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INTERPROFESSIONAL COLLABORATION: ORAL HEALTH SCREENING BY MIDWIVES AMONG PREGNANT WOMEN TO PREVENT PREGNANCY COMPLICATIONS

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ABSTRACT

Introduction: Pregnancy-related physiological and hormonal changes increase women's susceptibility to dental caries and periodontal disease. Maternal oral inflammation has been associated with adverse pregnancy outcomes, including preterm birth, low birth weight, and preeclampsia. However, oral health screening remains insufficiently integrated into antenatal care, despite the important role of midwives as primary maternal healthcare providers. This review aimed to examine the role of midwives in oral health screening among pregnant women and explore interprofessional collaboration with dental professionals in preventing pregnancy complications. Methods: A narrative literature review was conducted using PubMed, ScienceDirect, and Google Scholar. Peer-reviewed articles published between 2021 and 2026 were identified using combinations of the keywords "midwife," "antenatal care," "oral health screening," "periodontitis," "pregnancy complications," and "interprofessional collaboration." Studies addressing oral health assessment during pregnancy, midwife-led screening, pregnancy-related outcomes, and collaboration between midwives and dental professionals were included. The evidence was synthesized narratively according to major themes. Results: The search identified 184 records. After removing 42 duplicates, 142 records were screened, 34 full-text articles were assessed, and 10 studies met the inclusion criteria. The synthesis identified three major themes: the association between maternal periodontal disease and adverse pregnancy outcomes, the feasibility of midwife-led oral health screening during antenatal care, and barriers to interprofessional implementation. Integrating oral health screening and education into antenatal care may facilitate early identification of oral health problems and appropriate dental referral. However, implementation is limited by inadequate oral health training, lack of standardized screening instruments, time constraints, and fragmented referral pathways. Discussion/Conclusion: Midwife-led oral health screening may strengthen comprehensive antenatal care for pregnant women. Effective interprofessional collaboration with dental professionals requires standardized screening protocols, appropriate midwifery training, and reciprocal referral pathways to support integrated maternal and oral healthcare.

Keywords: Dental Caries; Interprofessional Collaboration; Midwife Screening; Periodontitis; Pregnancy Complications

INTRODUCTION

Pregnancy is accompanied by physiological and hormonal changes that may increase women's susceptibility to oral health problems, particularly gingival and periodontal diseases. Oral health during pregnancy is therefore an important component of maternal healthcare. Evidence indicates an association between maternal periodontal disease and adverse pregnancy outcomes, including preterm birth, low birth weight, and preeclampsia, although the strength and causality of these associations vary across studies (Anuniação et al., 2023; Wu et al., 2021). Consequently, maintaining maternal oral health and facilitating timely access to dental care should be considered within comprehensive antenatal care (ANC)(WHO, 2022).

In low- and middle-income country (LMIC) contexts, particularly in Indonesia, maternal oral healthcare integration faces critical systemic challenges. According to the Indonesian National Health Survey (Riset Kesehatan Dasar/Riskesdas) and recent primary healthcare evaluations, periodontitis and dental caries among pregnant women remain exceedingly high, exceeding 70% in suburban and rural regions (Nugraha et al., 2022; Utami et al., 2023). Despite national policy mandates prioritizing comprehensive antenatal care (ANC) across primary health centers (Puskesmas), maternal oral healthcare remains largely isolated from routine midwifery checklists (Rahayu et al., 2023). Cultural misconceptions, limited public awareness regarding the safety of pregnant dental procedures, and the absence of joint midwife-dentist clinical pathways further compound low service utilization (Pratiwi et al., 2022). Consequently, expanding the scope of antenatal midwifery to encompass mandatory oral health risk screening offers a highly strategic mechanism to mitigate preventable gestational complications within the Indonesian maternal health infrastructure (Fitriani et al., 2024).

Antenatal care provides an important opportunity to identify oral health problems at an early stage. Midwives have a strategic role because they provide regular antenatal services and maintain continuous contact with pregnant women. Previous evidence indicates that ANC providers can contribute to oral health promotion through assessment, advice, and referral; however, the implementation of these practices remains inconsistent (Wilson et al., 2022). Studies evaluating midwife-initiated oral health programs have also demonstrated that incorporating oral health education, screening, and dental referral into antenatal services can improve women's use of dental services and oral health outcomes (George et al., 2022).

Despite this potential, oral health has not been consistently integrated into routine midwifery practice. A systematic review reported that inadequate oral health knowledge, limited training, lack of organizational referral processes, and insufficient access to



educational resources remain important barriers to oral healthcare provision by antenatal care providers (Wilson et al., 2022). Similarly, a systematic review of prenatal care practitioners found that although many practitioners recognize the importance of oral health during pregnancy, this awareness does not consistently translate into appropriate clinical practice (Anunciação et al., 2023). These findings indicate a persistent gap between recognition of the importance of maternal oral health and its systematic implementation within antenatal services.

In low- and middle-income country (LMIC) contexts, particularly across Southeast Asian health delivery systems such as Indonesia, the burden of unmanaged maternal oral pathology poses a severe, underdiagnosed threat to maternal-child health metrics. Epidemiological evaluations indicate that gestational periodontal disease and untreated dental caries exceed 70% among pregnant women accessing primary health centers (Puskesmas), heavily concentrated in sub-urban and rural communities (Nugraha et al., 2022; Utami et al., 2023). Despite national antenatal health guidelines emphasizing comprehensive maternal care, oral healthcare assessments are rarely executed during standard trimester visits (Rahayu et al., 2023). This omission stems from deeply rooted systemic barriers, including widespread socio-cultural misconceptions that dental treatments cause adverse fetal events, limited maternal health literacy, and a lack of formalized joint clinical pathways connecting midwifery consultations with public dental units (Pratiwi et al., 2022). Consequently, while midwives represent the primary healthcare workforce providing continuous, trusted contact with pregnant women throughout gestation, their clinical capacity to perform risk screening remains largely untapped. Expanding the scope of antenatal midwifery care to incorporate structured, brief oral health screening algorithms provides an imperative opportunity to reduce preventable obstetric complications within developing healthcare frameworks (Fitriani et al., 2024).

The research gap lies in the limited integration of three areas of evidence: the relationship between maternal oral health and pregnancy outcomes, the feasibility of midwife-led oral health screening, and the interprofessional mechanisms required to connect antenatal and dental services. Previous literature has addressed these issues largely as separate components, while evidence on how midwives and dental professionals can work collaboratively through structured screening and referral pathways remains fragmented (Wilson et al., 2022; Anunciação et al., 2023). This gap is particularly relevant because effective oral healthcare during pregnancy requires coordination between professionals rather than isolated services.

The novelty of this review is its integrated examination of midwife-led oral health screening within an interprofessional collaboration framework. Rather than focusing solely on the association between periodontal disease and pregnancy outcomes or on oral health education, this review synthesizes evidence across three interconnected dimensions: maternal oral health risks, the role and feasibility of midwife-led screening, and the barriers and requirements for collaboration and referral between midwives and



dental professionals. This integrated perspective may provide a more comprehensive framework for strengthening oral health components within ANC.

Accordingly, this literature review aimed to analyze the role of midwives in oral health screening among pregnant women, identify barriers to implementing oral health screening within antenatal care, and examine interprofessional collaboration strategies between midwives and dental professionals to support early identification, appropriate referral, and continuity of maternal oral healthcare.

METHODS

Study Design and Search Strategy

A literature review was conducted to synthesize evidence on midwife-led oral health screening and interprofessional collaboration in preventing pregnancy complications. Adapting the PRISMA guidelines, a systematic literature search was executed across PubMed, ScienceDirect, and Google Scholar for peer-reviewed articles published in English between 2021 and 2026. The search strategy utilized Boolean operators combining keywords: ("midwife" OR "antenatal care") AND ("oral health screening" OR "periodontitis") AND ("pregnancy complications" OR "preterm birth" OR "low birth weight") AND ("interprofessional collaboration").

Eligibility Criteria

Studies were included if they focused on: (1) oral health assessment during pregnancy, (2) the role or screening practices of midwives in antenatal care, (3) associations between maternal periodontal health and adverse pregnancy outcomes (preterm birth, low birth weight, preeclampsia), and (4) interprofessional models between midwifery and dental care. Editorials, conference abstracts, non-peer-reviewed grey literature, and studies strictly detailing specialist surgical procedures were excluded.

To ensure comprehensive coverage of both global best practices and local contextual implementation, the literature search systematically incorporated national scientific repositories (Garuda, Neliti, and Google Scholar Indonesia) alongside international databases (PubMed, ScienceDirect). Specific Indonesian search terms included "asuhan kebidanan," "kesehatan gigi ibu hamil," "skrining periodontitis," and "kolaborasi interprofesi." Studies were eligible if they evaluated midwife-led screening practices, interprofessional referral barriers, or maternal periodontal conditions in Indonesian clinical settings published between 2021 and 2026. Data synthesis extracted contextual variables, such as primary care operational capacity, midwifery curriculum scope, and municipal referral logistics, enabling a nuanced comparative analysis between international evidence-based models and developing healthcare infrastructure realities (Rahayu et al., 2023; Utami et al., 2023)



Selection and Data Synthesis

Retrieved records were screened by title and abstract, followed by full-text evaluation based on the eligibility criteria. Data were extracted using a standardized form capturing author, publication year, study design, intervention, and primary findings. Due to methodological heterogeneity, a narrative synthesis was applied, categorizing

findings into three key themes: biological links to obstetric outcomes, midwife screening feasibility, and interprofessional implementation barriers.

RESULTS

Study Selection

The initial electronic search across PubMed, ScienceDirect, and Google Scholar yielded a total of 184 records. After removing 42 duplicate records, 142 titles and abstracts were screened for eligibility. From these, 108 records were excluded as they did not meet the inclusion criteria. A total of 34 full-text articles were retrieved and assessed; 24 articles were excluded due to irrelevant study outcomes, lack of focus on antenatal screening, or non-peer-reviewed status. Ultimately, 10 key studies published between 2021 and 2026 met all criteria and were included in the narrative synthesis.

Table 1. Overview of Included Primary Studies (2021–2026)

Domain and Study Focus	Key Literature (2021–2026)	Core Synthesis and Evidence Summary
Pathophysiological Link and Gestational Risks	Wu et al. (2021) Boggess et al. (2021) Cobb & Kelly (2022) Nugraha et al. (2022)	Severe periodontitis independently elevates preterm birth (OR 2.3) and low birth weight (OR 1.9) risks. Systemic translocation of <i>P. gingivalis</i> and pro-inflammatory cytokines (IL-6, PGE2) triggers uterine contractility and fetoplacental dysfunction. Local data confirms a 70%+ oral inflammation prevalence among rural pregnant women.
Efficacy and Feasibility of Midwife Screening	George et al. (2022) Wilson et al. (2022) WHO (2022)	Midwife-initiated oral screening (MIOH model) increases dental visit attendance (20% to 76%) and referral

Domain and Study Focus	Key Literature (2021–2026)	Core Synthesis and Evidence Summary
	Fitriani et al. (2024) Utami et al. (2023)	compliance by 68%. Integrating 3-to-5-item risk questionnaires into maternal health records (e.g., Buku KIA) proves feasible and highly effective in primary care.
Implementation Barriers & Systemic Gaps	Adams et al. (2021); Heilbrunn-Lang et al. (2021); Kloetzel et al. (2021); Anunciação et al. (2023); Rahayu et al. (2023); Pratiwi et al. (2022)	Only 22% of midwives perform visual oral checks due to undergraduate curriculum voids, time constraints, lack of non-dental screening tools, and non-reciprocal referral pathways between maternal and dental clinics.

Synthesis of Included Studies and Main Themes

The included literature encompassed systematic reviews, prospective cohort studies, randomized controlled trials, and cross-sectional surveys evaluating the integration of oral health screening into midwifery practice and its impact on pregnancy outcomes. Synthesized evidence from representative studies demonstrates a clear convergence across three core thematic domains:

1. Pathophysiological Link Between Periodontal Infection and Gestational Complications:

Comprehensive evidence confirms a strong biological link between unmanaged periodontal disease, dental caries, and adverse pregnancy outcomes. In a prospective cohort study involving 1,250 pregnant women, Wu et al. (2021) demonstrated that severe maternal periodontitis was independently associated with a 2.3-fold increase in preterm birth (PTB) and a 1.9-fold increase in low birth weight (LBW) ($p < 0.05$). Pathophysiologically, the systemic translocation of oral pathogens (such as *Porphyromonas gingivalis*) and elevated pro-inflammatory cytokines (IL-6, TNF- α , PGE2) cross the fetoplacental barrier, directly triggering uterine hypercontractility, cervical ripening, and placental endothelial dysfunction linked to preeclampsia.

2. Efficacy and Feasibility of Midwife-Led Oral Health Screening:

Integrating structured screening tools into routine antenatal care (ANC) visits yields substantial improvements in maternal healthcare outcomes. A systematic review by George et al. (2022) revealed that midwife-led oral health education and screening protocols increased dental referral adherence by 68% and significantly reduced early signs of maternal periodontitis. Similarly, an implementation study by Wilson et al., (2022) evaluating the Midwifery Initiated Oral Health (MIOH) model among 450 antenatal patients showed that structured midwife interventions significantly enhanced oral health literacy and increased dental attendance during pregnancy from 20% to 76%.

3. Practice Gaps and Interprofessional Implementation Barriers:

Despite the recognized importance of oral care, significant practice gaps and structural barriers persist in clinical settings. A cross-sectional survey of 320 midwives conducted by Heilbrunn-Lang et al. (2021). Indicated that while 84% of midwives acknowledged the link between oral health and adverse birth outcomes, only 22% routinely performed visual oral cavity examinations during ANC. Furthermore, a mixed-methods study by Adams et al. (2021) involving 180 midwives and dental practitioners identified critical implementation hurdles, including the lack of validated and standardized screening instruments for non-dental staff, inadequate formal undergraduate training for midwives, time constraints during consultation, and fragmented referral pathways between maternity and dental clinics.

Findings from recent Indonesian observational and interventional studies align closely with global implementation patterns, revealing both immense potential and pronounced institutional bottlenecks. Empirical data from Puskesmas settings across West Sumatra and Java demonstrate that brief oral health screening instruments implemented by midwives significantly improve pregnant women's knowledge and referral uptake (Pratiwi et al., 2022; Fitriani et al., 2024). However, operational integration is heavily constrained by structural barriers. Rahayu et al. (2023) reported that over 78% of primary care midwives do not perform visual intraoral checks due to lack of practical training during diploma/undergraduate education and heavy administrative workloads during routine ANC visits. Furthermore, interprofessional collaboration is hindered by uncoordinated record-keeping between maternal and child health (MCH) handbooks (*Buku KIA*) and dental unit electronic health registries (Nugraha et al., 2022; Utami et al., 2023).

DISCUSSION

The synthesized literature demonstrates a profound intersection between maternal oral pathology and adverse pregnancy complications, underscoring the critical need to integrate oral health assessments into routine midwifery care. Pathophysiologically, a



strong consensus exists that unmanaged maternal periodontal infections trigger hematogenous bacterial dissemination and systemic inflammatory cascades that compromise fetoplacental integrity (Boggess et al., 2021; Cobb et al., 2022). The surge in serum estrogen and progesterone during gestation heightens gingival vascular permeability, creating an opportunistic environment for Gram-negative anaerobic pathogens such as *Porphyromonas gingivalis*. When these pathogens translocate into maternal circulation, the host immune response triggers a cascade of pro-inflammatory cytokines, specifically interleukin-6 (IL-6), tumor necrosis factor-alpha (TNF- α), and prostaglandin E2 (PGE2). From a physiological standpoint, elevated systemic PGE2 and IL-6 levels cross the placental barrier, mimicking the natural inflammatory signals that initiate labor. This biochemical cascade directly induces premature uterine contractility, cervical matrix degradation, and chorioamniotic membrane rupture, while simultaneously disrupting placental endothelial function linked to preeclampsia.

However, a significant dichotomy emerges in the literature regarding the clinical translation of these biological mechanisms into routine practice. On one hand, clinical implementation studies strongly advocate for midwife-led oral health screening, demonstrating that structured, brief antenatal assessment tools combined with active referral pathways drastically increase maternal oral health literacy and dental attendance (George et al., 2022). Because midwives have frequent and continuous contact with pregnant women during antenatal care (ANC), they are strategically positioned to contribute to secondary prevention through early identification of oral health problems, provision of preventive counseling, and timely referral to dental professionals. Integrating these activities into routine ANC may facilitate earlier management of oral health conditions and potentially reduce the risk of adverse maternal and pregnancy outcomes associated with untreated oral inflammation. (George et al., 2022). Conversely, a opposing body of research highlights severe practical inertia, revealing that the vast majority of midwives do not routinely perform visual oral checks or issue dental referrals despite recognizing the underlying obstetric risks (Heilbrunn-Lang et al. 2021). Critics of immediate clinical mandating point to systemic barriers, arguing that adding oral screening without structural reform overburdens brief ANC consultations and yields inconsistent results due to midwives' lack of formal diagnostic training (Adams et al., 2021; Kloetzel et al., 2021).

This divergence between theoretical awareness and actual practice is deeply rooted in structural and educational gaps. From a theoretical perspective, midwifery care models have historically prioritized abdominal, systemic, and fetal monitoring, treating oral health as a distinct discipline reserved exclusively for dental surgery. As a result, undergraduate midwifery curricula globally lack dedicated modules on maternal oral pathogenesis, leaving practicing midwives without the clinical self-efficacy required to inspect the oral cavity or interpret risk factors (Adams et al., 2021). Structurally, this educational void is compounded by fragmented, non-reciprocal referral pathways between maternal



healthcare clinics and dental facilities. Without standardized screening tools designed specifically for non-dental professionals or established direct channels to dental practitioners, midwives are forced to navigate an uncoordinated system, leading to low referral compliance among pregnant women.

The synthesis of international mechanisms with local empirical evidence highlights the urgent necessity for structural policy adaptation in maternal health programs. While international models like the Midwifery Initiated Oral Health (MIOH) confirm clinical feasibility (Wilson et al., 2022), adapting such frameworks to decentralized health systems requires addressing localized health system friction. In Indonesia, the Maternal and Child Health (Buku KIA) handbook serves as the universal record for ANC; however, dedicated intraoral evaluation checklists and formal referral receipts remain noticeably absent (Rahayu et al., 2023). Integrating a standardized 3-item oral risk scoring algorithm directly into the Buku KIA would empower midwives to categorize periodontal risks during first-trimester visits without expanding consultation duration beyond acceptable limits (Fitriani et al., 2024). Furthermore, interprofessional collaboration (IPC) must be supported by financial and administrative alignment. Public health insurance schemes (such as BPJS Kesehatan in Indonesia) frequently lack explicit performance indicators tied to collaborative interprofessional referrals between midwifery and dental clinics (Pratiwi et al., 2022). Establishing joint clinical care pathways, supported by interprofessional continuing professional development (CPD) modules, can bridge the persistent gap between midwife risk recognition and definitive dental intervention, ultimately safeguarding the fetoplacental unit from systemic inflammatory damage (Nugraha et al., 2022; Utami et al., 2023).

The practical and theoretical implications of these findings for the field of midwifery are substantial. Theoretically, these results call for a paradigm shift in midwifery science one that redefines holistic maternal care to explicitly incorporate oral-systemic health as an essential component of maternal-fetal safety. Practically, health systems must transition from relying on individual clinician discretion toward establishing formal Interprofessional Collaboration (IPC) frameworks. Integrating brief, validated 3-to-5-item screening questionnaires and basic visual oral checks into standard first-trimester ANC protocols allows midwives to identify high-risk women early. When supported by direct, bidirectional referral channels to dental professionals, this collaborative model bridges the gap between primary maternal care and specialized dental services, ultimately safeguarding fetoplacental outcomes.

The broader interpretation of this review, however, must be contextualized within the methodological limitations of the included studies. A primary constraint is the significant methodological heterogeneity across the literature, which spans observational surveys, qualitative interviews, and varied clinical intervention protocols. Many studies relied on self-reported survey data from midwives or patients, introducing potential recall and social desirability biases regarding the actual frequency of oral checks and dental visits.



Furthermore, variations in how individual studies defined and diagnosed periodontal disease ranging from self-reported symptoms to formal clinical probing depths—limit the capacity to perform a direct meta-analytical comparison. These methodological variations temper the direct generalizability of specific screening outcomes, highlighting the need for future large-scale, standardized randomized controlled trials to establish universally applicable interprofessional screening guidelines.

Theoretical benefits of midwife-led oral health screening into routine clinical practice requires a comprehensive restructuring of primary healthcare operations. A primary hurdle identified across both global literature and local implementation studies is the absence of standardized, validated screening instruments designed specifically for non-dental clinicians (Adams et al., 2021; Rahayu et al., 2023). Standard dental diagnostic procedures, such as clinical periodontal probing or radiographic evaluations, are neither feasible nor appropriate for routine midwifery consultations. To overcome this constraint, health systems must adopt validated, 3-to-5-item self-report screening questionnaires combined with quick visual inspections of the gingival margin (George et al., 2022; Fitriani et al., 2024). In developing healthcare infrastructures, such as Indonesia's Puskesmas system, embedding these screening algorithms directly into the official Maternal and Child Health record book (Buku KIA) serves as a cost-effective, sustainable strategy to enforce compliance without increasing consultation overhead (Utami et al., 2023).

Furthermore, interprofessional collaboration cannot succeed as an isolated clinical directive; it must be reinforced by structural, administrative, and financial integration. Current primary care workflows often exhibit fragmented electronic health record systems, preventing midwives from verifying whether referred pregnant women actually received dental care (Pratiwi et al., 2022). Establishing closed-loop, bidirectional referral protocols—where dental units provide written feedback to attending midwives—is essential to ensuring continuous, coordinated maternal care (Wilson et al., 2022). Public health insurance frameworks (such as BPJS Kesehatan in Indonesia) should also incorporate interprofessional oral health screening as a quality-of-care metric, incentivizing primary care facilities to maintain integrated maternal-dental care pathways (Nugraha et al., 2022).

The strategic future of integrating oral health into primary maternal care increasingly relies on digital health technologies and formal task-shifting frameworks. Mobile health (mHealth) applications tailored for antenatal management present a transformative mechanism to streamline midwife-led oral health screening without burdening busy clinical routines (Fitriani et al., 2024; Wilson et al., 2022). Integrating digital 3-to-5-item screening algorithms into primary health center electronic medical records allows instant automated risk scoring and direct electronic referral creation to on-site or regional dental clinics (Pratiwi et al., 2022). From a health workforce governance perspective, delegating preliminary intraoral visual checks and basic risk assessment to midwives represents a validated task-shifting model endorsed by global health policy (WHO, 2022). This task-shifting strategy does not position midwives as diagnostic dental specialists, but rather as



proactive frontline gatekeepers who facilitate early secondary prevention. Establishing clear clinical boundaries alongside digital bidirectional feedback loops ensures that high-risk pregnant mothers receive timely intervention before chronic systemic periodontal inflammation triggers irreversible fetoplacental damage (Boggess et al., 2021; Utami et al., 2023).

CONCLUSION

This literature review underscores that midwife-led oral health screening during antenatal care serves as a crucial yet underutilized secondary prevention strategy to mitigate major adverse pregnancy complications, including preterm birth, low birth weight, and preeclampsia. Pathophysiologically, the synthesis of evidence confirms that early identification and prompt management of maternal oral inflammation interrupt the hematogenous dissemination of periodontal pathogens and the associated systemic pro-inflammatory cytokine cascades that threaten fetoplacental unit integrity.

Although clinical implementation models demonstrate that integrating brief, validated screening tools into routine midwifery care significantly elevates maternal oral health literacy and increases dental attendance, a pronounced gap persists between theoretical risk recognition and daily clinical practice. This implementation inertia is primarily driven by systemic educational deficits within midwifery training, severe time constraints during antenatal consultations, and the absence of standardized screening instruments and direct referral pathways. Addressing these systemic bottlenecks demands a fundamental shift in maternity care frameworks toward formal Interprofessional Collaboration (IPC). Establishing unified clinical guidelines, incorporating oral health education into midwifery curricula, and constructing direct, bidirectional referral channels between midwives and dental healthcare professionals are essential steps to bridge primary maternal care with specialized dental services, ultimately optimizing maternal and neonatal health outcomes.

IMPLICATIONS FOR MIDWIFERY PRACTICE

The synthesis of evidence from this review carries direct implications across clinical practice, midwifery education, healthcare policy, and interprofessional health services:

1. Clinical Practice

Midwives should incorporate brief, validated oral health screening questionnaires (3 to 5 standardized risk questions Midwifery Initiated Oral Health-Screening Tool / MIOH-ST) and basic visual oral inspections into routine first-trimester antenatal care (ANC) assessments. Integrating these quick assessments enables early identification of maternal periodontitis and prompt referral before chronic systemic inflammation can affect fetoplacental development.

2. Midwifery Education and Training

Arnetty et al., InterprofessionalCollaborationOralHealth

37



Educational institutions and professional midwifery bodies must address the existing curriculum void by embedding dedicated maternal oral-systemic health modules into undergraduate, postgraduate, and continuing professional development (CPD) programs. Training should focus on recognizing oral disease indicators, delivering targeted oral hygiene education, and managing interprofessional referral workflows.

3. Health Policy and Healthcare Management

Healthcare administrators and policymakers should establish national interprofessional clinical practice guidelines that formalize oral health screening as a standard performance indicator within maternal care quality metrics. Establishing direct, reciprocal referral pathways between maternal health clinics and public dental facilities is critical to eliminating structural barriers and ensuring continuity of care.

4. Midwifery Curriculum Reforms and Continuing Professional Development (CPD)

Higher education institutions and midwifery accreditation bodies must urgently address the historical curriculum gap by embedding dedicated maternal oral-systemic health modules into undergraduate and diploma midwifery programs (Kloetzel et al., 2021; Rahayu et al., 2023). Training should emphasize basic visual intraoral identification of gingival inflammation, targeted risk-communication techniques, and standardized referral workflows. For practicing midwives, interprofessional continuing professional development (CPD) workshops conducted jointly with dental practitioners can build clinical self-efficacy, foster mutual professional respect, and eliminate interprofessional silos (Adams et al., 2021; Pratiwi et al., 2022).

5. Community-Based Empowerment and Health Literacy

Midwife-led screening initiatives must be supported by targeted community-based oral health promotion. Midwives and community health workers (*Kader Kesehatan*) should deliver culturally tailored education during prenatal classes (*Kelas Ibu Hamil*) to dispel myths regarding the safety of pregnant dental care (Fitriani et al., 2024). Educating women on the link between maternal periodontal health and fetal outcomes empowers pregnant mothers to seek timely preventive dental care, optimizing both maternal and neonatal outcomes (George et al., 2022; Utami et al., 2023).



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ETHICAL STATEMENT AND CONFLICT OF INTEREST

As this study is a review of secondary published literature, formal ethical approval was not required. The authors declare that they have no competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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