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Effect of Free Care on Access to All Prenatal Consultations in the Sinfra District

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Abstract

This research aims to understand the effects of free healthcare on access to all Antenatal Consultations (ANC) in the Sinfra district. Based on a group of 150 mothers identified through snowball sampling in the Sinfra district and a descriptive quantitative approach, the results show that the majority of these mothers live in rural areas, at a rate of 98.7%, and at a distance of more than 5 km from the nearest maternity hospital. Mostly uneducated, at a rate of 57.7%, these women are between 21 and 41 years old. Although 88% of the mothers are aware of the importance of ANC and its availability free of charge, only 38% know the exact number of consultations recommended for a normal pregnancy. This suggests that while the general benefits of ANC are acknowledged, knowledge of the clinical schedule remains limited. Even though free healthcare has pushed the majority of mothers to initiate ANC early, only 8% have carried out at least four ANCs during pregnancy. This low attendance at prenatal care is justified by the lack of means of transport, the distance to the health facility, long wait times, professional responsibilities, the lack of means to pay for medications, and the use of traditional treatments. In its ambition to become one of the world's developed countries, Côte d'Ivoire must act urgently to encourage pregnant women to attend all prenatal care appointments. This involves raising awareness about the importance of antenatal care visits for the health of mothers and children, as well as complications related to pregnancy or childbirth.

Keywords

Free, Antenatal Consultations, Sinfra, RCI

1. Introduction

The importance of antenatal care visits (ANC) in preventing complications, preparing for childbirth, and educating couples in their role as future parents is now universally recognized, both nationally and internationally. ANC offers an effective solution in the fight against maternal and infant mortality, which has become a real plague, particularly in developing countries. Their importance has led to the deployment of various means worldwide to encourage populations to attend ANC: awareness campaigns, community education programs, subsidies or free care, universal health insurance, development of health infrastructure, use of mobile clinics, etc. [1].

Despite the importance of ANC and the efforts made to ensure their implementation worldwide and in Côte d'Ivoire, many pregnant women do not benefit from complete ANC coverage. This has a significant impact on maternal and infant mortality worldwide. Nearly 830 women die every day worldwide due to complications related to pregnancy or childbirth. In 2015 alone, the number of women who died during or after pregnancy or childbirth was estimated at 303,000 [2]. In sub-Saharan Africa, the situation is even more worrying. Indeed, the maternal mortality rate is 500 deaths per 100,000 live births in sub-Saharan Africa, 220 per 100,000 in South Asia and 16 per 100,000 in developed countries according to Barrère Monique (2004) [3].

In Côte d'Ivoire, the maternal mortality rate remains worrying. From 597 per 100,000 births, it has risen to 614 per 100,000 births [4]. As for the neonatal mortality rate, it is 33 deaths per 1000 births while the infant mortality rate is 60 per 1000 [4]. In addition, the neonatal mortality rate in Côte d'Ivoire, currently at 96%, is still very far from the national target of 59%. This situation has led the country to initiate various actions, including the integration of the Global Financing Facility (GFF), adherence to Countdown to 2030 (CD2030), free delivery care, the development of the Kangaroo Mother Care program, etc. Despite these efforts, the maternal and infant mortality rate in the country remain at a worrying level. An in-depth analysis shows that ANC4 coverage stood at 51.3% in 2016 compared to 61.1% in 2011 [2].

Regarding the main causes of maternal and infant deaths in Côte d'Ivoire, Mshpcmu [5] mainly points to prematurity, asphyxia and infections. However, these are causes that can be easily controlled if prenatal consultations are properly carried out. Indeed, proper antenatal consultations involve initiating them at an early stage of pregnancy and continuing them regularly until delivery [3].

Awareness of the importance of performing ANC has significantly evolved today. While the WHO recommends a minimum of eight (08) antenatal visits for a normal pregnancy, very few pregnant women manage to attend all of these consultations. They stop attending health facilities after one or two consultations, or do not attend at all. This poses a threat to the health of the mother and child and to the effectiveness of ANC.

In Côte d'Ivoire, the rate of abandonment of prenatal care is estimated at nearly 57.55% in 2012 and it is revealed that this rate can reach very worrying propor-

tions in the different regions of the country, such as the case of Korhogo, where this rate reached 80% in 2012 [6]. This rate increased to 59.23% in 2014 and 55.84% in 2015 [7]. In 2017, this rate reached 63.5% [6]. This shows that the monitoring of antenatal care visits remains relatively insufficient in Côte d'Ivoire, as well as its continuity.

Hue Bi Broba Fulgence, Kambire Bébé and ALLA Della André (2021) [8] identifies factors such as socio-cultural constraints and the quality of reception of pregnant women in antenatal consultations as barriers to the complete completion of ANC, while Barrère, M. [3] associate these factors with ethnicity, degree of modernity, perception of distance and household standard of living. These authors recommend free delivery care to improve regular attendance at prenatal care. Indeed, free delivery care is a strategy to reduce economic barriers linked to the provision of prenatal care. It aims to encourage greater use of maternal health services while reducing direct costs, which constitutes a barrier for vulnerable populations. However, the effects of this free policy since its implementation in Côte d'Ivoire remain difficult to determine, particularly given the low improvement in the rate of attendance at prenatal care in the country.

Thus, this article is part of the logic of evaluating the effects of free care on the complete coverage of ANC in the Sinfra district of Côte d'Ivoire. It seeks to understand the reasons why free antenatal consultations do not improve the complete coverage of ANC. This study is based on a descriptive quantitative approach.

The aim of this study is to contribute to improving the rate of complete coverage of prenatal consultations. Consequently, the results of this article will help redefine the free care policy for greater efficiency. To achieve this, we adopted a methodology based on a quantitative approach.

2. Materials and Methods

The logical path followed in this study concerns: the presentation of the framework of the study, as well as the collection and analysis of data.

2.1. Presentation of the Framework of the Study

The Sinfra department is a locality situated in the Central-West of Côte d'Ivoire. It is part of the administrative region of Marahoué and includes four (4) sub-prefectures: Sinfra, Bazré, Kouétinfla, and Kononfla. The Sinfra department covers an area of 1600 km^2 and is bordered to the north by the Bouaflé department, to the south by the Oumé and Gagnoa departments, to the east by the Yamoussoukro department, and to the west by the Daloa and Issia departments. The Sinfra department is located between longitudes 5˚38' and 6˚15' West and latitudes 6˚48' and 6˚82' North. It lies at the intersection of the degree squares of Gagnoa and Daloa (**Figure 1**).

2.2. Data Collection and Analysis

This quantitative research was conducted using a sample of mothers with infants

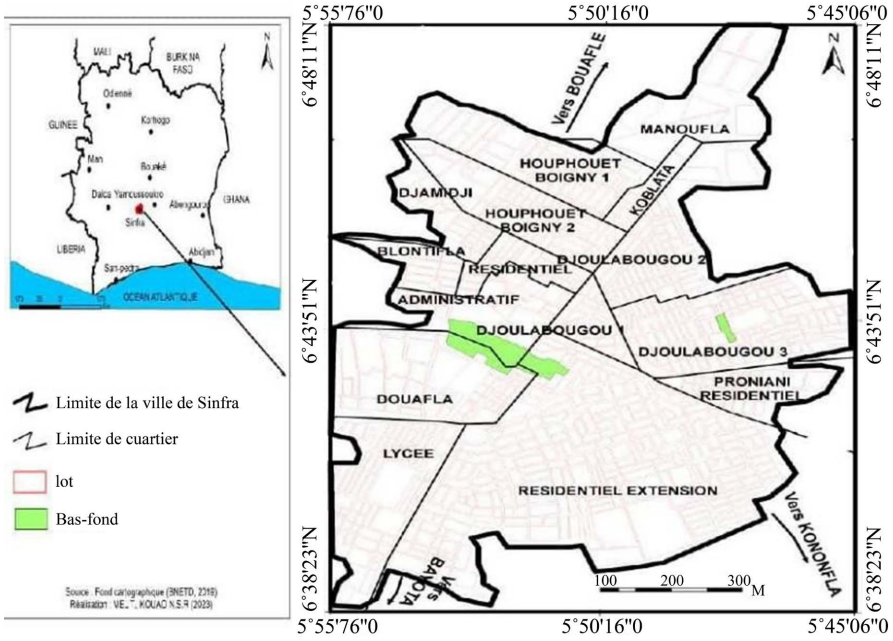
in the Sinfra district of Côte d'Ivoire. As we did not have a sampling frame for mothers with infants in the Sinfra district, we opted for a non-standardized approach.

Probabilistic, in particular snowball sampling. This allowed us to constitute a sample of 150 mothers with infants who were surveyed in the different villages and neighborhoods of Sinfra.

The choice of the snowball technique is explained by the fact that it allows the selection of mothers with infants meeting important criteria for achieving the objectives of this study. These criteria are: Being a pregnant woman residing in the Sinfra health district; Being a mother of an infant (0 to 12 months); Reside in the Sinfra health district; Being available to participate in the survey, and giving consent; Knowing how to express oneself well.

The collected data were analyzed using descriptive statistics tools: diagrams, histograms and statistical tables.

Although the WHO recommends eight antenatal care visits for a normal pregnancy, this study uses four visits as the benchmark for "complete coverage" of ANC [10]. This choice is based on the historical standard adopted by the Ivorian national health system prior to the adoption of the new WHO guidelines, as well as the fact that national statistics and monitoring indicators still frequently use four ANC visits as a threshold for minimum adequate care.



Source: S. Ouattara *et al.* [9].

Figure 1. The town of Sinfra in the Ivorian region.

3. Results

3.1. Socio-Demographic Characteristics of Mothers

Our study focused on a sample of 150 mothers with infants. The majority of these mothers live in rural areas, at a rate of 98.7%, and are more than 5 km from the

nearest maternity ward. In fact, nearly 38.46% live more than 10 km away, and nearly 38.46% live between 5 and 10 km. Only 23.08% live less than 5 km from the nearest maternity ward.

This population is primarily made up of uneducated people. Indeed, the majority is uneducated, representing a rate of 57.7%. Nearly 23.1% have a primary education, 15.4% have a secondary education, and 3.8% have attended a Koranic school.

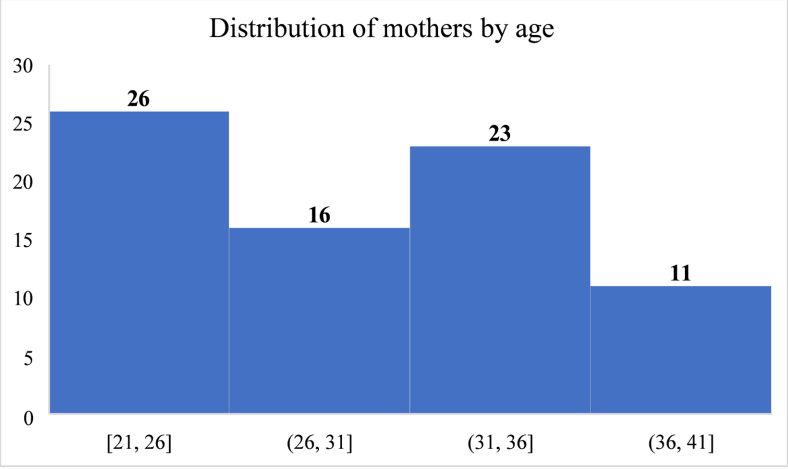


Figure 2. Distribution of mothers of infants by age.

The mothers of infants studied are mostly between 21 and 41 years old, with an average age of 31 years. The ages most represented are 36 and 38. The age distribution, as demonstrated in **Figure 2**, shows that the [21 - 26] age group is the most represented.

3.2. Knowledge and Perception of Prenatal Consultations

3.2.1. Knowledge of the Number of ANCs Recommended during a Normal Pregnancy

Table 1. Knowledge of the number of ANCs recommended for a normal pregnancy.

Knowledge of the number of ANCs recommended for a normal pregnancy	Number	Percentage
Three ANCs	80	54%
Four ANCs	58	38%
Five ANCs	6	4%
Six ANCs	6	4%
Total	150	100%

As illustrated in **Table 1**, the majority of women studied estimate that three (03) prenatal consultations are essential for a normal pregnancy, *i.e.* a rate of 54%. Nearly 38% estimate that four (04) the number of prenatal consultations is essen-

tial for a normal pregnancy, nearly 4% estimate at five (05) the number of prenatal consultations essential for a normal pregnancy and nearly 4% estimate at six (06) the number of prenatal consultations essential for a normal pregnancy.

3.2.2. Knowledge on the Importance of ANC

Table 2. Knowledge about the importance of ANCs.

Knowledge about the importance of ANCs	Staff	Percentage
Monitoring the health of mother and baby	143	95%
Prevention of complications	90	60%
Health education and childbirth preparation	118	79%
Strengthening the link between the patient and the system health	77	51%
Identification and management of high-risk pregnancies	103	69%
Reduction of maternal and infant mortality	132	88%

The mothers surveyed have diverse perceptions of the importance of ANC as demonstrated in Table 2. The majority emphasized its role in monitoring the health of the mother and baby (95%), in reducing maternal and infant mortality (88%), in health education and preparation for childbirth (79%), in identifying and managing high-risk pregnancies (69%), in preventing complications (60%), and in strengthening the link between the patient and the health system (51%).

3.2.3. Knowledge of the Performance of ANC Free of Charge before the Last Pregnancy

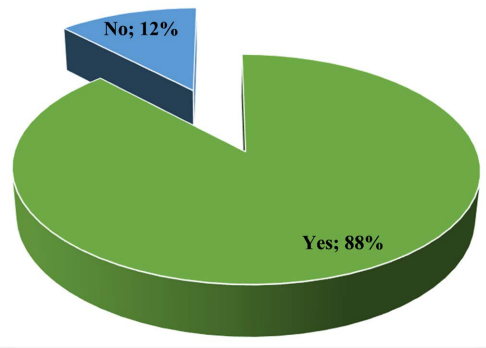


Figure 3. Knowledge of the performance of ANC free of charge before the last pregnancy.

Figure 3 demonstrates that nearly 12% of the mothers surveyed were not informed about the free provision of ANC before the last pregnancy.

3.3. Experience of ANC during Pregnancy

3.3.1. The Number of ANCs Performed

Table 3 shows that the majority of women studied had two antenatal care visits during pregnancy, a rate of 38%. Nearly 31% had three antenatal care visits, nearly 23% had one antenatal care visit, and nearly 8% had four antenatal care visits.

Table 3. Number of prenatal consultations carried out during pregnancy.

Number of prenatal cares performed during the pregnancy	Number	Percentage
A consultation	35	23%
Two consultations	58	38%
Three consultations	46	31%
Four consultations	12	8%

3.3.2. Free Access to Care for ANCs

Since 2012, maternity care has been free. This free service is the result of the targeted free care policy implemented by the Ivorian government and covers prenatal (ANC) and postnatal (CPoN) consultations, additional examinations (ultrasounds, laboratory analyses), normal delivery and its complications, caesarean sections, etc. However, patients must cover other indirect costs such as transport costs, booklet fees as well as the cost of medications not available at the health facility.

The mothers interviewed confirmed that ANC is free in the Sinfra district.

3.3.3. Influence of Free Care on Early Completion of ANC

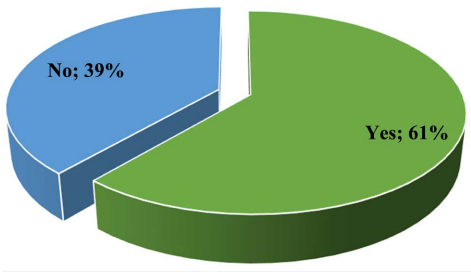


Figure 4. Influence of free care on early completion of ANC.

The majority of mothers initiated prenatal consultations early because they were free, at a rate of 61% as demonstrated in Figure 4.

3.3.4. Period of Implementation of ANC1

Table 4. Period of carrying out the first prenatal care.

Period of carrying out the first treatment prenatal	Number	Percentage
After the third month	12	7.7%
Before the third month	92	61.5%
The third month	46	30.8%
Total	**150**	**100.0%**

It appears that the majority of women studied had their first prenatal consultation before the third month of pregnancy, a rate of 61.5%, as shown in Table 4. Nearly 30.8% had it in the third month and nearly 7.7% had it after the third month of pregnancy.

3.3.5. Factors Associated with Non-Completion of All ANC

Table 5. Factors associated with absence from prenatal care.

Factors associated with absence from prenatal consultations	Number	Percentage
I have no money	42	34.62%
I waited too long last time when I was supposed to go to the field	5	3.85%
It's hard to go to the hospital when it's raining	5	3.85%
Difficult to access the center	5	3.85%
Lack of time	33	26.92%
I had traveled to a very remote area and there was no health center there	5	3.85%
I followed traditional remedies at my parents' house in the village	5	3.85%
The distance and when I am pregnant I go to my house very often mother to give birth but there is no hospital nearby	5	3.85%
The midwife didn't see me quickly the other time	5	3.85%
The center is a bit far and I don't have time to walk there over there	5	3.85%
I didn't buy the medication there and I won't be able to buy them. So, there's no point in going back there	5	3.85%
Too busy with the kids and field work	5	3.85%

The table shows that several factors prevented the women studied from attending all prenatal consultations. While the majority of women mentioned a lack of financial means (34.62%) or a lack of time (26.92%), others mentioned treatments traditional, waiting times for consultations, difficulties in getting to the centers. For certain questions, particularly those related to the barriers to ANC completion (Table 5), respondents were allowed to provide multiple answers. As a result, the cumulative percentages in the corresponding tables may exceed 100%.

3.4. Impact of Free Maternity Care

3.4.1. Implications of Free Healthcare

Table 6. Implication of free healthcare.

Implication of free healthcare	Staff	Percentage
Completion of all necessary ANC s	12	8%
Reduction of pregnancy-related expenses	118	79%
Easier access to health services	20	13%
Total	**150**	**100%**

Table 6 shows that free maternity care led nearly 8% of mothers to complete all prenatal care visits. Nearly 13% mentioned its importance in providing easy access to health services. However, the majority emphasized the importance of free care

in reducing pregnancy-related expenses, at a rate of 79%.

3.4.2. Influence of Free Care on the Quality of ANC Services

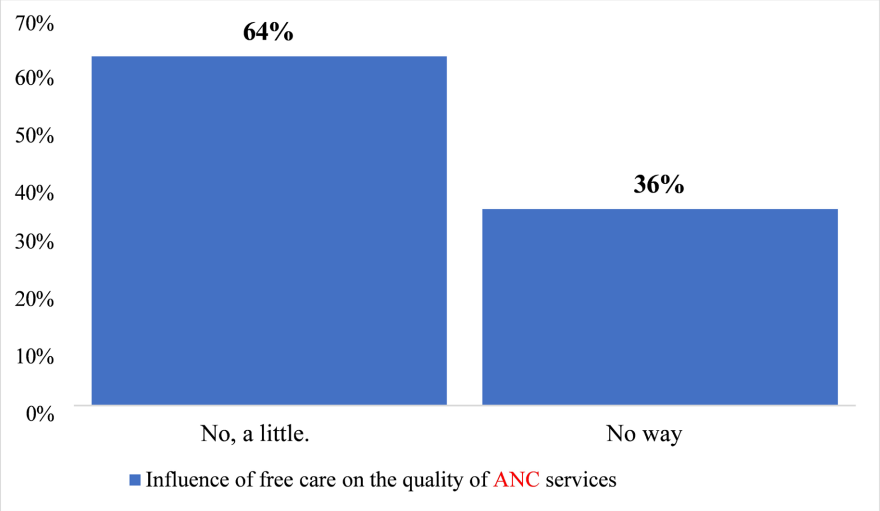


Figure 5. Influence of free care on the quality of ANC services.

The majority of mothers reveal the deterioration in the quality of prenatal consultation services and associate it with the result of free care, as shown in **Figure 5**.

3.4.3. Other Services to Be Included in the Free Delivery Kit

Table 7. Other services to be included in the free delivery kit.

Other services to be included in the kit free childbirth	Staff	Percentage
Additional medical examinations	143	95%
Transportation to health centers	89	59%
Cost of purchasing notebooks	39	26%
Drugs	140	93%

Various other services were offered to improve the free delivery kit in the city of Sinfra, shown in **Table 7**. These services included: additional medical examinations; transportation to health centers; and the purchase of records and medications. However, the majority of mothers focused on additional medical examinations and medications.

4. Discussion

Attendance at all prenatal visits is a crucial factor in combating maternal and infant mortality worldwide, particularly in Côte d'Ivoire. It also reveals the effectiveness of maternal health policies in the country.

The results of our study based on the effect of free care on access to all prenatal consultations allow us to highlight two essential factors: non-financial determi-

nants of attendance at prenatal care and quality of prenatal consultation services.

4.1. Non-Financial Determinants of Antenatal Care Attendance

The free prenatal care policy aims to reduce financial barriers such as consultation fees, basic medications, and certain tests. This leads to a reduction in expenses related to pregnancy and childbirth. Our study revealed that free prenatal care has helped reduce pregnancy-related expenses and facilitated access to health services.

However, the experience of the mothers surveyed in this study shows that financial determinants are not sufficient to improve attendance at all prenatal appointments. Indeed, other factors intervene in the attendance of ANC. These factors have also been highlighted by other researchers and concern: travel, loss of income related to the choice to attend antenatal care, particularly in the context of vulnerable families, distance from health facilities, low knowledge of the benefits of ANC, cultural constraints, lack of awareness, social norms, concerns related to the quality of services, etc.

Indeed, even if our results reveal that free prenatal care led to the early completion of ANC, the rate of completion of at least four (04) ANC is very low. Only 8% of mothers managed to participate in four (04) ANC. These women reveal several factors: lack of money, professional responsibilities, poor road conditions during the rainy season, recourse to traditional remedies, child care. K. Kouassi *et al.* [11] confirm the weight of traditional medicine in the abandonment of ANC. Salifou *et al.* [12] also support the weight of difficulties in geographical accessibility of health facilities, which leads to discouragement in the completion of ANC.

4.2. Quality of Antenatal Consultation Services

As in any industry, service quality is a key determinant of customer satisfaction and loyalty. In the context of prenatal care services, it plays an important role in ensuring continued ANC attendance.

Free care is generally associated with increased demand, which increases the burden on workers. The consequences for clients are: long queues, poor quality of care received, etc. In some settings, the overflow of health facilities, particularly in a vulnerable context where it is the pregnant woman who must go to the market after the consultation or go to the fields to look for food for the family and herself, can constitute an obstacle to regular attendance at prenatal appointments.

Free prenatal care also requires careful planning to ensure a sufficient supply of medical equipment, medications, and qualified personnel, which is not always guaranteed, particularly in developing countries, which are often characterized by insufficient resources. This can lead to stockouts, affecting the quality of care and leading to mistrust of prenatal care services among pregnant women.

In the context of our study, 100% of the mothers interviewed deplored the quality of prenatal care in local health establishments, which also explains this high abandonment rate of 92%. Cheickna [2] also confirms the importance of the quality of care in the continuity of ANC. Kochou HA Salomon *et al.* [13] integrates

the reception of pregnant women in prenatal consultation into the quality of prenatal care.

However, the use of snowball sampling as a non-probabilistic method introduces potential selection biases. Mothers more integrated into social networks may have been overrepresented, while more isolated individuals might have been missed. As such, while the findings provide valuable insights, they cannot be generalized to the entire population of mothers in the Sinfra district.

5. Conclusions

Our study has made it possible to understand that while the elimination of direct costs linked to the performance of ANC constitutes an essential step in improving access to prenatal care, it is still insufficient to encourage the performance of all ANC.

Beyond financial barriers, other factors affect the provision of ANC in the city of Sinfra. These include the quality of care, travel to health facilities, traditional remedies, long waiting times, professional responsibilities, and difficulties in purchasing medications. These factors have led to a 92% ANC abandonment rate. This constitutes a significant obstacle to achieving the goals of reducing maternal and infant mortality in Côte d'Ivoire.

In light of this situation, urgent action is needed to encourage pregnant women to attend all prenatal care appointments. This primarily involves: raising awareness of the importance of prenatal care for mothers and children; strengthening the infrastructure and resources needed to ensure quality prenatal care; and taking into account non-financial factors, such as distance and traditional beliefs, when defining the free prenatal care program in Côte d'Ivoire.

Furthermore, it is essential to adopt a holistic and integrated approach to maximize the impact of the free prenatal care policy. Collaboration between health authorities and traditional and community leaders is essential to address non-financial barriers and encourage pregnant women to complete all prenatal care visits.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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