International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Beatrice JNL et al. Int J Reprod Contracept Obstet Gynecol. 2026 Dec;15(12):xxx-xxx
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: https://dx.doi.org/10.18203/2320-1770.ijrcog20264238

Review Article

Women's health across the life course in Malaysia: a narrative review of care gaps and opportunities for service integration

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Received: 14 October 2026
Revised: 30 October 2026
Accepted: 31 October 2026

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ABSTRACT

Women's healthcare in Malaysia spans several programmes and clinical settings, yet continuity between life stages is less well understood. This narrative review examines care, access and opportunities for service integration from adolescence through the reproductive years, pregnancy and postpartum, to menopause. It draws on PubMed and supplementary Malaysian public sources, grey literature and citation searches for publications from 1 January 2000 to 20 October 2026. The literature comprised 83 reports representing 81 underlying evidence sources. Of these reports, 45 concerned pregnancy and postpartum care, 15 preconception and reproductive care, 13 adolescence and 10 menopauses. Recurring barriers involved confidentiality, sociocultural acceptability, cost, reproductive planning, follow-up and referral coordination. Findings from individual studies are interpreted within their settings and distinguished from gaps in published evidence. Priorities for evaluation include trusted adolescent entry points, discussion of reproductive intentions during routine care, completion of postpartum and mental-health follow-up, and access to appropriate midlife care. We propose a primary-care framework that connects these functions through shared information and clearly assigned follow-up responsibilities. Limited database coverage, heterogeneous study designs and the absence of formal quality appraisal constrain the conclusions. The review identifies practical opportunities to improve continuity, while recognising that the proposed framework requires evaluation and that the available literature cannot establish the extent of service gaps nationally.

Keywords: Women's health, Life course, Primary health care, Continuity of care, Sexual and reproductive health, Malaysia

INTRODUCTION

Women's health needs change over time, while care is often organised around individual conditions or episodes. Menstrual and sexual-health concerns may arise in adolescence, and reproductive planning becomes relevant alongside the management of chronic disease. Pregnancy can reveal cardiometabolic or psychological risks that persist after childbirth. In midlife, menopause symptoms, bone health and cancer prevention may become more prominent. A life-course approach considers how care at each stage can address current concerns and inform future prevention. Continuity is relevant even when a woman does not experience every reproductive stage. A useful pathway should accommodate different reproductive choices, change health priorities and periods when contact with services is infrequent. The central question is whether information and responsibility remain connected as her needs change, rather than whether she follows a fixed sequence of programmes. Malaysia has an extensive primary-care network and established maternal and child health services. Women also seek care through schools, private general practice, hospitals, pharmacies and digital channels. Whether these contacts provide continuity

across life stages is harder to determine from studies of single conditions or services. Access also depends on social, legal and economic circumstances, particularly for adolescents, unmarried women, migrants, women with chronic disease and those in rural or low-income communities.[1-3]

Malaysian studies have examined adolescent sexual and reproductive health, pre-pregnancy care, antenatal screening, postnatal support and menopause management. However, less attention has been given to the connections between these areas and the role of primary care in maintaining continuity. This narrative review examines evidence across four life stages to identify recurring barriers to care and opportunities for integration. It distinguishes problems documented in particular settings from questions that remain unanswered and uses this interpretation to propose a practical framework for primary and community care.[4-7] The 2025 World Health Organization framework places transitions and cumulative exposures at the centre of a life-course approach. It provides a useful policy context for asking whether care remains connected when women move between programmes.[8]

REVIEW APPROACH

This narrative review considers Malaysian literature published from 1 January 2000 to 20 October 2026. Sources were identified through PubMed, supplemented by Malaysian public sources, grey literature and citation searches. The review focuses on prevention, management, access, follow-up and coordination within primary and community care and their links with specialist services. Empirical studies, reviews, guidelines and policy analyses were considered; reports without separable Malaysian findings, protocols without results and abstracts with insufficient information were excluded. Table 1 summarises the scope. Figure 1 summarises the search and selection history.

The first author selected the literature and extracted information on life stage, study design, setting, population, care domain and findings relevant to integration. The second author verified all eligibility decisions and extracted fields, with checks completed by 20 October 2026; both authors agreed on the final decisions. Reports were grouped by one primary life stage for descriptive purposes, although their findings could inform more than one stage. Companion publications were identified to avoid interpreting them as independent confirmation. Findings were synthesised thematically, with reviews and guidance used for context. One report was available only as an abstract, and its contribution was restricted to the information provided there. No formal risk-of-bias assessment, certainty grading or meta-analysis was undertaken.

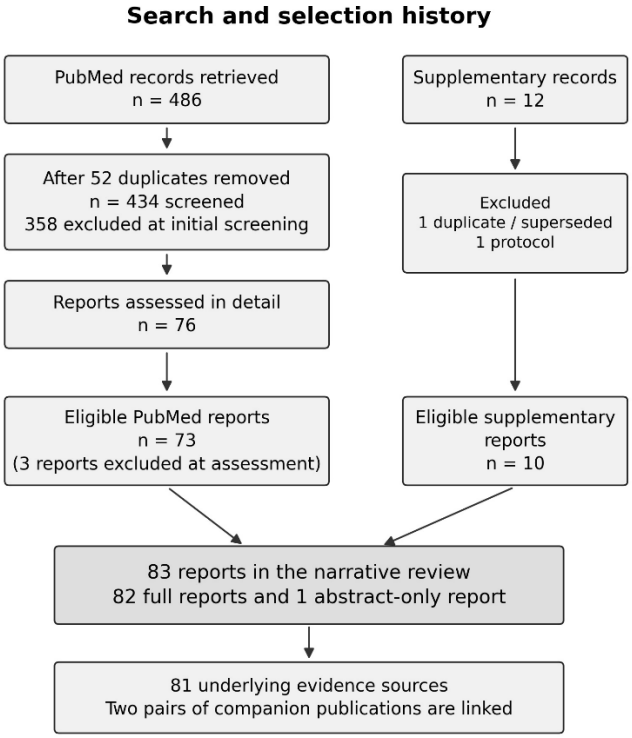


Figure 1: Search and selection history for the narrative review. The original search identified 83 reports representing 81 underlying Malaysian evidence sources. The diagram describes the recorded selection process and does not imply an exhaustive systematic review. The two international policy documents consulted during this revision provide context only and are outside these counts.

Table 1: Scope of the literature considered.

Element	Scope and interpretation
Population	Girls and women in Malaysia; caregivers, clinicians and stakeholders when directly relevant to women's care.
Care focus	Prevention, assessment, counselling, management, help-seeking, access, referral, follow-up and service organisation.
Context	Primary, community, school and outpatient care, including interfaces with specialist and national services.
Literature types	Empirical studies, reviews, guidelines and substantive policy analyses. Reviews and guidance provide context rather than independent primary-study effects.
Period and language	1 January 2000 to 20 October 2026; English or sufficient English-language information for assessment.
Excluded material	No separable Malaysian findings; no care or service implication; protocols without results; brief abstracts with insufficient information.
Evidence access	82 full reports and one abstract-only report; the latter contributes only information available in its abstract.

THE DISTRIBUTION AND INTERPRETATION OF MALAYSIAN EVIDENCE

The literature comprised 83 reports representing 81 underlying evidence sources, including two pairs of companion publications. Pregnancy and postpartum care accounted for 45 reports (54.2%), followed by preconception and reproductive care with 15 (18.1%), adolescence with 13 (15.7%), and menopause with 10 (12.0%). These totals include reviews and guidance as well as primary studies. The most frequently charted care domains were preconception, contraception and abortion care (n=17); adolescent sexual, reproductive and menstrual health (n=13); maternal screening and prevention (n=13); perinatal mental health (n=9); and health-system access, quality and integration (n=9). Table 2 and Figure 2 show the distribution by life stage.

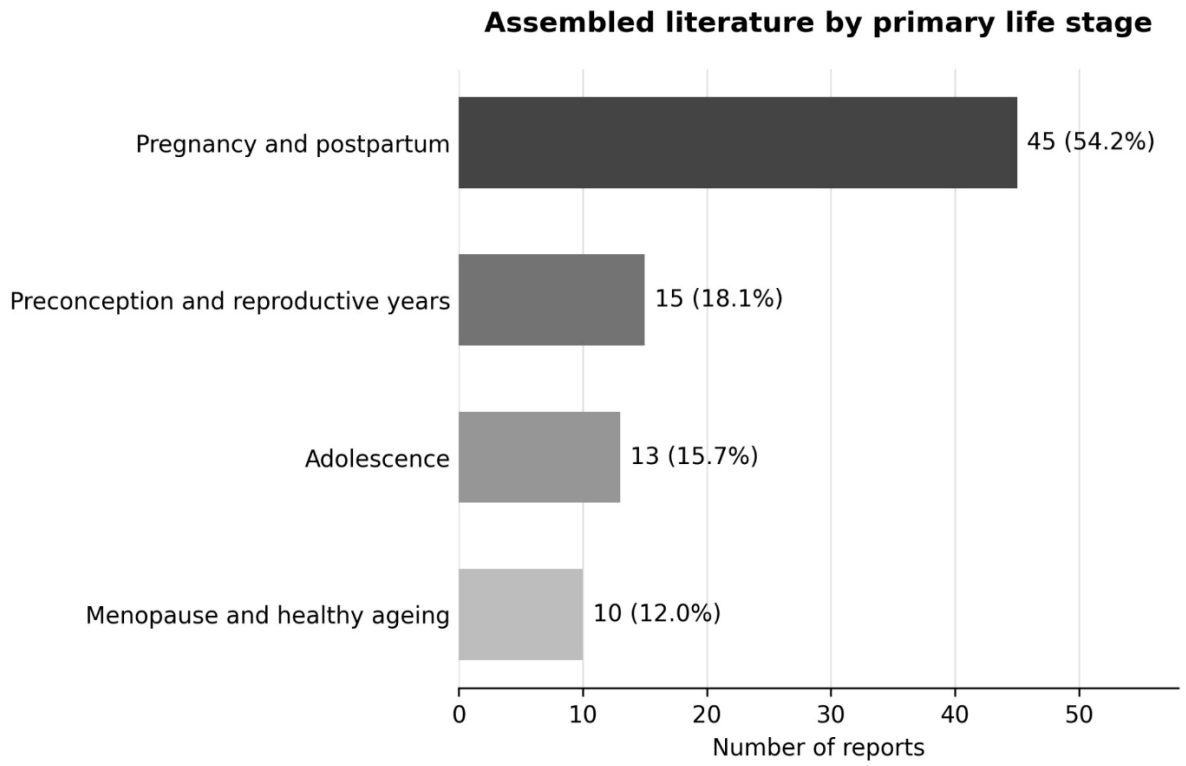


Figure 2: Distribution of the 83 reports by primary life stage. Counts include primary studies, reviews and guidance. Two pairs of companion publications are counted as separate reports, not independent participant samples. The distribution describes the literature considered and does not measure national service availability or unmet need.

Table 2: Profile of the assembled literature by primary life stage.

Life stage	Reports N (%)	Care questions	Interpretation and research gap
Adolescence	13 (15.7)	Confidential information, consent concerns, menstrual health and clinical access.	Published accounts identify access barriers; evaluated links between information and completed clinical care remain limited.
Preconception and reproductive years	15 (18.1)	Pregnancy preparation, contraception, chronic disease, abortion access and migrant care.	Selected populations describe underuse and counselling barriers. Findings do not constitute national utilisation estimates.
Pregnancy and postpartum	45 (54.2)	Screening, care quality, breastfeeding, mental health, pelvic-floor care and post-pregnancy prevention.	The largest literature group. Interventions address different outcomes; continuity across services needs direct evaluation.
Menopause and healthy ageing	10 (12.0)	Help-seeking, treatment access, bone health, breast screening and guideline implementation.	Regional clinician surveys identify specific implementation concerns; limited publication does not demonstrate absent services.

Counts refer to 83 reports, representing 81 underlying evidence sources. Each report has one primary stage, although interpretation may span stages. The two known companion-publication pairs concern high-risk pregnancy and clinician menopause practice. Counts include reviews and guidance and do not measure service quality, unmet need or intervention effectiveness.

The prominence of maternity care may reflect established services, research priorities and the search terms used. Report numbers cannot establish the availability or quality of services, nor can they quantify unmet need. Similarly, evidence of awareness or acceptability does not demonstrate access to treatment or completion of care. These distinctions guide the interpretation below. The distribution also needs to be read alongside the diversity of sources. A guideline describes recommended care, a survey describes reported experience or practice, and an intervention study examines a defined activity in a selected population. Bringing them together can identify questions for service development, but agreement across these sources is not equivalent to independent evidence that an integrated pathway will improve outcomes.

ADOLESCENCE AND THE TRANSITION FROM INFORMATION TO CARE

Access to adolescent care was closely linked to social and legal concerns. Reviews and qualitative studies described gaps in sexual and reproductive health information, uncertainty about consent, and tensions between professional responsibilities and personal, religious or community expectations. In a Selangor state school study, many adolescents knew little about available primary-care services, and approximately three-quarters reported discomfort with attending a clinic for sexual and reproductive health concerns. Menstrual-health research also described embarrassment and delayed help-seeking, especially among rural girls. These findings describe the settings studied and should not be taken as a national account of current practice.[1,9,10]

The study available only as an abstract examined how Malaysian adolescents sought and assessed sexual-health information online, including how they responded emotionally to that information.[11] Its findings suggest a role for digital information, but provide limited detail for assessing clinical implications. Information is most useful when adolescents can also reach confidential assessment, safeguarding and appropriate care. The reviewed studies did not establish whether a particular school-to-clinic or digital referral pathway improves attendance.

Better knowledge alone may not overcome fear of judgement or unwanted disclosure. Services therefore need to explain confidentiality and its limits, provide age-appropriate information and offer a clear route from menstrual or sexual-health concerns to assessment and follow-up. Family involvement should take account of the adolescent's circumstances, safeguarding needs and applicable requirements. Evaluation should examine whether adolescents obtain appropriate care, as well as whether their knowledge improves.[1,9,10] For local implementation, the initial consultation would need a clear purpose and an understandable explanation of what happens next. Adolescents should know whom they can contact again and how referral will be arranged if their needs exceed the service's capacity. These are proposed design features to be evaluated with adolescents and staff, rather than conclusions that an existing Malaysian model has already demonstrated.

Malaysia's existing adolescent-friendly health services (Perkhidmatan Kesihatan Mesra Remaja), including Klinik Remaja within government primary care, provide a platform for addressing these concerns.[12] The practical opportunity is to make these services more approachable and strengthen the links between initial attendance, private assessment and follow-up. An adolescent presenting with menstrual pain, for example, could receive care for that concern without having to disclose sexual activity as a condition of access. Healthcare providers could then invite

discussion of other concerns in private, explain confidentiality and its limits, and agree on a safe way to maintain contact.

School and community activities could help adolescents understand where these services are available and what to expect during a consultation. In our interpretation, the presence of a designated service is an important foundation, while its success also depends on whether adolescents feel comfortable attending and can complete the care they need. Evaluation should therefore include adolescents' experiences of privacy, respectful communication and follow-up, particularly among those who do not currently use clinic services.

PRECONCEPTION AND REPRODUCTIVE CARE WITHIN ROUTINE HEALTH SERVICES

Malaysian studies reported underuse of pre-pregnancy care and explored ways to reach women and couples before conception. Community intervention-development work identified opportunities for engagement, while a qualitative study among women with diabetes showed how perceived risks, family expectations and counselling shaped contraceptive decisions.[4,13,14] In a Perak state sample of 490 women with high-risk pregnancies, 23.9% reported using pre-pregnancy care, fewer than half had good knowledge, and previous attendance was associated with better knowledge.[15,16] These findings support discussing reproductive intentions during chronic-disease and general primary-care visits, with counselling and access to contraception or pregnancy preparation according to the woman's goals.

The two Perak state reports describe knowledge and utilisation in the same sample and should be read together. Their retrospective accounts after pregnancy do not represent women who never attend maternity services, and the utilisation figure is not a national estimate. Intervention-development and qualitative studies also cannot establish that a separate preconception referral improves outcomes. The next step is to test whether asking about reproductive goals during routine visits leads to timely counselling and appropriate care.[15,16] Reproductive intentions can also change between visits. Recording a response once would therefore be an incomplete measure of good care. A proposed routine approach should allow women to revisit their preferences, discuss uncertainty and decline an intervention without losing access to other services. Evaluation should examine the appropriateness of the care offered and whether the woman's stated goals were respected.

Presently, Malaysia's primary care pre-pregnancy care services and chronic-disease clinics provide existing routes for acting on these findings.[17] A woman attending a diabetes review, for example, could be asked whether she is considering pregnancy, wishes to avoid it or is unsure. The agreed plan could then connect disease optimisation, medication review and contraceptive counselling with the appropriate pre-pregnancy service, followed by shared care with the tertiary centre.

The referring team would need to know whether that care was received and remain involved in ongoing disease management. The opportunity is to make reproductive planning part of routine care, so that women receive timely support to prepare for pregnancy or prevent an unintended pregnancy. Success should be assessed by whether care meets women's reproductive goals, as well as by attendance at a pre-pregnancy clinic.

Research on abortion and contraception described gaps in legal knowledge, provider attitudes, cost, stigma and uncertainty about where to obtain safe care. Migrant and refugee women faced further barriers related to finances, documentation, language and discrimination. Such difficulties can affect reproductive care, antenatal entry and postpartum follow-up. Integration therefore needs to address how women navigate services and overcome barriers to attendance; the presence of a clinic does not in itself ensure access.[2,18,19]

PREGNANCY AND POSTPARTUM CARE AS OPPORTUNITIES FOR CONTINUITY

Pregnancy and postpartum care formed the largest part of the reviewed literature. Topics included antenatal risk classification, gestational diabetes screening, delivery of recommended antenatal care, infectious-disease screening, maternal near miss, maternal-death review and women's experiences. This body of work reflects sustained attention to maternity services, while also identifying areas for improvement. Risk identification does not always lead to completed care: selective screening may miss affected women, recommended care may be incompletely delivered, and needs identified during pregnancy may remain unresolved after childbirth.[5,20-23]

Gestational diabetes illustrates the importance of follow-up beyond pregnancy. Malaysian studies described gaps in knowledge about postpartum glucose testing and barriers to ongoing diabetes-prevention support. The MYGODDESS trial examined the feasibility of a mobile application; it does not establish long-term prevention of type 2 diabetes. Digital support may help maintain contact, but its role needs to be connected to clinical review, laboratory testing and escalation when required.[24-26] A proposed follow-up plan should make the intended test, timing and responsible service clear to both the woman and the receiving clinician. Where a test is not completed, the next step should address the reason for non-attendance and the clinical importance of the outstanding action. This provides a practical basis for evaluating continuity beyond the number of digital contacts delivered.

Other studies examined telephone lactation counselling, postnatal-care costs and cervical-screening promotion after childbirth. Antenatal pelvic-floor studies assessed exercise-related knowledge, self-efficacy or adherence.

These populations and outcomes differ: evidence from pregnant participants should not be presented as proof of postpartum benefit, and improved exercise adherence does not establish sustained symptom improvement. Results therefore need to be interpreted for each intervention, population and outcome.[27-31] Therefore, these findings highlight the importance of linking education and remote support with ongoing clinical care. Women with persistent symptoms should know whom to contact and how to obtain further assessment. This follow-up plan should be explained when support is first offered.

These studies also raise a broader service question: how can support for individual concerns be coordinated after childbirth? A tailored postnatal review could bring together infant feeding, contraception, mood, pelvic-floor symptoms and indicated blood-pressure or glycaemic follow-up. Additional contacts would depend on clinical and social needs. However, combining promising components does not establish the effectiveness of the whole model. Evaluation would need to examine attendance, workload, referral completion and women's experiences, while costing studies could inform resource planning.[27-31] Coordination need not require every concern to be addressed in one lengthy appointment. A shared plan could identify immediate priorities, schedule other needs and make responsibilities visible across contacts. Whether this arrangement reduces duplication or improves completion remains an empirical question. Women's preferences, available consultation time and staff capacity should inform how the model is tested in each setting.

Malaysia's established antenatal and postnatal services offer repeated opportunities to connect maternity care with longer-term primary care.[17] The transition after childbirth deserves particular attention because responsibility for pregnancy-related risks may become less visible once maternity follow-up ends. For a woman with gestational diabetes, an agreed plan could identify where postpartum testing will occur, who will review the result and which team will provide subsequent care. Where practical, appointments could be coordinated with other postnatal contacts while preserving time for the mother's own health concerns. This approach would use existing contacts to maintain continuity. Its value should be assessed through completed testing and subsequent management, with women's accounts helping to explain missed or delayed care.

PERINATAL MENTAL HEALTH AND THE COMPLETION OF CARE

Malaysian perinatal mental-health studies addressed awareness, screening, social support, help-seeking and support needs. Surveys suggested that health professionals could recognise the importance of postpartum depression while reporting uncertainty, limited training or inconsistent assessment and treatment pathways. Family members and other support figures also influenced recognition and help-seeking.[6,32] Further work identified a preference for concise, multilingual and culturally appropriate awareness resources, alongside weaknesses in policy coordination for postnatal depression.[33,34]

A screening score is only the beginning of care. Women need a private discussion, assessment of immediate safety concerns, an agreed management or referral plan and follow-up when appointments are missed. Maternity, primary-care and mental-health teams would need to agree who is responsible for each step. The pathway should also reflect women's preferences and the practical constraints they face in attending care.

Awareness surveys describe knowledge and attitudes, while policy analyses examine how services are organised. Neither shows what proportion of women with depression receive effective treatment. Evaluations should therefore follow women from a positive screen through assessment, agreed management and subsequent review. Cultural and language adaptation may support engagement, but its contribution needs to be considered alongside privacy, referral capacity and women's experiences of seeking help.[6,32-34] An evaluation should also distinguish referral offered, referral accepted and assessment completed. These steps identify different points at which support may be needed and avoid treating a referral letter as evidence that care was received. The proposed approach would include an agreed route for reviewing women who cannot attend or do not wish to take up the initial management option. From a service perspective, the receiving team should be identifiable before screening is expanded. Otherwise, greater recognition may increase unmet demand without improving access to assessment. Local planning should therefore examine both the number of women identified and the capacity to provide timely follow-up, including a clear route for urgent concerns.

Maternal services and primary-care mental-health services already sit within Malaysia's health-clinic service framework.[17] Their coexistence creates an opportunity for closer coordination, although it does not demonstrate that every woman can access timely treatment. At an antenatal or postnatal contact, a woman who reports emotional distress could be offered a private clinical assessment and an agreed follow-up plan, with specialist input according to need. If another team assumes care, feedback should return to the team maintaining contact with her. If she cannot attend, the team should discuss the barriers she faces and agree on a suitable alternative for follow-up. The key measure of success is whether identifying her needs leads to appropriate care that she can access and continue.

MENOPAUSE AND HEALTHY AGEING WITHIN PRIMARY CARE

Ten reports primarily concerned menopause or healthy ageing. They addressed help-seeking, osteoporosis assessment, pharmaceutical care, subsidised mammography, clinician practice and national guidance. These sources point to needs for clearer information on

symptoms and treatment, appropriate bone assessment, screening access and medication counselling. Their different designs answer different questions: clinic surveys, condition-specific studies and guidance cannot together provide a national measure of service provision. The small number of reports also does not establish low clinical need or absence of services.[3,35-37]

Two companion reports from a survey of public-clinic doctors in Selangor, Kuala Lumpur and Putrajaya provide a specific example. Respondents reported infrequent direct prescribing of menopause hormone therapy and reliance on hospital referral. Because both publications use the same survey, their findings are complementary rather than independent replication. Regional self-reported practice cannot establish national prescribing patterns or show that referrals were inappropriate. It does, however, support examining medicine availability, training and the route from counselling to treatment in relation to national guidance.[7,38,39]

Midlife care also offers an opportunity to use information gathered earlier in life. Pregnancy complications, reproductive history, medication exposure and cardiometabolic risk may inform later prevention, but the reviewed literature provided little direct evaluation of pathways connecting this history with midlife care. A structured primary-care review could bring together symptoms, cardiovascular and metabolic risk, bone health, cancer screening, sexual wellbeing and mental health, while respecting normal ageing and individual priorities.

The value of this history lies in informing the current consultation, rather than generating an automatic referral for every past complication. A woman attending for troublesome menopausal symptoms could have relevant pregnancy history reviewed alongside her present priorities, with preventive actions agreed and followed up through the same team. Patient preference is central to this approach. More prescriptions would not, by themselves, demonstrate better menopause care. Appropriate management includes informed choices, discussion of risks and alternatives, and follow-up. Pharmaceutical-care and bone-health studies likewise highlight the work that follows assessment.

Evaluation should focus on appropriate management and women's outcomes, alongside service use.[3,35,36,39] A structured review should therefore begin with the woman's concerns and what she hopes to achieve. Where treatment is offered, the plan should specify how response and tolerability will be reviewed. Where treatment is deferred or declined, information and a route back to care remain relevant. These proposed functions allow continuity to be assessed without equating intervention intensity with quality. The Malaysian menopause guideline provides an existing clinical foundation for strengthening midlife care.[39]

A routine primary-care or chronic-disease consultation could create space to ask about troublesome vasomotor, sleep or genitourinary symptoms and invite discussion of sexual wellbeing in private. Assessment could then connect the woman's immediate concerns with relevant preventive care and an informed discussion of management options. Where specialist referral is needed, the primary-care team could retain responsibility for other health needs and review whether the referral led to an agreed plan. This would bring menopause care into the woman's continuing relationship with primary care. Evaluation should examine symptom-related wellbeing, informed choices and follow-up, rather than prescribing rates alone.

CONNECTING SERVICES ACROSS THE LIFE COURSE

Across the four life stages, recurring concerns involved knowing where to seek help, trusting that care would be confidential, meeting financial or administrative requirements, negotiating cultural and family expectations, and obtaining follow-up. Their importance varied across populations and settings. Although the literature described many entry points and several promising interventions, few studies examined handover between life stages or services. For this review, integration means that a woman can enter through an appropriate service, her priorities and future risks are recorded, and responsibility for the next action is clear. Missed follow-up should prompt a response proportionate to clinical need. We interpret these recurring concerns as three related tasks: helping women enter care, ensuring that agreed actions are completed, and carrying clinically relevant information into later contacts.

This distinction matters because improving one task may leave the others unchanged. A more welcoming clinic may improve attendance while referrals remain incomplete; a shared record may preserve information while nobody is assigned to act on it. The evidence supports examining these connections, but does not establish the extent of fragmentation nationally. Adolescent discomfort with services, low preconception attendance in a selected sample and referral dependence in a regional menopause survey each describe a particular concern. Recommendations drawn from these findings need to remain sensitive to differences between regions, populations and public and private services.[7,9,16]

A longitudinal primary-care team could coordinate care while maintaining access to specialist expertise. Figure 3 presents our proposed framework, linking life-stage contacts through shared information, named responsibility for the next action and feedback after referral. This is a conceptual proposal requiring evaluation. Its feasibility depends on staffing, information systems, medicines, diagnostic capacity and referral arrangements, all of which need local assessment. Table 3 summarises the proposed responses and candidate measures for local evaluation.

The shared record is intended to support clinical responsibility, rather than simply collect more information.

A locally tested version would need to identify who reviews an unresolved result, who contacts the woman and how advice from another service returns to the primary-care team. Women should also receive an understandable account of the plan so that continuity does not depend entirely on communication between professionals. In settings where records cannot be shared electronically, a concise transfer summary and a named receiving team offer a starting point for local testing. Sensitive sexual, reproductive and mental-health information should be shared only as appropriate for care, with privacy safeguards and an explanation to the woman. Digital interoperability would support coordination.

Table 3: Recurring gaps and proposed priorities for integration.

Evidence-informed concern	Proposed primary-care response	Candidate measure
Unclear or uncomfortable entry points	Connect school, community and digital information to confidential clinical assessment.	Completed assessment after information-seeking or referral.
Reproductive goals separated from chronic-disease care	Ask about reproductive intention and offer appropriate contraception or pregnancy preparation.	Documented goals and completed indicated counselling or care.
Screening separated from subsequent action	Agree a responsible team, recall process and feedback after referral.	Completion of indicated testing, assessment or treatment.
Condition-specific postnatal contacts	Coordinate mood, contraception, pelvic-floor and cardiometabolic follow-up with feeding support.	Completion of a tailored postnatal care plan and patient experience.
Financial, language and administrative barriers	Assess navigation needs, communication support and feasible access routes.	Attendance and completion by relevant equity characteristics.
Midlife management disconnected from earlier history	Use reproductive and pregnancy history within symptom assessment and prevention.	Appropriate assessment, shared decisions and follow-up rather than prescribing counts alone.

Responses and indicators are author proposals requiring local feasibility testing and evaluation. They are not validated standards, proof of effectiveness or estimates of national service performance.

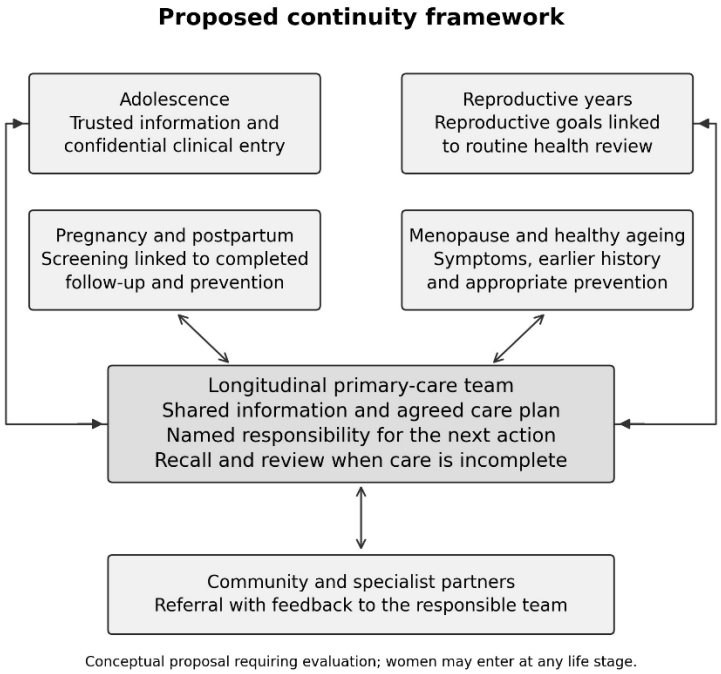


Figure 3: Proposed framework for continuity in Malaysian women's healthcare. Life-stage contacts connect through a longitudinal primary-care team, shared information and explicit responsibility for follow-up, with feedback after referral. The framework has not been evaluated. Women may enter at any life stage; the stages are not mandatory sequential experiences.

IMPLICATIONS FOR PRACTICE AND POLICY

Service development could begin with existing contacts. Schools, community organisations and digital resources could provide a clear route to confidential adolescent care, with consent and safeguarding arrangements explained. Routine chronic-disease reviews could include reproductive intentions and access to contraception or pregnancy preparation. Antenatal and postnatal records could specify which findings require action after pregnancy and identify the responsible team. Postnatal care could coordinate mental health, contraception, cardiometabolic and pelvic-floor follow-up with feeding support. At midlife, review could connect symptom management and prevention with the woman's reproductive and pregnancy history. Responsibilities would need to be agreed across primary, maternity, community and specialist services. The 2025 interagency brief on integrating noncommunicable disease care with sexual, reproductive and maternal health supports this direction at policy level.40 For Malaysia, we propose a single, coordinated sexual and reproductive health pathway spanning adolescence, the reproductive years, pregnancy and postpartum, through to menopause. Existing services could be linked through shared care plans, clear referral arrangements and agreed responsibility for follow-up, allowing women to enter the pathway at any life stage. Local implementation could assess whether women understand their care plans, receive appropriate care and move smoothly between services, with findings guiding wider expansion.

Measures of progress should examine whether care is completed, as well as how many women are reached. Candidate indicators include the time to confidential adolescent assessment, documentation of reproductive intentions in chronic-disease care, postpartum glucose testing after gestational diabetes, completed referral after a positive mental-health screen, and appropriate midlife review. These proposed measures require local testing, clear denominators and interpretation alongside workload, patient experience and equity. Measures should be selected with staff and service users before implementation. An increase in recorded activity could reflect improved documentation without a corresponding improvement in care. Reviewing a small set of completed pathways alongside women's accounts could help interpret the numbers. Local testing should also establish whether collecting the proposed indicators creates additional work that outweighs their practical value. Denominators need particular care: postpartum testing should be assessed among women for whom testing is indicated, while referral completion should distinguish women awaiting assessment from those who decline after an informed discussion. Reasons for non-completion should be reviewed with women where feasible. Transport costs, caring duties, language and appointment arrangements may require different responses; repeated reminders alone would not address every barrier.

RESEARCH PRIORITIES

Future research should examine how women move through services and what helps them complete care. Priorities include links from school or online information to adolescent consultation, the effect of reproductive-intention prompts during routine visits, recall and navigation after pregnancy, management after a positive perinatal mental-health screen, and menopause care within primary care. Studies should examine differences in reach and outcomes by rurality, socioeconomic position, ethnicity, disability, migration and legal status. Implementation and economic findings are needed alongside clinical outcomes to judge whether a model can be sustained within the Malaysian health system.

Pragmatic evaluations should describe the existing pathway, intervention, staffing and comparator clearly enough to support adaptation. Relevant outcomes include attendance, completion of indicated care and patient experience, with longer follow-up where prevention is the intended benefit. Repeated visits, digital exclusion and increased referral workload should also be recorded. This would show whether a proposed model improves coordination and outcomes in practice. Comparisons should account for the starting level of service provision and the resources required to maintain the intervention. A pathway that works with dedicated research staff may need adaptation for routine care. Reporting these conditions would make the findings more useful for other clinics and help determine whether improved follow-up can be sustained after the evaluation period ends.

Strengths and limitations

This review brings together clinical, behavioural and service perspectives that are often discussed separately. Linking companion publications helps avoid treating related reports as independent evidence. The proposed framework translates recurring concerns into functions that can be examined in practice, while leaving its effectiveness to future evaluation.

Important limitations remain. PubMed was the only bibliographic database searched; Scopus, Web of Science, CINAHL and PsycINFO were not searched because access was unavailable. Public-source, Malaysian grey-literature and citation searches broadened coverage but cannot eliminate selection bias. Some additional search routes lack exact platform-specific queries, result limits and complete seed lists, limiting reproducibility. Search terminology may miss care studies that do not use the selected service or life-stage terms. English-language accessibility and availability of public reports may also shape the evidence assembled.

The underlying literature is heterogeneous, with no formal risk-of-bias assessment, certainty grading or pooled effect estimate. Interpretation is therefore qualitative and should not imply national representativeness or causal effects from descriptive findings. One report contributed only abstract-level information. Report counts reflect the search

and classification process rather than service quality, unmet need or intervention effectiveness. Historical findings may not reflect current services, and the proposed integration model requires prospective evaluation before claims of clinical or economic benefit can be made.

CONCLUSION

Malaysian literature describes substantial activity in women's healthcare, alongside recurring difficulties with access, follow-up and coordination. Pregnancy and postpartum care dominate the available evidence, while adolescence, midlife and transitions between life stages remain less well studied. A single, coordinated sexual and reproductive health pathway spanning adolescence to menopause could connect existing services through primary care, allowing women to enter at any life stage and receive care as their needs change. Priorities include trusted adolescent access, reproductive planning, maternal and postnatal continuity, mental-health support and appropriate menopause care. Shared information, clear referral arrangements and agreed responsibility for follow-up could support continuity across this pathway. Local implementation should be evaluated with women and healthcare teams to determine whether it improves care completion, women's experiences, equitable access and health outcomes before wider expansion.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

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Cite this article as: Beatrice JNL, Sharifuddin NB. Women's health across the life course in Malaysia: a narrative review of care gaps and opportunities for service integration. Int J Reprod Contracept Obstet Gynecol 2026;15:xxx-xx.