

Bridging Gaps in Antenatal Care in Africa: From Challenges to Policy Solutions

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Antenatal Care in Africa displays important discontinuity

Antenatal care (ANC) is one of the most effective tools in reducing maternal and newborn mortality. Yet in sub-Saharan Africa (SSA), its delivery remains inconsistent, placing millions of mothers and infants at continued risk. According to WHO estimates, ANC utilization in SSA is around 63%, considerably lower than in Europe (97%) or North America (95%) (WHO, 2014). Many women who begin ANC fail to complete the recommended four or more visits, leaving a significant gap in the continuum of care. This phenomenon, known as antenatal care discontinuity, weakens efforts to prevent maternal complications, detect high-risk pregnancies early, and manage conditions such as anemia, hypertension, and HIV/AIDS (Bouba Djourdebbé, 2021).

The discontinuity is alarming, particularly because each stage of pregnancy presents unique risks. Two-thirds of maternal deaths occur during late pregnancy, underscoring the need for sustained ANC (Bouba Djourdebbé, 2021). WHO emphasizes that ANC should begin early and continue consistently throughout pregnancy.

Despite slight improvements in ANC initiation across SSA, continuity remains an issue. The region has reduced maternal mortality by 41%, but challenges persist: only one African country achieved Millennium Development Goal 5 (MDG-5), while 18 made little or no progress (Union Africaine, 2013).

This discontinuity compromises preventive efforts against HIV, malaria, and other maternal infections. It also limits opportunities for tetanus immunization, iron and folic acid supplementation, and health education. Prenatal visits are an opportunity for screening and managing health risks, including nutritional deficiencies, blood pressure issues, and infections like syphilis and HIV. As Bouba Djourdebbé (2021) notes, ensuring women return after the first ANC visit is vital for improving maternal health outcomes across SSA.

Moreover, discontinuity in ANC prevents the creation of a robust maternal health record that can guide care throughout pregnancy and childbirth. Without consistent contact with healthcare providers, many complications may go undetected until it is too late. This affects not only maternal survival but



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also neonatal outcomes, increasing the risk of stillbirth, preterm delivery, and low birthweight.

A number of factors contribute to discontinuity, including distance from health facilities, cost of services or transportation, poor quality of care, and lack of awareness or education about the importance of continued care. In addition, sociocultural beliefs, stigma, and gender inequality also limit women's ability to access and continue care. For instance, in some regions, the approval or accompaniment of a male partner is required, which can delay or disrupt the care-seeking process.

Beyond individual-level barriers, stark urban-rural divides in ANC access reveal deeper systemic inequalities

Urban-rural disparities significantly influence ANC continuity in Africa. Using DHS data from 26 SSA countries, Bouba Djourdebbé (2021) classified countries into three categories regarding urban-rural differences in ANC discontinuity. In most countries, urban areas enjoy clear advantages. For example, rural women in Chad, Guinea, and Côte d'Ivoire are nearly twice as likely to discontinue ANC compared to urban women. These gaps are primarily attributed to «urban bias,» wherein health infrastructure, trained personnel, and quality services are concentrated in cities.

Healthcare accessibility in rural areas is often constrained by distance, inadequate transportation, shortage of skilled providers, and limited availability of drugs and equipment. Additionally, rural women may be more affected by traditional beliefs and lower literacy levels, which influence their understanding of the importance of regular ANC visits.

The first group of countries identified includes those with significant urban advantages: Cameroon, Chad, Congo, Côte d'Ivoire, Democratic Republic of Congo, Ethiopia, Gabon, Guinea, Liberia, Malawi, Niger, Senegal, and Tanzania. In these countries, rural women are about 1.5 times more likely to experience ANC discontinuity. Discontinuity is especially pronounced in Togo, Guinea, Chad, Côte d'Ivoire, and Gabon, where rural women are nearly twice as likely to discontinue care.

A second group of countries shows no statistically significant urban-rural differences. These include Benin, Comoros, Kenya, Lesotho, Mozambique, Namibia, Sao Tome and Principe, Swaziland, and Zimbabwe. This may reflect either relatively equal access or widespread deficiencies in ANC services that affect both urban and rural populations.

The third group presents a counterintuitive trend, with higher ANC discontinuity in urban areas. Gambia, Rwanda, and Zambia fall into this category. In Rwanda, rural health systems are relatively strong due to effective government policies and community health programs, which may explain better continuity in rural areas. Gambia's and Zambia's urban discontinuity may reflect issues of spatial inequality within cities, where poor urban residents, particularly those in informal settlements, face barriers similar to rural populations despite geographic proximity to healthcare facilities.

Further analysis of individual and household characteristics sheds more light on ANC discontinuity. Women's age is a significant factor; younger women (aged 15–24) are more likely to discontinue ANC than older women. This may be due to lack of experience,

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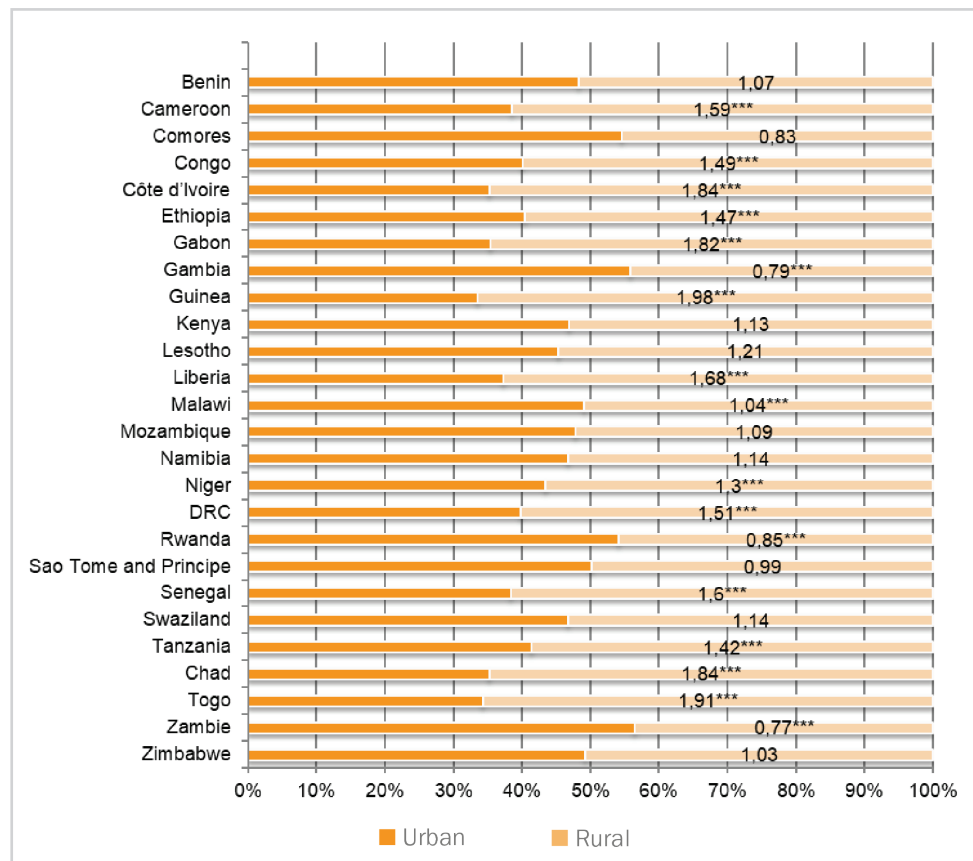
unplanned pregnancies, or stigma related to early pregnancy. High parity (having five or more children) is also associated with greater discontinuity, possibly because women with many children may perceive less need for continued care.

Education and wealth are powerful determinants. In almost all countries

studied, women with secondary or higher education are significantly more likely to complete ANC schedules. Similarly, those from wealthier households are less likely to drop out. This indicates that economic and informational empowerment are critical levers for improving maternal health outcomes.

Figure: Representation of the effects of women's place of residence on the discontinuity of prenatal care in 27 Sub-Saharan countries (DHS from 1998 to 2016)

Reading note : *** Significant at the 1% level; ** Significant at the 5% level; * Significant at the 10% level.



What Works: Policy Innovations to Ensure Continuity in ANC

Numerous interventions have been piloted or implemented across SSA to reduce ANC discontinuity. These interventions can be broadly categorized into health system strategies, community-based approaches, and combined models. Each category addresses different aspects of ANC barriers—supply-side issues like poor infrastructure and workforce shortages, and demand-side barriers like low awareness, distance, and affordability.

Health System Strengthening

Multifaceted facility reforms to improve ANC quality. In Nigeria, interventions targeting both health facilities and provider capabilities have shown promising results. Okonofua et al. (2020) implemented a multifaceted strategy involving staff training, automated appointment systems, and health education. This led to improved ANC quality, with an odds ratio (OR) of 1.11 for care quality improvements. The intervention also streamlined clinic operations, reduced wait times, and encouraged return visits.

Provider training and guidelines to enhance risk awareness. In Ethiopia, Villadsen et al. (2015) found that strengthening ANC service delivery through provider training, updated guidelines, and medical equipment significantly improved awareness of pregnancy danger signs and user satisfaction. Health education alone achieved an OR of 3.9 for knowledge of danger signs, highlighting the importance of well-trained providers who can communicate effectively with patients.

Integrating nutrition into ANC for higher retention. In Burkina Faso, Kim et al. (2022) evaluated an intervention that integrated nutrition services into

routine ANC in Burkina Faso. This approach led to an 8.5 percentage-point increase in the number of women attending at least four ANC visits and a 39.5-point rise in receipt of nutrition counseling. The findings demonstrate that enhancing the content of ANC services can improve their perceived value and motivate women to return.

Community-Based Interventions

Village health teams drive first visit uptake. Community mobilization is another effective strategy. In Uganda, Ediau et al. (2013) reported a sharp increase in first ANC visits—from 114 to 202—after deploying village health teams to engage households and educate communities. The odds ratio for this intervention was a striking 11.41, showing the power of community engagement in overcoming social and logistical barriers.

Mass media campaigns shift health-seeking behavior. Esopo et al. (2020) analyzed mass media and advertisement campaigns designed to increase ANC awareness in Uganda, Ghana, and Tanzania. These campaigns led to a rate ratio of 5.86 for increased ANC attendance, suggesting that strategic messaging can shift health-seeking behavior, especially when integrated into broader maternal health programs.

SMS reminders and vouchers boost follow-up visits. Mobile health interventions are gaining momentum. Lund et al. (2014) evaluated a program in Zanzibar that sent appointment reminders via SMS and offered transport vouchers. The results showed a significant increase in four or more ANC visits, with an OR of 2.39. These technologies are not only scalable and cost-effective but also adaptable to various contexts, making them ideal for addressing urban and rural disparities.

Combined Approaches

Blending facility and community strategies for consistency. Integrated interventions that combine facility-based improvements with community outreach tend to produce the most consistent results. Mbuagbaw et al. (2015) conducted a systematic review and found that such combined approaches increased ANC coverage (OR 1.79) and reduced perinatal mortality (OR 0.74). Similarly, Tekelab et al. (2019) found that consistent ANC attendance was associated with a 39% reduction in neonatal mortality (RR 0.61). These findings underscore the importance of addressing both sides of the healthcare equation. On the supply side, quality and accessibility must be improved. On the demand side, awareness, affordability, and sociocultural acceptability must be addressed. Without this dual focus, interventions are less likely to produce sustainable improvements.

Conclusion and Policy Implications

Antenatal care discontinuity remains a pressing issue in sub-Saharan Africa, affecting both maternal and neonatal outcomes. While urban areas generally fare better, exceptions exist, highlighting the need for context-specific approaches. Discontinuity is influenced by a complex interplay of demographic, socio-economic, and systemic factors. However, well-designed interventions—particularly those combining health system strengthening with community outreach—can significantly enhance ANC continuity.

Policy efforts must be holistic, equitable, and adaptive to local contexts. Investing in rural health systems, leveraging technology, promoting education, and empowering communities are crucial steps toward ensuring that every woman receives continuous, high-quality care throughout her pregnancy. Addressing antenatal care discontinuity is not only a matter of public health but also a fundamental aspect of social justice and human development.

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