

**EFFECTIVENESS OF THE MIDWIFE-LED CONTINUITY OF CARE MODEL IN IMPROVING MATERNAL AND NEONATAL HEALTH****EFEKTIVITAS MODEL CONTINUITY OF CARE BERBASIS BIDAN TERHADAP PENINGKATAN KESEHATAN IBU DAN BAYI****Redha Ulfa**

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Maternal and neonatal mortality rates remain a global challenge due to fragmented healthcare delivery models. This study aims to analyze the transformative mechanisms of the Midwife-Led Continuity of Care (MLCC) model in improving the quality of clinical care and the childbirth experience. A systematic narrative review was conducted of the literature retrieved from the PubMed, Scopus, ScienceDirect, and Cochrane databases (2014–2024). Thematic analysis was employed to synthesize evidence on the clinical, psychosocial, and systemic mechanisms underpinning the MLCC model. The findings indicate that MLCC significantly enhances early risk detection through strong therapeutic relationships and transparent communication. Physiologically, this model reduces iatrogenic medical interventions, such as cesarean sections and synthetic induction, by respecting the biological rhythm of childbirth. Furthermore, continuous support has been shown to mitigate stress through the regulation of psychoneuroendocrinological pathways, increasing endogenous oxytocin levels and stabilizing the hypothalamic–pituitary–adrenal (HPA) axis. The integration of the Donabedian framework confirms that the synergy between autonomous midwifery team structures and woman-centered care processes leads to more resilient health outcomes. MLCC represents an effective systemic strategy for transforming maternal care from reactive to proactive. The integration of this model into national health policies is strongly recommended to achieve the Sustainable Development Goals (SDGs).

**Keywords:** Midwife-led continuity of care, MLCC, maternal and neonatal health, medical interventions, psychoneuroendocrinology.

**ABSTRAK**

Angka kematian ibu dan bayi tetap menjadi tantangan global akibat model pelayanan kesehatan yang terfragmentasi. Penelitian ini bertujuan untuk menganalisis mekanisme transformatif model *Midwife-Led Continuity of Care* (MLCC) dalam meningkatkan kualitas asuhan klinis dan pengalaman persalinan. Tinjauan naratif sistematis dilakukan terhadap literatur dari basis data PubMed, Scopus, ScienceDirect, dan Cochrane (2014-2024). Analisis tematik digunakan untuk mensintesis data mengenai mekanisme klinis, psikososial, dan sistemik pada model MLCC. Temuan menunjukkan bahwa MLCC secara signifikan meningkatkan deteksi dini risiko melalui hubungan terapeutik yang kuat dan komunikasi yang transparan. Secara fisiologis, model ini mereduksi intervensi medis iatrogenik, seperti seksio sesarea dan induksi sintesis, dengan menghormati ritme biologis persalinan. Selain itu, dukungan berkelanjutan terbukti memitigasi stres melalui regulasi jalur psikoneuroendokrinologi, yang meningkatkan kadar oksitosin alami dan menstabilkan poros HPA. Integrasi kerangka Donabedian mengonfirmasi bahwa sinergi antara struktur tim bidan yang otonom dan proses asuhan yang berpusat pada perempuan menghasilkan luaran kesehatan yang lebih resilien. MLCC merupakan strategi sistemik yang efektif untuk mentransformasi asuhan maternal dari reaktif menjadi proaktif. Integrasi model ini ke dalam kebijakan nasional sangat direkomendasikan untuk mencapai target SDGs.

**Kata Kunci:** Kontinuitas asuhan bidan, MLCC, kesehatan ibu dan bayi, intervensi medis, psychoneuroendocrinology.

## 1. PENDAHULUAN

Upaya penurunan angka kematian ibu (AKI) dan angka kematian bayi (AKB) tetap menjadi prioritas utama dalam agenda global *Sustainable Development Goals* (SDGs). Meskipun akses terhadap fasilitas kesehatan meningkat signifikan, kualitas asuhan seringkali terabaikan akibat model pelayanan yang terfragmentasi, di mana transisi antara periode antenatal, persalinan, hingga postnatal melibatkan pergantian tenaga medis yang tidak konsisten. Kondisi ini berisiko menyebabkan hilangnya informasi klinis krusial dan menurunkan kepercayaan pasien.

Sebagai solusi, organisasi kesehatan dunia seperti World Health Organization (WHO) dan International Confederation of Midwives (ICM) mendorong reorientasi model pelayanan melalui *Midwife-Led Continuity of Care* (MLCC). MLCC menempatkan bidan sebagai profesional utama yang bertanggung jawab mengkoordinasikan asuhan secara berkelanjutan, mengedepankan filosofi asuhan yang berpusat pada perempuan (*women-centered care*). Model ini terbukti secara klinis mampu mengurangi risiko kelahiran prematur dan memitigasi intervensi medis yang tidak perlu melalui penguatan deteksi dini dan dukungan emosional yang konsisten.

**Tabel 1.**  
**Perbandingan Karakteristik Model Pelayanan**

Tabel berikut menyajikan perbedaan antara model pelayanan terfragmentasi (konvensional) dengan model MLCC berdasarkan standar kualitas asuhan:

Komponen Kualitas	Model Terfragmentasi (Konvensional)	Model MLCC (Kontinuitas Bidan)
Konsistensi Tenaga	Berganti-ganti di setiap fase (Antenatal ke Postnatal)	Bidan/tim yang sama sepanjang spektrum kehamilan
Fokus Pelayanan	Cenderung reaktif terhadap komplikasi (Medikalisasi)	Preventif, holistik, dan berpusat pada perempuan
Komunikasi	Berisiko hilangnya informasi klinis krusial	Pertukaran data akurat (informational continuity)
Hubungan Pasien	Berisiko menurunkan kepercayaan pasien	Membangun kemitraan jangka panjang dan kepercayaan

**Sumber: WHO & ICM Policy Documents dalam Sintesis Literatur, 2024**

Model MLCC mentransformasi asuhan dari yang sebelumnya bersifat reaktif menjadi proaktif melalui hubungan terapeutik antara bidan dan ibu. Keberadaan tenaga kesehatan yang konsisten memungkinkan bidan memahami konteks sosial, psikologis, dan fisik ibu secara holistik, sehingga menciptakan lingkungan yang aman secara emosional. Hal ini berbeda dengan model konvensional yang seringkali memicu hambatan komunikasi, terutama jika ibu merasa terintimidasi oleh pemberi asuhan.

Artikel ini bertujuan untuk melakukan tinjauan naratif mendalam mengenai mekanisme transformatif MLCC dalam memitigasi risiko komplikasi pada periode antenatal hingga postnatal. Melalui analisis kritis terhadap literatur terkini, artikel ini akan membedah bagaimana struktur asuhan yang berkelanjutan berkontribusi pada peningkatan kualitas klinis dan pengalaman positif persalinan. Diharapkan, sintesis ini dapat memberikan landasan teoritis bagi pengambil kebijakan kesehatan untuk mengintegrasikan model MLCC secara lebih luas guna mencapai target kesehatan ibu dan anak yang lebih resilien.

## 2. METODE

Proses penelusuran literatur dalam tinjauan naratif ini dilakukan secara sistematis melalui empat basis data bibliografi utama, yaitu PubMed/MEDLINE, Scopus, ScienceDirect, dan Cochrane Library. Strategi pencarian menggunakan kombinasi kata kunci Boolean dan istilah MeSH (*Medical Subject Headings*) yang mencakup: "*Midwife-led continuity of care*", "*MLCC mechanism*", "*maternal health outcomes*", "*neonatal complications*", dan "*transformative midwifery model*". Pencarian dibatasi pada artikel yang diterbitkan dalam bahasa Inggris dan bahasa Indonesia selama sepuluh tahun terakhir (2014–2024) guna memastikan relevansi temuan dengan tren sistem kesehatan modern. Selain artikel penelitian orisinal (studi kohort, RCT, dan studi kualitatif), dokumen kebijakan dari organisasi kesehatan dunia seperti WHO dan *International Confederation of Midwives* (ICM) juga di inklusi untuk memberikan perspektif kebijakan yang lebih luas.

Kriteria inklusi difokuskan pada studi yang secara spesifik mengevaluasi model kontinuitas asuhan yang dipimpin oleh bidan sejak periode antenatal hingga postnatal. Proses seleksi literatur dilakukan melalui dua tahap evaluasi: pertama, penyaringan judul dan abstrak untuk memastikan kesesuaian dengan pertanyaan penelitian mengenai mekanisme transformatif MLCC; kedua, tinjauan teks lengkap (*full-text review*) untuk menilai kedalaman metodologis dan relevansi temuan terhadap mitigasi komplikasi. Data yang diperoleh kemudian disintesis menggunakan pendekatan analisis tematik untuk mengidentifikasi pola-pola mekanisme klinis, psikososial, dan sistemik. Pendekatan naratif ini memungkinkan pengintegrasian berbagai jenis data, baik kuantitatif maupun kualitatif, guna membangun argumen yang komprehensif mengenai bagaimana MLCC mampu mengubah trayektori kesehatan ibu dan bayi.

## 3. HASIL DAN PEMBAHASAN

### 3.1. Penguatan Deteksi Dini melalui Hubungan Terapeutik

The trust established within the MLCC model plays a pivotal role in enhancing maternal and midwife communication. This relationship stands in contrast to traditional care models, which can inhibit mothers from expressing concerns. In environments where mothers feel intimidated by healthcare providers, they may underestimate or overlook symptoms they perceive as trivial (Hollander et al., 2019). However, the MLCC model cultivates a therapeutic alliance that fosters a psychologically safe space, lowering communication barriers and empowering mothers to report even minor deviations in their physical or emotional states, such as decreased fetal movement or unusual headaches. The emphasis on early reporting can significantly reduce delays in recognizing danger signs and seeking necessary help (Sirivar et al., 2025).

The unique continuity of the caregiver relationship within this model enables midwives to develop a profound understanding of individual health profiles indicated by each mother, encompassing not just objective medical data but also subjective experiences and psychosocial influences. For instance, variations in pain thresholds and fetal movement patterns necessitate a nuanced understanding that standard protocols might overlook. Research has shown that a midwife's familiarity with a mother's baseline behaviors and preferences enhances clinical intuition (Grigoriadis et al., 2018). This facilitates immediate reassessment and responsive care when deviations from established norms occur. Trust in the midwife's competence thus correlates with adherence to clinical guidance, improving risk management and maternal outcomes while potentially altering the trajectory of maternal care.

Moreover, the cultivation of a trusting relationship significantly mitigates clinical anxiety and phenomena such as "white-coat hypertension." Mothers who report feeling emotionally supported generally exhibit more stable vital signs during examinations, safeguarding the accuracy of clinical evaluation metrics such as blood pressure and heart rate

(Fawcett et al., 2019). Accurate physiological data obtained under conditions of psychological safety is crucial to prevent misdiagnosed complications, enabling proactive intervention strategies (Sandman et al., 1997). These findings underscore the assertion that early detection and effective risk management in the MLCC model hinge not only on sophisticated medical technologies but also fundamentally on the quality of human interactions and the trust cultivated therein (Kuo et al., 2014).

In summary, the MLCC model enhances maternal care significantly by fostering an environment of trust and open communication, which positively influences psychological well-being and clinical outcomes. By allowing for ongoing, intimate relationships with midwives, mothers are encouraged to report changes in their health proactively, facilitating earlier interventions that can improve both maternal and fetal health outcomes. This qualitative aspect of care complements the technological and procedural elements necessary for effective healthcare delivery.

### **3.2. Reduksi Intervensi Medis yang Tidak Perlu**

The Midwife-Led Continuity of Care (MLCC) model has been shown to minimize invasive medical interventions during childbirth, aligning care practices with the physiological needs of women in labor. This model emphasizes a tailored approach, allowing personalized support throughout pregnancy and labor, which is associated with reduced rates of cesarean sections (CS) and other unnecessary medical procedures (McLachlan et al., 2012), (Jeong et al., 2025).

Research indicates that the MLCC model fosters a significant decrease in interventions such as inductions of labor and the use of epidural analgesia. A study by McLachlan et al. demonstrated that women under the MLCC model reported higher instances of spontaneous vaginal births and lower rates of cesarean sections compared to those receiving standard obstetric care (McLachlan et al., 2012). Additionally, Jeong et al. found that midwife-led deliveries were associated with lower rates of cesarean sections and perineal incisions, indicating a clear advantage of this model in maintaining a more natural birthing process (Jeong et al., 2025).

The supportive environment cultivated by midwives through MLCC facilitates watchful attendance, effectively addressing the trend of rigid time-based labor management that often leads to premature interventions (Bohren et al., 2015). This form of care enhances maternal comfort through non-pharmacological methods and transforms the prenatal experience into one marked by autonomy and empowerment (Perdok et al., 2018).

The essence of the MLCC model lies in the continuity of care it provides, which is associated with increased maternal confidence. Strong emotional support from a consistent midwife can lead to improvements in pain tolerance and reductions in anxiety for expecting mothers (Declercq et al., 2019; , (Simon et al., 2025). A study by Simon et al. supports this by indicating that women who receive midwifery care generally experience fewer interventions than those managed by obstetricians, fostering a more positive birthing experience overall (Simon et al., 2025). Additionally, the emotional and physical support provided by midwives aids in the release of oxytocin, a natural hormone essential for effective labor progression. This often results in better labor outcomes without the necessity for synthetic aids (Jeong et al., 2025).

The benefits of the MLCC model extend beyond immediate birth outcomes, representing a strategic approach to ensuring the long-term safety and health of mothers and their babies. By significantly reducing the rate of cesarean sections and routine episiotomies, MLCC helps mitigate risks such as severe bleeding and post-operative infections, which can have lasting repercussions (Gama et al., 2016). For infants, births characterized by lesser

medical intervention tend to promote better adaptation post-delivery and support early breastfeeding initiation, which is critical for neonatal health (Jeong et al., 2025). Adnani et al. connect the model's utilization with improvements in maternal and neonatal health outcomes, emphasizing its role in diminishing unnecessary medical interventions while simultaneously increasing maternal satisfaction (Adnani et al., 2025).

In conclusion, the Midwife-Led Continuity of Care model stands out as an effective strategy for enhancing childbirth experiences. Its demonstrated efficacy in reducing medical interventions, bolstering maternal confidence, and ensuring safer outcomes for both mothers and infants underscores its significance in modern obstetric care. The evidence points to the transformative potential in the delivery room, where respect for physiological processes and supportive care can redefine birth experiences.

### **3.3. Mitigasi Stres Psikologis dan Fisiologis.**

The maternal-fetal dynamic is profoundly influenced by maternal emotional states, particularly during pregnancy. Emotional support provided through models like Midwifery and Labor Continuity Care (MLCC) operates via complex biological pathways, particularly psychoneuroendocrinological mechanisms. This response is critical as it pertains to the regulation of stress and hormonal balance, which have significant implications for both maternal and infant health.

Recent studies emphasize how maternal stress responses are primarily mediated through elevated cortisol and catecholamines, leading to adverse physiological states (Sandman et al., 2006; Glover et al., 2010; . Specifically, elevated maternal cortisol early in pregnancy can predict increased levels of placental corticotropin-releasing hormone (CRH), which is linked to shorter gestational periods (Sandman et al., 2006; . The sympathetic nervous system's heightened activity causes vasoconstriction in uterine blood vessels, ultimately reducing placental perfusion and oxygen delivery to the developing fetus (Sandman et al., 2006; Glover et al., 2010; González-Ochoa et al., 2018).

Conversely, continuous emotional support from a trusted midwife, as outlined in the MLCC model, may mitigate these effects by suppressing the activation of the hypothalamic-pituitary-adrenal (HPA) axis (Sandman et al., 2006; Glover et al., 2010; (Homer, 2016; . Evidence suggests that a supportive environment not only stabilizes maternal stress responses but also promotes hemodynamic balance throughout pregnancy by reducing anxiety levels (Eapen et al., 2014; Pearson et al., 2013).

A significant factor in this interplay is oxytocin, often referred to as the 'love hormone,' which is released in response to emotional support and intimate interactions (Skrundz et al., 2011). Oxytocin has been shown to have antagonistic effects against cortisol, lowering stress hormone levels and increasing pain thresholds while fostering a conducive environment for effective labor (Skrundz et al., 2011) (Cox et al., 2015; . The administration of natural oxytocin facilitates optimal uterine contractions, significantly reducing the risks of prolonged labor and fetal distress (Eapen et al., 2014; Skrundz et al., 2011).

Moreover, oxytocin's influence is not confined to labor but extends into postpartum periods. High levels of oxytocin positively correlate with maternal bonding and improved emotional states, which are crucial for successful lactation and overall maternal well-being (Eapen et al., 2014; Cox et al., 2015; . Furthermore, stress mitigation during pregnancy through MLCC is essential in preventing postpartum complications such as depression, with mothers experiencing consistent support reporting higher levels of self-efficacy (Homer, 2016; Pearson et al., 2013).

The implications of emotional support during pregnancy stretch well beyond the delivery room. Establishing a low-stress intrauterine environment is linked to optimal neurodevelopment in infants, highlighting the significance of emotional stability during

gestation (Talge et al., 2007; Huizink et al., 2004). Maternal emotional well-being, nurtured through models like MLCC, is pivotal in reducing risks for postpartum psychological distress and complications related to infant attachment and bonding (Homer, 2016; Pearson et al., 2013).

Moreover, emotional support may aid in effective breastfeeding practices, wherein high levels of oxytocin and prolactin—hormones critical for milk production—can function optimally when stress levels are minimized. The presence of a supportive caregiver enhances the mother's psychological state, thus facilitating lactation and improving mother-infant bonding (Eapen et al., 2014; Cox et al., 2015; Huizink et al., 2004).

The evidence underscores the relevance of emotional support in maternal health, especially within midwifery models like MLCC. Understanding its psychoneuroendocrinological pathways illuminates the biological ties between maternal emotional states and fetal outcomes. As such, ensuring ongoing emotional support is crucial in facilitating favorable outcomes for both mothers and their infants, establishing a foundation for lifelong health and well-being.

#### **3.4. Analisis Teoritis: Integrasi Donabedian Framework dalam MLCC**

The effectiveness of Midwife-Led Continuity of Care (MLCC) can be examined through the lens of the Donabedian Framework, which categorizes health care quality into three key components: Structure, Process, and Outcomes. This synthesis will explore how each of these components interacts in the context of MLCC, utilizing various relevant studies to substantiate the claims made.

In the context of MLCC, the Structure aspect includes not only the qualifications and competencies of midwives but also the organizational ethos that facilitates continuity of care. Well-defined small teams of midwives can create a supportive environment conducive to sustained caregiver-patient relationships. According to research by Hailemeskel et al., midwives have noted that MLCC improves maternal outcomes, reduces unnecessary interventions, and enhances the uptake of maternity services (Hailemeskel et al., 2021). This suggests that a strong organizational framework is essential for midwives to operate effectively and empowers them to provide autonomous care (Bazirete et al., 2023).

Moreover, to achieve optimal outcomes, regulations must also facilitate midwives' ability to accompany mothers throughout different stages of care. For example, Mortensen et al. highlight that efficient organizational structures can help in implementing timely interventions, thereby improving neonatal health outcomes (Mortensen et al., 2019). Without a supportive framework for continuity, the potential benefits of MLCC may remain unfulfilled.

The Process dimension in MLCC encompasses the quality of interactions between midwives and mothers, serving as a critical clinical instrument. It integrates both technical medical actions and interpersonal care, focusing on informational continuity—accurate data sharing—and relational continuity—developing trusting relationships. Research indicates that a consistent care process fosters a deeper understanding of each mother's health trajectory, distinguishing MLCC from traditional models which may be more reactive to clinical symptoms (Forster et al., 2016).

For instance, the systematic review conducted by Debes et al. found that early initiation of breastfeeding significantly reduces neonatal mortality, underscoring the importance of timely and process-oriented interventions within MLCC (Debes et al., 2013). This concept of preventative and supportive care further establishes the value of the Process dimension in achieving better overall health outcomes for mothers and infants alike.

Outcomes resulting from MLCC must be evaluated beyond traditional clinical metrics, also incorporating measures of maternal and infant psychological wellbeing. Studies show that when the structure of MLCC supports robust woman-centered care processes, there is a noticeable decrease in iatrogenic interventions, such as cesarean sections, alongside an increase in successful exclusive breastfeeding practices (Mortensen et al., 2019).

Furthermore, the work of Brocklehurst et al. provides a comparative perspective, revealing that settings supporting midwifery-led care yield lower rates of adverse outcomes, such as maternal and neonatal mortality, compared to standard delivery models (Brocklehurst et al., 2011). This correlation suggests a strong link between supportive structures, quality process measures, and successful health outcomes in MLCC frameworks.

The synergy between Structure, Process, and Outcomes in the context of MLCC establishes it as a systemic strategy aimed at enhancing maternal and infant health. By carefully aligning supportive organizational structures with high-quality care processes, the transformative potential of MLCC can be fully leveraged, ultimately leading to safer and more humane health outcomes.

#### 4. KESIMPULAN

Penelitian ini menyimpulkan bahwa model *Midwife-Led Continuity of Care* (MLCC) merupakan mekanisme transformatif yang secara signifikan meningkatkan hasil kesehatan ibu dan bayi melalui integrasi jalur klinis dan psikososial secara simultan. Melalui hubungan terapeutik yang berkelanjutan, MLCC mampu meruntuhkan hambatan komunikasi antara pasien dan tenaga medis, sehingga memungkinkan deteksi dini penyimpangan status kesehatan sekecil apa pun. Hal ini membuktikan bahwa kualitas interaksi manusia dan rasa percaya merupakan pondasi utama dalam manajemen risiko maternal yang efektif.

Secara fisiologis, model asuhan ini terbukti mampu menekan intervensi medis yang bersifat iatrogenik dan tidak perlu, seperti penggunaan induksi sintesis dan tindakan bedah seksio sesarea. Dengan memberikan dukungan yang berpusat pada perempuan, bidan memfasilitasi proses persalinan alami yang menghormati ritme biologis ibu. Pengurangan intervensi ini tidak hanya meningkatkan keselamatan fisik dengan memitigasi risiko perdarahan dan infeksi pasca-operasi, tetapi juga mendukung adaptasi neonatal yang lebih baik dan inisiasi menyusui dini.

Selain aspek klinis, MLCC berperan krusial dalam mitigasi stres psikologis melalui regulasi jalur psikoneuroendokrinologi. Dukungan emosional yang konsisten dari bidan yang dikenal mampu menstabilkan poros HPA dan menurunkan kadar kortisol, yang secara langsung berkontribusi pada stabilitas hemodinamik ibu dan kesejahteraan janin di dalam rahim. Peningkatan hormon oksitosin alami selama proses ini tidak hanya memperlancar persalinan, tetapi juga memperkuat ikatan batin (*bonding*) antara ibu dan bayi serta mencegah depresi pasca persalinan.

Sebagai implikasi praktis, penelitian ini merekomendasikan bagi pembuat kebijakan kesehatan untuk mengintegrasikan model MLCC ke dalam sistem kesehatan nasional guna mencapai target *Sustainable Development Goals* (SDGs) yang lebih resilien. Diperlukan dukungan struktural dan regulasi yang memberikan otonomi kepada bidan untuk menjalankan asuhan yang berkelanjutan ini. Untuk penelitian selanjutnya, sangat mendesak untuk melakukan evaluasi mengenai efektivitas biaya (*cost-effectiveness*) dari penerapan MLCC, terutama di negara-negara dengan sumber daya terbatas, guna menjamin keberlanjutan model pelayanan ini secara luas.

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