 2024).

Across all domains, the economic burden is driven predominantly by indirect costs, rather than direct healthcare expenditure.

DISTRIBUTION OF TOTAL BURDEN BY MOTHER & CHILD



The majority of costs are indirect. Productivity and DALY-related losses account for nearly 90% of the total burden, meaning current health system accounting significantly underestimates the true societal impact.

For mothers:

- Productivity losses: USD 1,443 (THB 47,000) per woman giving birth (80%)
- DALY-related losses: USD 352 (THB 11,500) per woman giving birth (20%)

For children:

- DALY-related losses: USD 1,032 (THB 33,700) per woman giving birth (71%)
- Future income losses: USD 335 (THB 11,000) per woman giving birth (23%)
- Direct healthcare costs: USD 91 (THB 3,000) per woman giving birth (6%)

Overall, productivity losses and DALY-related losses account for the majority of total costs, consistent with previous global and multi-country analyses (Chisholm et al., 2016). This reflects the long-term impacts of perinatal mental health problems on functional capacity, economic participation, and quality of life.

d) Implications for Investment

The estimated USD 2.1 billion (THB 68 billion) cost for a single annual cohort represents a substantial and largely hidden economic burden, as most costs accrue outside the healthcare sector. The dominance of productivity and DALY losses indicates that current health system accounting significantly underestimates the true societal impact. From an economic perspective, these findings strengthen the case for investment in maternal mental health as a cross-sectoral policy priority.

The large share of costs attributable to children underscores the role of maternal mental health as a determinant of long-term human capital formation, with implications for education, labour markets, and economic growth (WHO, 2008; 2022). Given that many of these costs may be mitigated through effective early identification and treatment, investment in perinatal mental health has the potential to generate substantial economic returns. Even partial reductions in prevalence or severity could translate into meaningful cost savings across multiple sectors over time.

9. Discussion

a) Key Findings

This analysis synthesises global and Thailand-specific evidence on perinatal mental health (PMH), including prevalence, risk factors, health outcomes, service delivery, policy responses, and economic impact.

The literature indicates that PMH problems represent a substantial global burden and affect populations across high-, middle-, and low-income countries. Higher-risk groups include those facing socioeconomic disadvantage, gender-based risks, history of mental illness, and psychosocial issues. Although socioeconomic status likely plays an important role, the consistent findings among individuals from higher economic backgrounds suggest that psychosocial risk factors are relevant across socioeconomic groups (McNab et al., 2022a; McNab et al., 2022b; Wilson et al., 2024; Stevenson et al., 2023; Resolve Global Health, 2025).

Untreated PMH problems are associated with adverse maternal health outcomes, obstetric complications, impaired infant health, and poorer long-term child developmental outcomes.

Untreated PMH problems are associated with adverse maternal health outcomes, obstetric complications, impaired infant health, and poorer long-term child developmental outcomes. These impacts extend beyond maternal health, contributing to intergenerational and broader societal consequences (Dadi et al., 2020; Surkan et al., 2011; Wilson et al., 2024; Stevenson et al., 2023).

b) Thailand in the Global Context

Evidence from Thailand is consistent with broader global LMIC patterns, while also revealing distinct country-level dynamics. Prevalence rates reported in Thailand vary widely across regions and populations, with higher rates observed among women in northeastern provinces and migrant communities, such as those along the Thai-Myanmar border. This increased risk likely reflects intersecting vulnerabilities including legal insecurity, social isolation, and limited access to services. This is also consistent with international evidence highlighting migration-related vulnerability, supporting the need for equity-oriented national strategies (Phoosuwan et al., 2018; Phoosuwan et al., 2020a; Fellmeth et al., 2021; Stevenson et al., 2023).

Thai evidence further reinforces that financial stress is not solely through direct poverty but also via indirect costs of care and exclusion from social protections such as maternity leave, as seen for women in informal employment. Yet, higher-income women also experience elevated risk when pregnancies occur alongside psychosocial stressors (e.g., limited social support,

unintended pregnancy, relationship conflicts), indicating the importance of these factors beyond economic status alone (Resolve Global Health, 2025; OECD, 2025; Sornmayura et al., 2024; Tuksanawes et al., 2020).

Furthermore, adverse obstetric outcomes including preterm birth, low birth weight, and foetal growth restriction, align with global literature and supports the importance of early detection and intervention (Tuksanawes et al., 2020; Dadi et al., 2020). Maternal suicide and suicidality represent particularly serious outcomes yet remain systematically under-recognised due to stigma and limitations in surveillance and classification systems. This contributes to underestimation of the true burden within national surveillance systems (Phoosuwan et al., 2018; Jatchavala et al., 2023).

At the same time, Thailand differs from many LMICs in that it benefits from Universal Health Coverage, high antenatal-care utilisation, and routine depression screening within its maternal services (Wannasewok et al., 2022; Phoosuwan et al., 2018). Despite these structural advantages, there remains persistent under-recognition, variation, and limited follow-up, suggesting that service coverage alone has proven insufficient for full mental health integration (Phoosuwan et al., 2021; Sornmayura et al., 2024; Jatchavala et al., 2023). Overall, the evidence suggests that Thailand's challenge relates less to its initial access to maternal care, but the depth and quality of mental health integration within that care.

These findings should also be interpreted within Thailand's sociocultural context. These often emphasise emotional restraint and endurance, possibly to preserve social harmony. This can discourage disclosure of psychological distress, leading to a normalisation of psychological distress and delay to help-seeking (Resolve Global Health, 2025).

The stigma may further lead to minimisation of symptoms, misclassification, and silence, especially around the topic of suicide. Overall, these findings suggest PMH vulnerability in Thailand is not only shaped by individual risk factors, but also intersecting broader determinants, such as migration policy, gender and cultural norms, and labour protections.

c) Health System and Policy Implications

Despite the existing validated screening tools, including the EPDS and 2Q depression screen, PMH problems remain under-recognised, under-diagnosed, and undertreated in Thailand. Therefore, strengthening antenatal screening is an important strategy for improving outcomes. WHO guidance emphasises integration of mental health into maternal and child health services through routine screening, stepped-care models, task-sharing approaches, and strengthened referral systems (WHO, 2022; Phoosuwan et al., 2021; Sornmayura et al., 2024).

Given that screening tools are already in use, Thailand is relatively well-positioned compared to many other LMICs where detection remains limited. Evidence from LMIC settings has demonstrated that task-sharing in the form of trained non-specialist providers is a potentially

effective strategy, suggesting a feasible pathway for scale-up for Thailand (Prina et al., 2023; McNab et al., 2022b; Abdelghaffar et al., 2023).

Nevertheless, implementation gaps may limit the full application of WHO guidance. There is variation in screening threshold (standardised cut-offs), inconsistent referral pathways, and limitations in continuity of care between primary and specialist mental health services (Phoosuwan et al., 2021; Sornmayura et al., 2024; Jatchavala et al., 2023).

Additional structural challenges further constrain scale-up. Shortages of mental health specialists and the concentration of psychiatrists in urban centres represent major structural barriers to national scale-up. These workforce constraints are compounded by limited national investment in mental health services (Phiphopthatsanee, 2025; Wannasewok et al., 2022).

Thus, while task-sharing models are feasible and evidence-based, and Thailand is structurally well-positioned to adopt WHO-recommended models, clearer policy endorsement and additional resourcing may be required. A national PMH strategy should align screening, referral, workforce training, monitoring, and accountability across primary and specialist services. Importantly, screening is necessary but not sufficient; detection without treatment creates ethical and clinical gaps in care.

d) Limitations of the Evidence Landscape

This review highlights persistent methodological gaps in the research addressing PMH in Thailand. Most studies are cross-sectional and primarily focus on prevalence, while limited literature exists on examining causality or intervention. There is substantial scope for prospective and interventional study designs, which are more appropriate to establishing causal relationships than retrospective observational designs. Understanding causality is important to identify modifiable risk factors that can then be targeted. Ongoing initiatives such as the Siriraj prospective cohort study demonstrate an advance in producing more robust local data that can more reliably inform future policy and practice (Samranjit et al., 2025; Sutthi et al., 2025).

While screening has been integrated into routine antenatal care, inconsistencies in screening instruments, timing of assessment, and cut-off thresholds contribute to substantial variability in reported prevalence estimates. Studies using different versions of the Edinburgh Postnatal Depression Scale (EPDS) and the Ministry of Public Health 2Q screening tool have produced heterogeneous findings, limiting comparability across studies (Phoosuwan et al., 2021; Sornmayura et al., 2024).

In addition, some Thai studies have noted limited consideration of cultural and contextual factors and limited reporting of inter-rater reliability, which may reduce reproducibility, constrain causal interpretation, and increase vulnerability to confounding bias and measurement inconsistency (Sutthi et al., 2025). Without greater methodological consistency

and contextual standardisation, evidence-informed policy development may remain constrained.

Community-based and task-sharing interventions remain insufficiently evaluated within the Thai context, despite global evidence supporting these approaches in LMIC settings (Prina et al., 2023; Jatchavala et al., 2023). Future studies should not only address maternal outcomes, but also long-term child developmental outcomes. With little data on the latter, the scale of the full intergenerational impact remains an important evidence gap in the Thai context.

Surveillance challenges also persist, with under-reporting of suicide and misclassification within obstetric systems, where perinatal suicide may not be accurately recorded (Jatchavala et al., 2023). Addressing these methodological and surveillance gaps will likely be important for strengthening national evidence. Future research efforts must also consider cultural and contextual factors to ensure findings are both appropriate and locally applicable.

e) Future Implications

Our findings have identified important gaps in the current existing data, screening details and service integration related to PMH in Thailand. Strengthening PMH nationally will require coordinated and sustained action across both local and system-wide healthcare to implement a comprehensive national PMH strategy. As per the WHO guidance, perinatal mental health should be integrated into both maternal and child health services, to not only address problems that arise during the pregnancy and the postpartum period, but also long-term child developmental outcomes (WHO, 2022).

Key priorities include standardising screening protocols and cut-off thresholds, establishing clear and consistent nationwide referral pathways, and strengthening continuity of care between primary and specialist services. Improved surveillance of severe outcomes, particularly perinatal suicide, is also essential to enhance accountability and inform responsive policymaking (Jatchavala et al., 2023; WHO, 2022).

Workforce constraints and the concentration of specialists in urban centres support the rationale for task-sharing approaches; trained nurses, midwives, and community health workers delivering brief evidence-backed psychosocial interventions are a feasible strategy for scale-up within Thailand's existing health infrastructure (Prina et al., 2023; Phiphopthatsanee, 2025).

Addressing PMH must also extend beyond the health sector and attend to socioeconomic risk factors (OECD, 2025). For example, expanding social protection policies to include informal-sector mothers. Moreover, PMH represents both a public health and economic concern, and societal attitudes towards mental health and its stigma may benefit from broader public education initiatives. Reducing stigma may encourage earlier disclosure of psychological distress and improve recognition of early warning signs, rather than normalising symptoms as typical postpartum adjustment (Resolve Global Health, 2025).

From a research perspective, future studies should move beyond prevalence estimation and toward interventional study designs examining both maternal and child developmental outcomes. Such evidence will be key for evaluating effectiveness of implemented strategies.

To conclude, PMH in Thailand represents an important public health challenge. Translating the foundations of existing policies into effective, equitable, and sustained system-level action is essential to improve outcomes for mothers and future generations. Without sustained system-level improvements, the burden of untreated PMH problems will continue to produce long-term adverse outcomes in Thailand, on both a medical level and across wider societal systems.

10. Recommendations: National Roadmap for Perinatal Mental Health in Thailand

Addressing perinatal mental health (PMH) in Thailand requires a coordinated, multi-sectoral response that strengthens existing maternal health systems while embedding mental health integration across the life course. Despite high antenatal care coverage and the availability of validated screening tools, gaps remain in service integration, treatment pathways, workforce capacity, and equity of access across populations.

This roadmap outlines five strategic pillars: stakeholder engagement and governance, mapping of existing services, development and implementation of national guidelines alongside concurrent delivery solutions, and the establishment of a national research and monitoring agenda.

Implementation of the roadmap should occur in phased stages, beginning with pilot implementation in selected provinces, followed by evaluation and gradual national scale-up. Early implementation efforts should prioritise standardisation of screening protocols, workforce training, and establishment of referral pathways before expansion into broader system reforms.

NATIONAL ROADMAP

1. **Stakeholder collaboration & engagement**
   Convene a national PMH alliance across obstetric, psychiatric, paediatric, nursing, academic, and civil society stakeholders. Build shared ownership and cross-sector alignment
2. **Map existing care systems**
   Baseline assessment of screening practices, referral pathways, workforce distribution, geographic inequities, and existing pilots across urban and rural settings.
3. **Develop national PMH guidelines**
   Evidence-based guidelines spanning the full continuum — from risk prediction through to treatment, implementation, and financing.
4. **Concurrent solutions delivery**
   Parallel rapid actions: workforce training, Pink Book update, OB/GYN and paediatric toolkits, non-medical sector engagement, and low/no-cost rapid interventions.
5. **National research & monitoring agenda**
   PMH surveillance framework, longitudinal cohort studies (building on Siriraj), standardised tools, enhanced suicide reporting, and interventional study designs.

a) Stakeholder Collaboration and Engagement

Strengthening PMH in Thailand will require coordination across government, healthcare, academia, civil society, and lived-experience communities. One model adopted internationally in approximately 20 countries has been the development of an "Alliance", the development of a national PMH ecosystem by convening key stakeholders including the obstetric and gynaecological societies, psychiatric associations, paediatric and family medicine groups, nursing and midwifery bodies, universities, hospitals, NGOs, and community organisations.

This approach aims to support cross-sector alignment, reduce fragmentation, and create shared ownership of PMH priorities. Engagement with bodies such as the Royal Thai College of Obstetricians and Gynaecologists, Royal College of Psychiatrists of Thailand, and Royal College of Pediatricians of Thailand, maternal and child health services, and international partners will be important to support guideline development, workforce training, referral pathways, advocacy, and long-term systems integration.

b) Map of Existing Care Systems

A comprehensive national mapping of existing perinatal mental health services is required to establish a clear baseline for action. This should include assessment of current screening practices across antenatal and postnatal services, identification of tools used, such as the EPDS and 2Q, and documentation of referral pathways and follow-up systems. In parallel, it is essential to assess the availability and distribution of specialist mental health services and to understand workforce capacity across urban and rural settings.

This mapping exercise should also identify geographic and socioeconomic inequities in service access, particularly between formal and informal sector populations, as well as fragmentation points between maternal health and mental health systems. Existing pilot programmes, NGO-supported interventions, and informal community-based support structures should also be documented to inform future scale-up.

c) Development of Evidence-Based National PMH Guidelines

The development of national perinatal mental health (PMH) guidelines should be grounded in evidence-based practice and aligned with global recommendations, while remaining adaptable to Thailand's health system context. The guidelines should span the full continuum of care, from early risk detection through to treatment, implementation, and financing.

1. **Prediction**

Strengthen early identification of women at increased risk of perinatal mental health problems through integration of psychosocial risk screening into routine antenatal care, including

assessment of socioeconomic vulnerability, prior mental health history, and psychosocial stressors.

2. **Prevention**

Implement preventive interventions during pregnancy and the postpartum period, including psychosocial support, family and partner engagement, and community-based education to reduce stigma and strengthen protective social networks.

3. **Identification**

Standardise national screening protocols across antenatal and postnatal services, including harmonised use of validated tools (e.g., EPDS, 2Q), consistent timing of screening, and agreed cut-off thresholds to ensure comparability and continuity of care.

4. **Treatment**

Adopt a stepped-care model of treatment, including low-intensity psychosocial interventions delivered through task-sharing approaches, evidence-based psychological therapies (e.g., CBT, IPT), and appropriate pharmacological management for moderate to severe cases, supported by clear referral pathways between primary and specialist care.

5. **Implementation & Phased Roll-Out**

Implement a phased national roll-out beginning with pilot sites in selected urban and rural provinces, followed by scale-up informed by evaluation findings. This should include workforce training, integration of digital health tools where appropriate, and strengthening of supervision and referral systems to ensure quality of care.

6. **Budget & Financing**

Develop a fully costed national implementation plan, including integration into Universal Health Coverage mechanisms. Financing strategies should identify sustainable domestic funding sources while also considering complementary external or donor-supported investments during initial scale-up phases.

d) Concurrent Solutions Delivery

Alongside the development of national guidelines, a set of concurrent implementation strategies should be advanced to enable rapid translation of policy into practice. These components focus on strengthening workforce capacity, standardising tools and resources, and identifying feasible entry points for early action within existing systems.

1. **Training & Workforce Development**

Scale up capacity-building for the existing maternal and primary healthcare workforce through structured training on perinatal mental health screening, identification, basic psychosocial support, and referral pathways. This should prioritise task-sharing approaches to expand service delivery within resource-constrained settings.

2. **“Pink Book” review & alignment**

The “Pink Book”, which contains recommendations for parenting, in addition to a version of the EPDS, should be updated to be aligned with guidelines, along with links to electronic resources, including the EPDS for which those who complete are pointed towards appropriate resources and with the potential for follow-up based on score.

3. **“Toolkits” for identification**

Obstetricians/Gynaecologists and Paediatricians, with their contact of potential and new parents, are in an important position to be able to provide information to, and identify those, mothers with potential PMH problems. They could be equipped with “toolkits” to both educate them and provide to new parents (physically or electronically).

4. **Non-Medical Sectors Strategy (e.g. social development)**

Healthcare workers, and other support systems, within Thailand are important points of contact which interact with new mothers who should be educated and also provided with the relevant information to provide to new parents.

5. **Exploration of Rapid No/Low-Cost Actions**

Identify and implement immediate, low-resource interventions that can be rapidly deployed within the current health system. These may include standardisation of existing screening practices, integration of perinatal mental health messaging into antenatal education, basic stigma reduction initiatives, and strengthening provider awareness of referral pathways.

e) National Research Agenda and Monitoring System

A national research and monitoring agenda is essential to sustain progress and strengthen the evidence base. This should include the development of a PMH surveillance framework integrated into routine health information systems, as well as longitudinal and multi-site cohort studies to better understand variation across populations and regions.

Priority should be given to evaluating the effectiveness of task-sharing models and community-based interventions, alongside strengthening evidence on long-term child developmental outcomes, which remain a key gap in the Thai context. Existing initiatives, including the *Siriraj cohort study*, should be expanded and leveraged to inform national policy.

In addition, standardisation of measurement tools and thresholds is critical to improving comparability across studies. Enhanced reporting of severe outcomes, including perinatal suicide, should be prioritised to improve surveillance accuracy and accountability. Together, these efforts will support a more robust and policy-relevant evidence base for future decision-making.

11. Report Limitations

This report should be interpreted in light of several limitations within the available evidence base and modelling assumptions.

First, the Thai evidence base on perinatal mental health remains relatively limited compared with higher-income settings and focuses largely on depressive disorders, with less evidence available for anxiety disorders, postpartum psychosis, bipolar disorders, and other perinatal psychiatric conditions.

Second, substantial methodological variation exists across studies, including differences in screening tools, cut-off thresholds, populations, and timing of assessment. Many studies are also cross-sectional, limiting causal interpretation and longitudinal understanding of outcomes (Sutthi et al., 2025).

Third, evidence on infant and longer-term child developmental outcomes in Thailand remains limited, meaning the full intergenerational and societal impacts may be underestimated.

Fourth, the economic modelling relied on a combination of Thai and international evidence where local data were unavailable. Although based on established methodologies and the best available evidence, uncertainty remains regarding the precise scale of long-term impacts within the Thai context.

Finally, under-recognition, under-reporting, stigma, and limitations in screening and surveillance systems may contribute to underestimation of the true burden of maternal mental health problems. As additional Thai research and prospective cohort data emerge, prevalence estimates, risk factors, intervention effectiveness, and economic modelling assumptions may be refined over time.

Taken together, these limitations suggest that the estimated burden presented in this report is likely to be conservative, particularly given under-recognition of PMH problems, incomplete surveillance of severe outcomes, and limited availability of long-term child outcome data in Thailand.

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