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Beyond Attendance: Drivers of Delayed and Discontinued Antenatal Care in Karisimbi Health Zone, Eastern DRC; a Triangulated Qualitative Study

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Abstract *In unstable urban environments such as Karisimbi in the eastern of the Democratic Republic of Congo (DRC), timely access and completion of antenatal care (ANC) remains challenging. To explore how women, community leaders, and health providers in Karisimbi Health Zone understand the delayed and incomplete ANC use. We conducted a triangulated qualitative study. 64 participants were purposively enrolled: 51 women delivered in the previous 12 months, 7 healthcare providers, 5 religious leaders, and 1 community leader. Data was collected through focal group discussion and in-depth interviews in Swahili and French depending on the preference of the participants. Data was recording, transcribed, translated in English and imported in Nvivo15 for thematic framework analysis and triangulation. Six themes were identified: ANC as a valued but not always urgent service, cumulative cost of seeking care, livelihood and waiting time, social judgment, service experience, and household and community support. Delayed and incomplete ANC use was shaped by interacting with financial, social, and health-system constraints, including care-related costs and income loss; low perceived need without symptoms; fear of social judgment, provider reception, and trust; and limited household or community support. Improving uptake requires integrated action on affordability, quality of care, trust, and community support.*

Keywords *Antenatal Care, Community Support, Democratic Republic of the Congo, Qualitative Research.*

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Introduction

Antenatal care has become a central platform for maternal and newborn health because it combines clinical assessment, disease prevention, counselling, risk detection and linkage to facility-based delivery. Contemporary antenatal care (ANC) debates have moved beyond whether a woman has at least one contact with the health system. Increasing attention is now given to when care begins, whether it continues, what content is received, and whether women experience care as respectful and useful [1, 2]. This shift is especially important in settings where health facilities exist but access remains mediated by cost, insecurity, social norms, gender relations and variable service readiness[3, 4].

Globally, maternal mortality fell by 40% over the period 2000-2023, but although progress has been made in some regions, mothers in Sub-Saharan Africa still face great challenges [5]. Persistent inequalities in access to quality health care, lack of trained health personnel, and health system inequalities still threaten lives during a time that should be filled with joy and hope [6–9].

In the Democratic republic of Congo (DRC), a community-based mother and child health intervention drawing on the three delays model increased the odds of four or more antenatal care visits at the intervention site, suggesting that community health interventions adapted to the local context may enhance antenatal care utilization [10]. Four studies indicate that the optimal approach is not a singular intervention but rather an integrated strategy that encompasses demand-side support, affordability, service quality, respectful care, partner and community engagement, and health system enhancement. However, existing approaches have important limitations; surveys often leave unexplained the everyday calculations through which women decide whether to attend now, attend later, or stop attending [10–13]. In eastern DRC, the precarious health system overlaps with insecurity, mobility, informal urban livelihoods, and economic fragility of households [14], meaning that geographical proximity to a facility may not translate into effective access. Qualitative inquiry is therefore needed to understand how biomedical recommendations are interpreted within household economies, informal labor, social expectations and lived experience of health services in this setting.

This study focuses on Karisimbi Health Zone in North Kivu Province. Its objective is to explore how women, community leader, religious leaders, health providers explain delayed ANC initiation and discontinuation, and to identify the mechanisms linking economic constraints, social norms, household relations and service experience to women's ANC trajectories. The novelty of this work lies in its triangulated qualitative design in a fragile urban health-zone setting of eastern DRC, integrating women lived experience with community and provider perspectives to move beyond attendance counts toward an explanation of how ANC use is negotiated in everyday life.

This study is guided by an adapted socio-ecological, patient-centered access framework. It views antenatal care (ANC) use in Karisimbi not as a choice, but as a pathway shaped by women's capacity to recognize when care is needed, seek support, access health services, afford treatment, and maintain communication with healthcare providers is essential to timely and effective maternal care [1, 15]. At individual and household levels, delayed initiation or discontinuation will be explored through pregnancy recognition, perceived risk, knowledge, partner support, control over money, transport and competing domestic or survival priorities [15, 16]. At community level, the framework examines how gender expectations, religious advice, stigma and norms around pregnancy disclosure influence acceptance of ANC care [15]. At service level, it focuses on affordability, availability, respectful communication, waiting

time, confidentiality and perceived quality, consistent with world health organization (WHO)'s emphasis on positive pregnancy experience [1, 17]. Bringing together the perspectives of women, community leaders and health-care providers strengthened the analysis and helped identify what drives or interrupts ANC use [18].

Materials and Methods

Study Design

We used a qualitative interpretive design with triangulation across participant groups. It sought to provide a reason behind meanings, constraints and mechanisms shaping ANC trajectories in Karisimbi health zone.

Study Setting

The study was conducted in Karisimbi Health Zone, North Kivu Province, eastern DRC. Karisimbi is an urban and peri-urban setting with 20 health areas and a mix of public, private and faith-linked health facilities. It is characterized by dense urban neighborhoods, informal income-generating activities, reliance on daily cash flow, and uneven community-facility linkages [14, 19, 20].

Sampling and Participants

Participants were selected through maximum variation sampling including age, employment status, religion and education level. Women were recruited from the community and eligible if they had delivered within the previous 12 months to reduce recall bias and get participant who went through ANC journey in their previous pregnancy. Providers were recruited from ANC service delivery points at health facilities, while religious and community leaders were identified through their recognized roles in community communication and social influence.

The study included 64 participants: 39 women in individual interviews, 12 women in two focus group discussions (six per group), 5 religious leader,1community leaders, and seven health-care providers "Table 1". The sample size was based on saturation of information.

Table 1. Study Participants in Karisimbi Health Zone

Participants	**Setting**	**Category of involvement**	**FGD**	**IDI**	**Number of participants**
Women who delivered within the previous 12 months	Community	Women with recent ANC experience	12(six per group)	39	51[a]
Religious/community leaders	Community	Community and religious influence on ANC norms and referrals	-	6	6
Health-care provider	Health facility	Facility readiness and service delivery constraints	-	7	7
Total sample			2 FGDs	52 IDIs	64

[a] *the 51 women include 39 women interviewed individually and 12 women who participated in two focus group discussions. ANC, antenatal care; FGD, focus group discussion; IDI, in-depth interview.*

Data Collection

Before data collection, the principal investigator recruited five interviewers:4 female and 1 man to comply with gender norm in local community. He trained them for two days on the study objectives, qualitative interviewing, focus group facilitation, informed consent, probing, audio-recording, field-note taking, and confidentiality. Written informed consent was received from all participants.

Data were gathered using semi-structured interview and focus group discussion guides tailored to three participant groups: women, health-care providers, religious and community leaders. The guides included common core questions to enable triangulation, while allowing each group to discuss issues specific to their role and experience. The tools were piloted with three eligible women and reviewed with the interviewers to assess clarity, flow, language, cultural appropriateness, and duration. Minor revisions were made to wording, sequencing, and probes before formal data collection.

Women's interviews and focus groups explored perceptions of antenatal care, timing of first attendance, reasons for delayed initiation or discontinuation, household decision-making, financial and transport barriers, service experience, and suggestions for improvement. Provider and manager interviews examined ANC attendance patterns, service readiness, stock-outs, user fees, workload, and community-facility collaboration. Interviews with religious and community leaders focused on pregnancy-related norms, communication channels, referral practices, and their role in promoting ANC.

Two focus group discussions were conducted with six women each and lasted approximately 90 minutes. Individual interviews with women lasted about 30 minutes. Interviews and discussions were conducted in French or Kiswahili, according to participant preference. Participants were encouraged to speak freely, and probes were used to deepen responses and maintain consistency across interviews. With consent, audio recordings were made of all interviews and discussions, and field notes were taken.

Data quality was strengthened through close supervision by the principal investigator, regular review of recordings, transcripts, and field notes, and collective debriefings to deal with new concerns and synchronize data collection among participant groups. Transcription and translation were checked for consistency, with particular attention to preserving the meaning of key terms related to ANC, costs, shame, trust, community and household support.

Trustworthiness was strengthened through following approaches: Confirmability was supported by retaining recordings, field notes, transcripts and coding decisions to keep findings grounded in participants meaning considering Karisimbi context. Transferability was enhanced by clearly describing the Karisimbi context, participants and data collection procedures. Dependability was promoted through interviewer training, piloting, semi-structured guides, supervision, transcript checks and team debriefings. Reflexivity was anticipated in choice of interviewers and discussion during briefing and debriefing in pilot phase by discussing how their community profile, assumptions and interaction with women, leaders and health providers influence questioning and interpretation. Triangulation was achieved by comparing perspectives from women, providers and religious/community leaders, and by combining interviews with focus group discussions.

Data Control and Analysis

All interviews and focus group discussion were transcribed in French using kobo collect and then translated in English by an expert and validate by the principal investigator before

importation in Nvivo 15. Analysis employed a thematic approach. First, deductive domains were developed from the interview guides and the broader literature on ANC utilization, including perceived value of ANC, cost, distance, household influence, community engagement, service readiness and quality of care. Second, inductive coding refined these categories through repeated reading of transcript summaries, illustrative quotations and matrices. Coding focused on units of meaning rather than isolated words. Codes were then grouped into analytic themes and compared across participant categories.

Triangulation was undertaken at three levels. Initial triangulation examined codes from women, focus groups, community leaders, religious leaders, and providers. Thematic triangulation examined whether codes clustered similarly across participant groups. Interpretive triangulation identified convergence, complementarity and divergence.

Results

Participants Presentation and Interpretative Thematic Analysis

A total of 64 participants were included:39 women in individual in-depth interviews, 12 women in two focus group discussions, 5 religious leaders, 1community leader, and 7 health-care providers. Most participants were female (81.3%). The age distribution was broad, with the largest groups aged 25-29 years (23.4%), 30-34 years (20.3%), and 35-39 years (17.2%). Educational attainment varied: 35.9% had secondary education, 28.1% primary education, 18.8% no formal education, and 17.2% higher education. Informal income-generating activities were the most common occupation or role (39.1%), followed by household or informal domestic work (26.6%). Religious affiliation was mainly Protestant (40.6%) and Catholic (32.8%), with smaller Muslim and other Christian groups (Table 2).

Table 2. Socio-Demographic Characteristics of Study Participants in Karisimbi Health Zone

Category	Frequency	Per cent
Age group		
18-24	10	15.6
25-29	15	23.4
30-34	13	20.3
35-39	11	17.2
40-44	8	12.5
>45	7	10.9
Sex		
Female	52	81.3
Male	12	18.8
Participant group		
Women interviewed individually	39	60.9
Women participating in focus group discussions	12	18.8
Religious/community leaders	6	9.4
Health-care providers	7	10.9
Educational level		
None	12	18.8

Primary	18	28.1
Secondary	23	35.9
Higher	11	17.2
Occupation / role		
Housewife / informal household work	17	26.6
Informal income-generating activity	25	39.1
Formal employment	9	14.1
Health-care provider	6	9.4
Health manager	1	1.6
Religious leader	5	7.8
Community leader	1	1.6
Other	0	0.0
Religion		
Catholic	21	32.8
Protestant	26	40.6
Muslim	7	10.9
Other Christian denomination	7	10.9
Other	3	4.7

Note: *Percentages were calculated using the total sample size of 64 participants as the denominator.*

The analysis identified six interrelated themes explaining delayed initiation and discontinuation of antenatal care.

ANC was Valued, but Perceived Value did not Automatically Translate into Early Initiation

Across participant groups, ANC was valued as pregnancy care. Women associated ANC with checking the baby's condition, monitoring fetal position, identifying complications, receiving medicines, and preparing for delivery.

Providers similarly framed ANC as a space for risk detection, health education, prevention, and timely management of complications.

Religious and community leaders also recognized ANC as useful, although they described their involvement in ANC promotion as limited.

However, some women showed that perceived value did not always create a sense of urgency for instance when pregnancy was experienced as normal, they delayed the first visit. For multiparous women, previous uncomplicated pregnancies sometimes reinforced confidence and reduced the perceived need for early attendance.

"So, at three months, I started ANC to look after my health and that of my child."

Woman, 22 years, IDI

"ANC helps us support pregnant women, identify risks that may arise during childbirth, and manage them appropriately."

Health-care provider, 42 years, KII

"I recognize that antenatal care is useful, but we are less involved. If health services share messages with us, we will pass them on."

Religious leader, 45 years, KII

Costs were Experienced as a Pathway Burden, not a Single Fee

Economic constraint was one of the most consistent explanations for delayed or

discontinued ANC. Women described costs related to consultation cards, laboratory tests, ultrasound, medicines, transport, and purchases outside the facility when supplies were unavailable.

Providers converged with women's point of view by identifying poverty and lack of financial means as major barriers to timely and continuous care.

The divergence lay in the level of detail. Providers often named poverty as a broad determinant, while women described how costs accumulated along the entire care pathway. Attending to ANC required cash before leaving home transport to the facility, payments at the facility, possible external purchases, food during long waits, and income lost from missing daily work. Cost therefore shaped not only whether ANC was valued, but whether attendance was feasible on a given day.

"Most women are engaged in small-scale street trading; they wake up very early and return home in the evening, looking for ways to support their families, sometimes overlooking other priority needs, including antenatal care appointments."

Woman, 35 years, FGD

Livelihoods and Waiting Time Made ANC Attendance Economically Risky

Daily livelihood demands shaped both ANC initiation and continuity. Many women relied on informal work or daily income-generating activities. In this context, a long ANC visit could mean losing income needed for food, transport, or household needs. Waiting time was therefore not only an inconvenience; it was an economic and caregiving problem.

Women highlighted the immediate consequences of spending many hours at a facility.

Providers also recognized transport and poverty as barriers, but they less often described how facility waiting time interacted with women's daily life.

"many women lack transport means to reach the health facility…"

Health-care provider, 36 years, KII

"I may spend the whole day at the hospital and fail to go out to look for food for my children."

Woman, 28 years, IDI

Pregnancy Visibility, Shame, and Fear Delayed the First Visit

Several women linked late ANC initiation to shame, fear, or social judgement. Some described fear of injections, while others mentioned lack of appropriate clothing, wanting to hide the pregnancy, or avoiding comments about repeated pregnancies. These concerns were less visible in provider narratives, which focused mainly on poverty, transport, education, and multiparity.

For some women, postponing ANC was a way to control when pregnancy became publicly known.

"It depends on one person to another: the cost of the card, needing a new dress to go to ANC; for others, it is shame."

Woman, 25 years IDI,

"I started ANC at seven months; the delay was because I was afraid of the injection."

Woman, 18 years, IDI

Quality of Reception and Service Readiness shaped Confidence in Continuing Care

Continuity after the first ANC visit was strongly influenced by how women experienced care. Some participants emphasized respectful reception, clear explanations, dignity, and satisfaction. Whereas others mentioned long waits, poor communication, lack of confidence in providers, incomplete examinations, discomfort, and occasional stock-outs.

Providers converged with women by acknowledging that lack of trust and limited materials could reduce attendance.

Conversely, unclear fees, stock-outs, external purchases, poor reception, or perceived neglect weakened confidence in continued care. Service readiness was therefore experienced not only as a technical condition, but also as evidence of whether the facility could meet women's needs.

"I was welcomed; they treated me with dignity and respect. I was truly satisfied with the services offered by the centre."

Woman,38 years IDI

"Lack of trust in providers."

Health-care provider/manager,47 years KII

"Make the necessary materials for ANC available and strengthen awareness-raising."

Health-care provider, 33 years KII

Household and Community Support Influenced Both Initiation and Continuity

Household support, particularly from husbands or partners, shaped decision-making, money for care, transport, and reminders. Some women described ANC decisions as personal, while others presented them as negotiated within the household. Community structures, including religious leaders, community health workers and women's groups, were also described as potential sources of encouragement and referral.

However, community support was uneven. Religious and community leaders recognized that they could help share ANC messages, and providers acknowledged the potential role of community health workers. Yet participants also described weak or inconsistent links between facilities and community actors.

"She informed her husband, and afterwards they did the pregnancy test."

Woman,23years IDI

"Community health workers can take the initiative to spread the message for prevention."

Woman, 40 years, IDI

"In our Centre, community health workers are not involved in awareness-raising."

Health-care provider,27 years KII

Cross-Theme Analytic Synthesis

There was the strongest convergence around the practical and social conditions that frame ANC use: cost of care, need for better information and sensitisation, role of community and religious actors and importance of support from partners and families.

However, there were some differences in how participant groups explained delayed ANC use. Women's opinions were much more oriented on everyday experience. They described the cumulative burden of paying for transport, tests, medicines, or other required items, while also losing time and income when they spent long hours waiting at the facility. Their narratives also forward more personal and socially sensitive barriers, including shame, fear, pregnancy denial, poor reception, and concerns about being judged. Health-care providers, in contrast, were more keen to explain delays through structural and service-related factors such as poverty, distance, transport difficulties, low education, high parity, stock-outs, shortages of materials, financing gaps, and lack of items in facilities. Religious and community leaders often stated the issue as one of poverty, lack of awareness, religious and community communication, and weak collaboration with health services.

Discussion

This study shows that delayed initiation and discontinuation of ANC in Karisimbi are not adequately explained by lack of awareness. Women, providers and community actors recognized the value of ANC, yet timely and sustained use depended on whether care was economically feasible, socially acceptable and trusted. This interpretation is consistent with evidence from sub-Saharan Africa showing that timely and

adequate ANC remain low and are shaped by poverty, education, parity, autonomy, insurance and community context [12, 21]. The findings extend this literature by showing how structural barriers are lived as cumulative pathway costs rather than single fees. Transport, user payments, ultrasound or laboratory costs, childcare, lost market time and long waiting transformed ANC into an economic risk for women dependent on daily livelihoods. These results align with systematic evidence that socioeconomic position, distance and service costs influence ANC utilization, and with qualitative evidence from Somaliland showing that economic barriers, transport, waiting time and provider behavior shape ANC use [3, 22].

A second contribution is the visibility of social and affective barriers. Shame, fear of injections, pregnancy concealment and fear of judgement were prominent in women's accounts but less visible in provider explanations. This suggests the delay on initiation of ANC is also a matter of dignity, privacy and social exposure, not only information or distance. Respectful, person-centered care is therefore central because women's willingness to return depends on whether services produce trust through clear communication, respectful reception, privacy and reliable content [10].

Continuity was also influenced by the availability of service. Women interpreted stock-outs, incomplete examinations and poor reception as signs that returning might not be worthwhile, while providers highlighted shortages, financing gaps and materials. This supports evidence that ANC contact does not guarantee quality; multicountries analyses show substantial gaps in quality-adjusted ANC in sub-Saharan Africa [11].

Finally, household and community support operated as an enabling environment rather than a uniform intervention. Community health workers, husbands, community health workers, women's groups and religious leaders could facilitate money, information, accompaniment and referral, but their engagement was uneven. Evidence from DRC shows community-based maternal and child health interventions can increase ANC utilization, while reviews indicate that male involvement can improve maternal health service use, though effects depend on how support is defined and implemented [10, 23].

Overall, ANC use in Karisimbi should be understood as a negotiated care trajectory shaped by intersecting economic, social and health-system conditions.

Strengths, Limitations and Future Research

This study is strengthened by its diverse qualitative sample, including women, focus group participants, community/religious leaders and health-care providers. This triangulated design allowed women lived experiences to be compared with community and facility perspectives, improving credibility and analytic depth. The use of purposive sampling, a structured codebook, thematic matrices and illustrative quotations also supported transparency and dependability.

The study has limitations. It was conducted in one health zone, so findings are not statistically generalizable, although they may be transferable to similar fragile urban settings. Women were interviewed after delivery, which may introduce recall bias, but restricting inclusion to women who had delivered within the previous 12 months reduced this risk. The study did not include adolescent mothers aged 15-17 years or displaced women, whose ANC experiences may differ because of stigma, dependency, mobility, insecurity and disrupted social support [24-26]. It also did not include direct facility observation or quantitative measurement of waiting time, fees, transport costs, stock-outs or readiness; these

constraints are therefore based on participant experience.

Future studies should include adolescent mothers, displaced women and host-community women living alongside displaced populations. However, in humanitarian settings, host communities are sometimes less visible than internally displaced populations, although they may face similar pressure on livelihoods, services and social support [27, 28], therefore the added value of this manuscript is that it foregrounds host community women's everyday negotiations around ANC in a fragile urban health zone, showing that delayed or discontinued care is not simply a knowledge problem but the result of interrelated economic, social and health-system constraints.

Conclusion

In Karisimbi Health Zone, women did not delay or discontinue ANC simply because they failed to understand its value. Their care trajectories reflected constrained agency in a setting where pregnancy care competes with daily income, social judgement, transport costs, household responsibilities and variable service confidence. The study therefore shifts the explanation of delayed ANC from individual knowledge to the conditions that make timely and continuous care feasible, acceptable and trustworthy. For research and policy, the implication is that ANC indicators should be interpreted alongside women's economic realities, experience of care and facility readiness, rather than as isolated measures of attendance.

Conflict of Interest

There is no conflict of interest.

Ethics Approval

The approval ethic number 10 bis/ESAPU/UNIGOM was provided by the Ethical committee of the University of Goma.

Authors Contributions

David Munganga Kaseke originated the study, directed its design, oversaw data collection, performed data analysis, and composed the manuscript. Heritier Chelo participated in data collection and field operations. Didier Mukeba Tshialala conducted a critical review of the manuscript. Jerome Mastaki Kambale offered methodological direction and comprehensive oversight.

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Data Accessibility

Although anonymized to protect participant privacy, the data used in this study may be made available upon request.

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