



Evidence Brief

Bridging the gap: Accelerating timely antenatal care for healthier mothers and babies

Daniel Muthiani¹, Simon Muchemi², Esther Kiambati³, and Joyce Maina⁴.

¹Machakos County Government, ²Division of Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCAH), Ministry of Health, ³Pumwani Maternity College of Nursing and Midwifery (PCNM), ⁴Nyeri County Government.

Executive summary

Antenatal care (ANC) is essential for maternal and newborn survival, yet most women in Kenya delay their first visit, with only 29% initiating within the first trimester (KDHS, 2022). Early ANC enables timely detection of complications, facilitates preventive interventions, and leads to improved pregnancy outcomes.

Kenya has introduced major financing reforms, the Free Maternity Services Policy (2013) and Linda Mama (2017), which expanded access to skilled maternity care and increased facility deliveries. However, these policies have had limited effect on when women begin ANC. Hidden costs, knowledge gaps, cultural barriers, and uneven implementation continue to delay care.

Evidence shows that community-based strategies are the most effective drivers of early ANC. Interventions such as community health volunteer (CHV) led pregnancy testing and referrals, and community mobilisation models (e.g., "4byFour" in Migori) significantly improved first-trimester initiation. Service quality also matters, as seen in Kwale, where district-level quality improvement increased early ANC uptake from 8% to 24%. Persistent inequities, linked to poverty, rural residence, and low education, remain critical barriers.

As Kenya transitions from "Linda Mama" to the Social Health Authority (SHA), both opportunities and risks arise. Sustaining financing while embedding strong community engagement, equity-focused outreach, and service quality improvements will be key to bridging the gap between high ANC coverage and timely initiation.

Key messages

- Early initiation of ANC in the first trimester remains low in Kenya, with only 29% of women attending on time despite near-universal overall ANC coverage.
- Significant disparities persist, with rural, poorer, and less-educated women disproportionately likely to delay ANC initiation.
- Financing reforms such as the Free Maternity Services Policy (2013) and "Linda Mama" (2017) improved access and facility deliveries but had a limited effect on when women begin ANC.
- Community-driven strategies, including CHV referrals, household pregnancy testing, and models like Migori's "4byFour", have shown measurable success in increasing early uptake.
- Service quality, particularly respectful maternity care, adequate staffing, and reliable supplies, strongly influences women's decisions to seek care early.
- Policy transitions, including the shift from "Linda Mama" to the SHA, create uncertainty but also an opportunity to strengthen continuity in maternal health financing.
- The evidence consistently shows that early ANC uptake improves most when financial access, community engagement, equity, and service quality are addressed together.

Background

Antenatal care (ANC) is widely recognised as one of the four pillars of safe motherhood and plays a crucial role in reducing maternal and newborn morbidity and mortality [1]. The World Health Organization (WHO) recommends that women attend at least eight ANC contacts during pregnancy, beginning within the first trimester, ideally before twelve weeks of gestation [2]. Early initiation allows for timely detection and management of complications, initiation of preventive measures such as folic acid supplementation during organogenesis, and provision of health education to support positive pregnancy outcomes[2,3].

In Kenya, policy reforms have been introduced to increase access to maternal health services. The Free Maternity Services Policy (2013) eliminated user fees for ANC and delivery services in public facilities. It was later expanded under the "Linda Mama" Programme (2017), administered through the National Health Insurance Fund (NHIF). "Linda Mama" broadened access by including some private and faith-based facilities and extending coverage to antenatal, delivery, and postnatal care. These initiatives contributed to higher utilisation of skilled maternity services and facility-based deliveries[4].

Despite these gains, challenges remain. Evaluations indicate that while financial barriers have been reduced, the timing of first ANC visits has not significantly improved. Data from the Kenya Demographic and Health Survey (2022) shows that

although 98 percent of women received ANC from a skilled provider, only 66 percent completed at least four visits, and just 29 percent initiated ANC within the first trimester [5]. Implementation challenges such as delayed reimbursements to health facilities, reduced budget allocations, inconsistencies in service quality and knowledge and cultural barriers constrained policy effectiveness [6].

More recently, maternal health financing has entered a period of transition. The government is integrating "Linda Mama" into the SHA framework, also referred to as "Linda Jamii", with an expanded mandate for universal health coverage (UHC) [7]. While this transition is expected to sustain free maternity care, uncertainties remain regarding budget sufficiency, timely reimbursement to facilities, and how well the new model will incentivise early ANC uptake [8].

These realities highlight a persistent policy gap; although access has expanded, most Kenyan women still initiate ANC late, missing critical evidence-based interventions in the first trimester. Addressing this challenge requires not only sustaining financing reforms but also implementing community-based strategies, demand-generation efforts, and strengthening the health system to promote timely ANC initiation. This evidence brief therefore, seeks to synthesise lessons from low- and middle-income countries (LMICs), including Kenya, to inform strategies that bridge the gap between coverage and early uptake in Kenya.



98%

received ANC from
a skilled provider



66%

completed at least
4 visits



29%

initiated ANC within
the first trimester

Methodology

This evidence brief is based on a rapid review of peer-reviewed literature focusing on barriers, facilitators, and interventions related to the timely initiation of antenatal care (ANC), particularly in LMICs with emphasis on Kenya and Sub-Saharan Africa. A systematic search was conducted using PubMed, Scopus, and Google Scholar. The review covered studies published between 2010 and 2025. Data

extraction was performed using a standardised tool to capture key study characteristics, intervention details, main findings, and their relevance to the timely uptake of ANC services. Thematic analysis and narrative synthesis were then applied to generate context-specific recommendations, with particular emphasis on aligning them to Africa's policy priorities and programmatic needs.

Key findings

The evidence highlights that Kenya has made substantial progress in expanding access to antenatal care (ANC) through financing reforms, yet early initiation of ANC remains a persistent gap. The introduction of the Free Maternity Services Policy (2013) and the "Linda Mama" Programme (2017) eliminated user fees and significantly increased facility deliveries and overall ANC attendance [9, 10]. However, both policies have shown limited effect on the timing of the first ANC visit. Women continue to delay care due to persistent knowledge gaps, cultural practices, hidden costs such as transport, and uneven policy implementation across counties. This highlights that financing reforms alone are insufficient to shift ANC initiation without complementary community-based and health system interventions [11].

Community-driven strategies have proven to be among the most effective interventions for promoting early ANC uptake.

Evidence from Kenya demonstrates that combining household pregnancy testing with CHV referrals substantially increases the likelihood of women seeking ANC within the first trimester (12). Similarly, the "4by4" model in Migori County achieved a 20% increase in early ANC uptake through structured community engagement and mobilisation (13). International evidence further reinforces this

approach; in Thailand, training local health volunteers significantly improved the timeliness of ANC initiation [14], while a global review of reviews found that community mobilisation consistently enhances the timely use of ANC and postnatal services [15]. Together, these findings emphasise the central role of CHVs and community structures in bridging the gap between households and the health system.

At the same time, persistent inequities remain a barrier to timely ANC in Kenya. Analyses of demographic

and health survey data show that rural residence, low education, and poverty are strongly associated with late ANC initiation, with overall uptake before 12 weeks remaining below 30% [16, 17]. These disparities mirror trends seen in other LMICs, where rural women often underutilise ANC compared to their urban peers [18]. Targeted interventions are therefore needed to address structural and social determinants of delayed initiation, particularly among underserved and vulnerable populations, including outreach

and mobile clinics.

The quality of ANC services also influences women's care-seeking decisions. When facilities are perceived as overcrowded, understaffed, or disrespectful, women are less likely to attend early. Evidence from district-wide quality improvement initiatives in Kenya

Community-driven strategies have proven to be among the most effective interventions for promoting early ANC uptake.

demonstrates that strengthening provider skills, ensuring the availability of supplies, and promoting respectful maternity care can enhance ANC uptake [19]. These service-related factors, when left unaddressed, undermine the gains of financing and community-level interventions.

Evidence shows that M&E systems for maternal health face challenges including inconsistent indicators for early ANC initiation, weak data collection and reporting systems, limited facility capacity to record gestational age reliably, and insufficient use of evaluation findings due to lack of stakeholder engagement. Strengthening M&E, therefore requires

standard indicator definitions, regular data collection, use of digital tools, capacity building, and ensuring feedback loops[20].

In summary, the body of evidence indicates that while financing policies have expanded ANC access, they have not sufficiently accelerated early initiation. An integrated approach is the most effective, combining financial protection with community mobilisation, CHV support, equity-focused outreach, and improved service quality. Without such, Kenya risks achieving high overall ANC coverage while continuing to miss the critical early window of care that is essential for preventing maternal and newborn complications.



Summary of studies

Author(s), Year	Country/ Setting	Key findings	Implications
Njuguna et al., 2017	Kenya	Free Maternity Services Policy increased facility deliveries but did not significantly improve timing of ANC initiation.	Financing reforms alone are insufficient to shift ANC timing; complementary demand-side interventions are needed.
Guleid et al., 2024	Kenya	Linda Mama improved ANC attendance overall, but delays in first visit persisted due to knowledge and cultural barriers.	Policies should integrate community awareness and early detection strategies.
Otiso et al., 2024	Kenya	Household pregnancy testing plus CHV referrals improved early ANC attendance compared to standard care.	Strengthening CHV engagement is key to timely ANC.
Kase et al., 2025	Kenya	Rural residence, low education, and poverty are strongly associated with late ANC initiation.	Multi-sectoral approaches are needed to reduce inequities.
Asiimwe et al., 2024	Kenya	Early ANC uptake remains below 30%, with persistent disparities by wealth and region.	Need for targeted interventions in underserved communities and regions.
Alhassan et al., 2024	Kenya (Migori)	"4byFour" community model increased first trimester ANC by 20%.	Community mobilization can drive timely ANC.
Liabsuetrakul et al., 2018	Thailand	Training local health volunteers improved early ANC initiation.	Support CHV training as a scalable strategy.
Tran et al., 2011	Vietnam	Rural women had lower ANC utilization compared to urban peers.	Reinforces rural–urban inequities observed in Kenya.
Lateef et al., 2024	Sub-Saharan Africa	Free delivery policies alone did not improve early ANC; structural and social barriers persist.	Financing reforms must be paired with demand-side interventions.
Dada et al., 2021	Global (Review of reviews)	Community mobilization strengthens appropriate and timely ANC and PNC uptake.	Community-driven strategies complement facility-based care.
Mwaniki et al., 2024	Kenya (Kwale)	A district-wide quality improvement initiative increased first trimester ANC initiation from ~8% to ~24%.	Service delivery reforms and continuous quality improvement can accelerate early ANC uptake.
Sheffel et al., 2023	Burkina Faso, Kenya, Malawi, Senegal, and Sierra Leone.	ANC integration varies widely depending on the model and indicator used, with no single measure performing consistently across countries. It also highlighted major gaps in routine data systems, including incomplete reporting and inconsistent definitions.	Adopt context-specific indicators for monitoring ANC integration rather than relying on a one-size-fits-all approach. Strengthening data systems, harmonising indicators, and improving facility readiness are essential for effective tracking of early ANC initiation.

Recommendations

- Ministry of Health (MoH) and county governments should strengthen support for CHVs through fair remuneration, training, and supervision to enhance their role in mobilising early ANC initiation.
- National government and parliament should safeguard maternal health financing policies, such as Free Maternity Services and *Linda Mama*, by embedding them into legislation, ensuring continuity despite political transitions.
- County Health Departments should improve the quality of ANC services by addressing stockouts, staff shortages, and poor provider attitudes, and by promoting respectful maternity care.
- Community-based organisations and faith-based groups should intensify health education campaigns, engage men, and use culturally relevant approaches to increase awareness of the importance of early ANC.
- County governments and development partners should reduce inequities in access by scaling up outreach, mobile clinics, and targeted interventions in rural, remote, and informal settlement areas.
- MoH, counties, and health facilities should strengthen monitoring and evaluation systems, including the use of digital tools, to track ANC initiation trends and guide adaptive planning.

Acknowledgement

The authors acknowledge the contributions of Dr Violet Murunga, Belinda Korir and Derick Ngaira of the African Institute for Development Policy (AFIDEP) and Lilian Mayieka of the Kenya Medical Research Institute (KEMRI) who reviewed and refined the content of this policy brief. The development of this policy brief was made possible under the Africa Evidence and Equity in Policymaking Alliance (AEEPA) – LEEPS Project, funded by the International Development Research Centre (IDRC), the William & Flora Hewlett Foundation, and Robert Bosch Stiftung GmbH.

References

1. Mehta S. The Mother-Baby Package: an approach to implementing safe motherhood. *Int J Gynaecol Obstet Off Organ Int Fed Gynaecol Obstet*. 1995 Oct;50 Suppl 2: S113–20.
2. WHO. WHO recommendations on antenatal care for a positive pregnancy experience [Internet]. 2016 [cited 2025 July 7]. Available from: <https://www.who.int/publications/i/item/9789241549912>
3. Tunçalp Ö., Were WM, MacLennan C, Oladapo OT, Gülmezoglu AM, Bahl R, et al. Quality of care for pregnant women and newborns-the WHO vision. *BJOG Int J Obstet Gynaecol*. 2015 July; 122(8):1045–9.
4. Orangi S, Kairu A, Malla L, Ondera J, Mbuthia B, Ravishankar N, et al. Impact of free maternity policies in Kenya: an interrupted time-series analysis. *BMJ Glob Health [Internet]*. 2021 June 9 [cited 2025 Sept 15];6(6). Available from: <https://gh.bmj.com/content/6/6/e003649>
5. KDHS. Kenya Demographic and Health Survey - 2022 - Kenya National Bureau of Statistics [Internet]. 2022 [cited 2025 July 7]. Available from: <https://www.knbs.or.ke/reports/kdhs-2022/>
6. Out-of-pocket payments during childbirth ... | Wellcome Open Research [Internet]. [cited 2025 Sept 15]. Available from: <https://wellcomeopenresearch.org/articles/8-4>
7. K24 Digital [Internet]. [cited 2025 Sept 15]. 'Linda Mama to continue under Social Health Authority' – Govt. Available from: <https://k24.digital/411/linda-mama-to-continue-under-sha>
8. The Standard [Internet]. [cited 2025 Sept 15]. Reducing free maternal health care budget big blow to women. Available from: <https://www.standardmedia.co.ke/counties/article/2001497413/reducing-free-maternal-health-care-budget-big-blow-to-women>
9. Njuguna J, Kamau N, Muruka C. Impact of free delivery policy on utilization of maternal health services in county referral hospitals in Kenya. *BMC Health Serv Res*. 2017 June 21; 17(1):429.
10. Guleid FH, Njeru A, Kiptim J, Kamuya DM, Okiro E, Tsofa B, et al. Experience of Kenyan researchers and policy-makers with knowledge translation during COVID-19: a qualitative interview study. *BMJ Open*. 2022 June; 12(6): e059501.
11. Lateef MA, Kupiel D, Mchunu GG, Pillay JD. Utilization of Antenatal Care and Skilled Birth Delivery Services in Sub-Saharan Africa: A Systematic Scoping Review. *Int J Environ Res Public Health*. 2024 Apr 3; 21(4):440.
12. Otiso L, Alhassan Y, Odhong T, Onyango B, Muturi N, Hemingway C, et al. Exploring acceptability, opportunities, and challenges of community-based home pregnancy testing for early antenatal care initiation in rural Kenya. *BMC Public Health*. 2024 June 29; 24(1):1742.
13. Alhassan Y, Otiso L, Okoth L, Murray L, Hemingway C, Lewis J, et al. Four antenatal care visits by four months of pregnancy and four vital tests for pregnant mothers: impact of a community-facility health systems strengthening intervention in Migori County, Kenya. *BMC Pregnancy Childbirth*. 2024 Mar 27; 24.
14. Liabsuetrakul T, Oumudee N, Armeeroh M, Nima N, Duerahing N. Improvement of Early Antenatal Care Initiation: The Effects of Training Local Health Volunteers in the Community. *Health Serv Res Manag Epidemiol*. 2018 Jan 1; 5:2333392818761483.
15. Dada S, Tunçalp Ö, Portela A, Barreix M, Gilmore B. Community mobilization to strengthen support for appropriate and timely use of antenatal and postnatal care: A review of reviews. *J Glob Health*. 2021 Dec 30; 11:04076.
16. Gomani GT, Chisoni F, Umar E. Determinants of Late Initiation of Antenatal Care Among Pregnant Women in Sub-Saharan Africa: A Qualitative Systematic Review [Internet]. *Research Square*; 2025 [cited 2025 Sept 15]. Available from: <https://www.researchsquare.com/article/rs-6229528/v1>
17. Asimwe JB, Namulema A, Sserwanja Q, Kawuki J, Amperiize M, Amwiine E, et al. Determinants of quality antenatal care use in Kenya: Insights from the 2022 Kenya Demographic and Health Survey. *PLOS Glob Public Health*. 2024; 4(9): e0003460.
18. Tran TK, Nguyen CT, Nguyen HD, Eriksson B, Bondjers G, Gottvall K, et al. Urban - rural disparities in antenatal care utilization: a study of two cohorts of pregnant women in Vietnam. *BMC Health Serv Res*. 2011 May 23; 11(1):120.

19. Mwaniki MK, Vaid S, Chome IM, Amolo D, Tawfik Y, Kwale Improvement Coaches. Improving service uptake and quality of care of integrated maternal health services: the Kenya kwale district improvement collaborative. *BMC Health Serv Res.* 2014 Sept 21; 14(1):416.
20. Sheffel A, Tampe T, Katwan E, Moran AC. Development of indicators for integrated antenatal care service provision: a feasibility study in Burkina Faso, Kenya, Malawi, Senegal and Sierra Leone. *BMJ Open.* 2023 Feb 2; 13(2): e065358.



MINISTRY OF HEALTH

