

Evaluation of the Quality of Focused Antenatal Care Consultations in the Maternity Ward of the Ouidah-Kpomassè-Tori-Bossito Health District in 2024, Benin

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How to cite this paper: Sintondji, H.E., Aïssi, F., Sohe, A., Agbangla, H., Sodogandji, R., Ketehoundje, D., Ahogni, I., Daddah, D. and Djogbenou, L. (2026) Evaluation of the Quality of Focused Antenatal Care Consultations in the Maternity Ward of the Ouidah-Kpomassè-Tori-Bossito Health District in 2024, Benin. *Advances in Reproductive Sciences*, **14**, 157-174. <https://doi.org/10.4236/arsci.2026.143016>

Received: April 18, 2026

Accepted: August 3, 2026

Published: August 6, 2026

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Abstract

Introduction: Antenatal Care (ANC) is recognized as a key pillar in reducing maternal and neonatal mortality. Adopted in Benin since 2005 in its refocused form (FANC) providing for four (04) visits, the ANC model was updated by the WHO in 2016. This new model now recommends at least eight (08) contacts throughout pregnancy to improve the care experience. The absence of an assessment of the level of implementation and the quality of this model within the Ouidah-Kpomassè-Tori-Bossito Zone Hospital (HZ-OKT) justifies this study. Thus, the objective of this study is to evaluate the quality of FANC in the maternity service of the OKT zone hospital in 2024. **Methods:** This evaluative cross-sectional study was conducted from March 12 to April 05, 2024. In total, 150 pregnant women were surveyed regarding their satisfaction; information on FANC practices implemented by providers was collected; the women's pregnancy monitoring records were reviewed; and data on the FANC environment were gathered. The quality level of the FANC was assessed using one hundred forty-four (144) normative criteria from national protocols. The binary scoring system (0/1) was supplemented by the application of discriminative criteria: the insufficiency of a single strategic sub-component (score < 60%) systematically results in the overall component being classified as "poor", thus preventing average scores from masking critical gaps in maternal safety. **Results:** Our study revealed that while the raw scores for

structure (73.33%), process (65.87%), and outcomes (68.89%) were acceptable, the application of discriminative criteria concludes poor quality for each of these dimensions. Overall, the quality of CPNR within HZ-OKT was therefore judged to be poor. **Conclusion:** The poor quality of FANC in this study was attributable to the absence of FANC protocol documents, inadequate training of qualified human resources, the lack of a waiting room in the FANC physical environment, failure to discuss the delivery and emergency plan, the absence of counseling and health promotion advice, and failure to reach a conclusion regarding the pregnant woman's pregnancy status. These weaknesses should be addressed to improve FANC quality, thereby increasing satisfaction among pregnant women attending FANC.

Keywords

Evaluation, Quality, Focused Antenatal Care, Benin

1. Introduction

Antenatal care visits are recognized as one of the three main pillars in efforts to reduce maternal and child mortality [1]. They represent the most important means of pregnancy prophylaxis [2]. Services provided during antenatal care (ANC) enable the identification of major risks requiring intervention; the prevention, detection, and treatment of certain conditions that may jeopardize the health of the mother and child; and the provision of counseling, support, and information to pregnant women and their families [1].

According to WHO recommendations on antenatal care coverage, 98% of pregnant women in developed countries attend antenatal consultations, whereas this rate remained below 70% in most African countries [3]. According to WHO statistics in 2020, maternal deaths were estimated at 87% worldwide, with 70% occurring in sub-Saharan Africa. In Benin, approximately 1500 maternal deaths and more than 12,000 neonatal deaths are recorded each year [4]. According to Benin's National Health Development Plan (NHDP 2018-2022), the maternal mortality ratio was 225 deaths per 100,000 live births in 2022, compared with the Sustainable Development Goal 3 (SDG3) target of 125 per 100,000 live births by 2030. Similarly, the neonatal mortality rate was 29 per 1000 live births in 2022, against a target of 19 by 2030 [5].

Most maternal and neonatal deaths could be prevented if women attended ANC regularly and received appropriate prenatal care. Historically, the ANC model developed in the 1990s by the WHO, adopted in Benin under the name of Focused Antenatal Care (FANC), recommended four (04) visits. However, recent empirical data suggested that this format was associated with higher mortality [6]. Thus, the WHO updated its guidelines in 2016. This new model of prenatal care, now focused on a positive pregnancy experience, recommends at least eight (08) contacts at regular intervals throughout gestation [7].

High-quality FANC emphasizes the existence of FANC normative documents; qualified and competent staff; resources the availability of quality equipment; the availability of quality medical products and consumables; adherence to the different steps of the FANC protocol; and satisfaction among pregnant women attending the consultation [8].

Some studies conducted in Benin at the Suru-Léré district hospital, as well as in the three main maternity units in Parakou, reported noteworthy findings regarding the evaluation of FANC. Parameters considered important and underpinning the good quality of FANC were rated as poor, notably the reception of women attending FANC; implementation of FANC procedures; health promotion activities such as counselling, nutrition, and hygiene; discussion of the birth plan; and satisfaction among pregnant women attending the consultation. To achieve the WHO-recommended targets, it is important that this topic be periodically evaluated in each health facility. This is the context of the present study, which aims to assess the quality of focused antenatal care in the maternity department of the OKT district hospital in order to propose corrective measures for improvement. To implement this study, the following questions were posed: How is FANC delivered in the maternity department of the OKT district hospital? What are the shortcomings in the application of FANC standards and protocols in the maternity department of the OKT district hospital?

2. Materials and Methods

2.1. Study Type, Setting, and Study Period

This evaluative cross-sectional study was conducted at the OKT district hospital in 2024. The study took place from 12 March to 5 April 2024.

2.2. Study Population

- **Primary targets:** Healthcare personnel of the maternity unit at the OKT district hospital (midwives, nurses, and obstetrician-gynecologists).
- **Secondary targets:** pregnant women attending ANC; the pharmacy manager, the Head of Obstetric Care (HOC), and pharmacy staff.

2.2.1. Inclusion Criteria

The study included maternity ward staff involved in providing FANC who were present during the study period, as well as all pregnant women who attended the maternity ward for FANC during the data collection period and consented to participate in the study.

2.2.2. Exclusion Criteria

Participants who withdrew during data collection were excluded.

2.3. Sampling

The sampling method was non-probabilistic for all the study targets. The purposive sampling technique was applied to maternity staff, managers, totaling 14 pro-

viders, and for CPNR tools. In total, 45 consultation sessions were directly observed. These observations were distributed evenly at a rate of 5 observations per target provider (midwives and gynecologists) to ensure the representativeness of professional practices. For each observed session, a concurrent audit of 45 CPNR records was conducted in real time to verify the immediate compliance of the document completion (notebook, card, register) with the performed actions. This approach allowed avoiding biases related to retrospective control. The convenience sampling technique was used to recruit the 150 pregnant women who attended a CPNR during the collection period.

Moreover, the sample size by target is summarized in **Table 1** below:

Table 1. Sample size per target for evaluating the quality of FANC in the maternity ward of the OKT district hospital in 2024.

Targets	Method	Technique	Size
Administrative and management staff			
Pharmacy manager	Non-probabilistic	Reasoned choice	01
Head of obstetric care			01
Pharmacy staff			01
FANC tools			45
Healthcare personnel			
Nursing assistants	Non-probabilistic	Convenience	02
Midwives			06
Gynecologists			03
Beneficiaries			
Pregnant women attending FANC	Non-probabilistic	Convenience	150

2.4. Study Components

To assess the quality of focused antenatal care (FANC), we drew on Donabedian's conceptual framework by using the following three components: structure, process, and outcomes [9], as well as the protocol of Benin's family health services [10]. The assessment criteria for each component were therefore defined on the basis of the protocols of the Ministry of Health of Benin and the WHO. The primary component was the quality of the focused antenatal care (FANC), with the following explanatory components (**Figure A1**).

2.4.1. Structure

It was assessed in terms of the availability of qualified human resources; material and financial resources consistent with established standards; the availability of non-expired medical products and consumables; and an antenatal care environment consistent with standards.

2.4.2. Process

It was analyzed using parameters such as preparation for ANC service delivery; reception of the pregnant woman; history-taking; physical and ancillary examinations performed on the pregnant woman; discussion of the birth plan and emergency plan; health promotion counseling; continuity of care for the pregnant woman; the conclusion regarding the woman's pregnancy; and the pregnant woman's leave-taking and the correct completion of FANC tools.

2.4.3. Results

This component was assessed based on the satisfaction of pregnant women attending FANC, as well as improvements in access to prenatal care and in the early detection of pregnancy-related complications.

All criteria for each explanatory component and for the main component are described in **Table A1**.

2.5. Data Collection

2.5.1. Data Collection Techniques and Tools

Several techniques were employed in the study. Observation of service providers and the environment and FANC-related observations were conducted using the observation grid; interviews were carried out using the interview guide with pharmacy staff and the pharmacy manager to ensure the availability of health products required for FANC, as well as with the head of obstetric care and providers involved in delivering FANC regarding working conditions and motivation; FANC tools (maternal card, health booklet, consultation register) were reviewed using the extraction form to verify that they were correctly completed; and a questionnaire was administered to pregnant women to assess their satisfaction with the services and prenatal care received during consultations.

2.5.2. Development of the Tools

To ensure the proper conduct of our study, data collection tools were developed based on WHO recommendations [9] and Benin's national family health guidelines [10] for the provision of FANC. These tools were presented and validated during the defense of the research protocol before a jury on Friday, March 8, 2024, at the Regional Institute of Public Health (RIPH) in Ouidah.

2.5.3. Data Collection Procedure

Two (02) data collectors holding a Bachelor's degree in Public Health (BPH), native to the study setting and able to understand the various aspects of our study, were recruited and trained in the data collection tools. They were responsible for administering the questionnaire to pregnant women attending focused antenatal care (FANC), whereas the interviews, observation of FANC implementation, and data review were conducted by us. Supervision during data collection was also carried out by us. In addition, a pretest of our tools was conducted in a district hospital other than HZ-OKT to identify and correct non-compliance and irregularities before finalizing the tools.

2.6. Data Processing and Analysis

The collected data were processed using Excel 2013 and analyzed using Stata version 11.0. The assessment was based on a total of 144 basic criteria, rigorously selected from the Protocols and Standards for Family Health Services of the Ministry of Health of Benin [10] to form the components of the study. Each criterion was assigned a binary score: “1” if the criterion was present/met and “0” if it was absent/not met. All elements were given equal weight in the calculation of the initial scores.

The summary score for each component (Structure, Process, Outcomes) was calculated as the sum of the scores of its constituent subcomponents. Varkevisser’s adapted three-scale measure was used to evaluate each component of the study. Thus, each component was rated as good if the score obtained was between 80% and 100%; acceptable if the score obtained was between 60% and 79%; and poor if the score obtained was between 0% and 59%.

Furthermore, to assess the quality of each component of the study—given that the new CPNR model has been in use in Benin for over 15 years—discriminatory criteria were established to rigorously evaluate the quality of the CPNR.

The following rules were defined and applied:

- If any aspect of a subcomponent is rated as “poor”, “acceptable”, or “good”, that subcomponent will automatically receive a rating of “poor”, “acceptable”, or “good”.
- An explanatory component is considered “acceptable” only if all of its subcomponents are at least acceptable.
- “Structure” is considered good only if protocols, human resources, equipment, inputs, and the environment are all simultaneously rated as good.
- The “Process” is considered good only if all clinical steps are followed with a score of $\geq 80\%$. Finally, “Outcomes” are considered good only if pregnant women’s satisfaction reaches this same threshold.

Finally, the quality of the CPNR emphasizes the existence of CPNR normative documents/protocols; qualified and competent human resources; high-quality and adequate material resources; availability of medical products and supplies; adherence to the various steps of the CPNR protocol; and the satisfaction of pregnant women. Thus, the explanatory components “structure”, “process”, and “outcomes” will be rated as “good” when all the rules listed above are followed.

Data processing and analysis were conducted confidentially to avoid causing any harm to the participants.

2.7. Ethical and Deontological Considerations

The research protocol received formal ethical approval from the scientific committee of the Comlan Alfred Quenum Regional Institute of Public Health (IRSP-CAQ) on March 8, 2024. Official authorization to collect data was also obtained from the Departmental Health Directorate and the administration of the Ouidah-Kpomassè-Tori-Bossito Regional Hospital (HZ-OKT) prior to field deployment.

All study participants were informed in advance of the nature and objectives of the study. Participants who gave their voluntary consent were notified that the information obtained would be used exclusively within the strict framework of this research.

3. Results

According to **Table 1**, the study included a total of 164 participants, comprising 14 hospital staff members—01 pharmacy manager, 01 head of obstetric care (HOC), 01 pharmacy staff member, 02 nursing assistants, 03 gynecologists, and 06 midwives—and 150 pregnant women attending FANC. The median age of the pregnant women surveyed was 29 years (18 years; 49 years). The most represented ethnic group was Fon (54.97%), compared with Mina (7.28%). Most pregnant women attending FANC had a secondary level of education (45.70%), whereas a minority had reached higher education (05.30%). Married pregnant women (80.79%) predominated over unmarried women (19.21%); 50.99% lived in urban areas compared with 49.01% in rural areas. In addition, 54.97% were traders, followed by 06.62% who were unemployed.

Description of the structural, process, and outcome components of FANC in the maternity ward of OKT district hospital in 2024.

3.1. Structural Component

According to **Table A1**, the “structure” component in the HZ-OKT maternity ward was rated acceptable, with a score of 73.33% (33 out of 45). According to our discriminatory criteria, because the FANC protocol and physical environment subcomponents were rated poor, this resulted in the “structure” component being rated poor.

3.1.1. FANC Protocol

The protocol subcomponent of the FANC was rated as poor, with a score of 16.67% (1 out of 6). This result is explained by the absence of normative documents and obstetric care protocols within the maternity ward.

3.1.2. Subcomponent: Qualified Human Resources

The qualified human resources subcomponent was acceptable, with a score of 71.43% (5 out of 7). The maternity staff were sufficient in number, and each was qualified to occupy their respective positions. However, the maternity staff did not receive continuing education, and supervision of ANC activities was infrequent.

3.1.3. Subcomponent on Compliant Resources (Material and Financial)

The compliant resources component (material and financial) was rated as good, with a score of 95% (19 out of 20). This result is justified by the availability of the equipment required to deliver FANC in the maternity ward.

3.1.4. Subcomponent: Medical Products and Consumables

The medical products and consumables subcomponent was rated as good, with a

score of 100% (5 out of 5), because health products were consistently available and stockouts were rare, largely due to external suppliers.

3.1.5. Physical Environment Subcomponent

The physical environment subcomponent was rated poor, with a score of 42.86% (3 out of 7), due to the lack of informational materials for pregnant women, the absence of handwashing facilities, and the inadequacy of a sufficiently spacious waiting room to accommodate pregnant women attending routine antenatal care (FANC).

3.2. Process Component

According to **Table A1**, the “process” component in the maternity service of HZ-OKT was rated as acceptable, with a score of 65.87% (2164 out of 3285). According to our discriminative criteria, the subcomponents reception, delivery plan and emergency, promotional counseling, and conclusion on pregnancy were rated as poor, which resulted in the “process” component being rated as poor.

3.2.1. Service Preparation Subcomponent

The service preparation component achieved a score of 100% (90 out of 90) because the consultation room was cleaned and the FANC equipment and supplies were prepared before the start of FANC each day.

3.2.2. Reception Subcomponent

The reception subcomponent performed poorly, with a score of 51.67% (93 out of 180). This can be explained by providers’ failure to introduce themselves to pregnant women attending routine antenatal care (FANC) and to establish rapport before initiating any FANC activities.

3.2.3. Registration/Interview Subcomponent for the Pregnant Woman

The recording/interview subcomponent for pregnant women was rated acceptable, with a score of 78% (351 out of 450). This result is attributable to the failure to screen for pregnancy danger signs to enable early prevention of pregnancy-related complications, as well as providers’ failure to ask women attending routine antenatal care (FANC) about their lifestyle.

3.2.4. Subcomponent: Compliance with the Content of the Physical Examination

The content-compliance subcomponent of the physical examination was rated as good, with a score of 80% (700 out of 900), despite several shortcomings that explain this result, including the absence of axillary examination and the infrequent use of speculum examination and cardiac auscultation.

3.2.5. Subcomponent: Compliance with the Content of Additional Examinations

The subcomponent concerning compliance with the content of additional examinations was satisfactory, with a score of 95.56% (344 out of 360), because provid-

ers systematically requested prenatal tests in order to prevent all pregnancy-related pathologies in order to ensure the well-being of the maternal-fetal dyad.

3.2.6. Subcomponent: Adherence to Preventive Care Content

The content-adherence subcomponent of preventive care was acceptable, with a score of 66.22% (149 out of 225). This finding is attributable to the lack of supervision by providers of pregnant women's intake of sulfadoxine-pyrimethamine (SP) and to the low frequency of explanations regarding medication use.

3.2.7. Discussion Subcomponent on the Implementation of the Birth and Emergency Plan

The discussion subcomponent concerning the implementation of the birth and emergency plan was rated poorly, with a score of 2.97% (8 out of 270). This result may be explained by pregnant women's lack of knowledge of their intended place of delivery, the absence of counseling by providers on the woman's and her family's financial and psychological preparation, and inadequate planning for transportation to the hospital in the event of a high-risk delivery.

3.2.8. Subcomponent: Compliance with the Content of Promotional Recommendations

The subcomponent concerning adherence to the content of promotional counseling was rated poor, with a score of 5.78% (13 out of 225). This finding is explained by the lack of counselling on personal and environmental hygiene, the importance of regular ANC attendance, vaccination, and the use of LLINs, as well as the failure to train pregnant women to recognize danger signs and to seek care services immediately.

3.2.9. Continuity of Care Subcomponent

The continuity-of-care subcomponent was acceptable, with a score of 68.89% (124 out of 180). This result is explained by the fact that pregnant women did not discuss upcoming prenatal visits.

3.2.10. Conclusion Subcomponent on the Surrogate's Pregnancy

The conclusion subcomponent regarding the surrogate's pregnancy performed poorly, with a score of 26.11% (47 out of 180), attributable to the lack of explanation concerning the normal or abnormal course of the pregnancy and the expected date of delivery.

3.2.11. Subcomponent: Taking Leave

The "taking leave" subcomponent performed well, with a score of 100% (90 out of 90), because the providers escorted the pregnant women and said goodbye to them.

3.2.12. Subcomponent: Proper Completion of FANC Tools

The subcomponent concerning correct completion of FANC tools was satisfactory, with a score of 100% (45 out of 45), because the information collected by

providers was recorded in the health booklet, the maternal card, and the FANC register for each pregnant woman.

3.3. Results Component

According to **Table A1**, the “results” component in the maternity unit of HZ-OKT was rated acceptable, with a score of 68.89% (2966 out of 4305). According to our discriminative criteria, the subcomponent assessing pregnant women’s satisfaction was rated poor, which led to a poor rating for the “results” component.

3.3.1. Satisfaction Subcomponent among Pregnant Women

The pregnant women’s satisfaction subcomponent was rated as acceptable, with a score of 60% (1260 out of 2100). However, according to the selected rating criteria, certain items within this subcomponent were rated as poor, resulting in an overall poor rating for the pregnant women’s satisfaction subcomponent. This finding is explained by pregnant women’s dissatisfaction with excessively long waiting times, their lack of knowledge of pregnancy danger signs, and the failure to provide advice on adopting a healthy lifestyle.

3.3.2. Subcomponent: Accessibility of Prenatal Care (Financial and Geographic)

The subcomponent on access to prenatal care was acceptable, with a score of 68.44% (616 out of 900). According to the ratings used, one indicator of the subcomponent on access to prenatal care received a poor rating, which resulted in the subcomponent on access to prenatal care receiving a poor rating. This result is attributed to the high costs of CPNR care and medications available at HZ-OKT.

3.3.3. Subcomponent: Early Detection of Pregnancy Complications

The subcomponent on early detection of pregnancy complications was rated as good, with a score of 83.52% (1090 out of 1305). According to the ratings used, one aspect of the subcomponent on early detection of pregnancy complications received a “poor” rating, which resulted in the subcomponent on early detection of pregnancy complications receiving an overall “poor” rating. This result is attributed to the lack of screening for pregnancy risk factors, which are indicators that enable the early detection of pregnancy complications and their management.

Table A2 summarizes the description of the various aspects of the CPNR that were not implemented, the shortcomings identified during the study, and concludes with an assessment of the quality of the CPNR in the maternity ward at HZ-OKT in 2024.

4. Discussion

4.1. Achievement of Objectives

The overall objective of our study was to assess the poor quality of focused antenatal care consultations in the maternity ward of the OKT district hospital in 2024. The data collection techniques and tools we selected enabled us to obtain data that

were subsequently analyzed and processed. Information derived from the analysis of these data made it possible to assess the quality of focused antenatal care consultations in the maternity ward of the OKT district hospital in 2024, thereby achieving the objectives set out in the study.

4.2. Data Quality and Validity

Our study assessing the quality of focused antenatal care (FANC) was a cross-sectional evaluation. It primarily examined inputs, including the availability of FANC normative documents and protocols, equipment required to deliver FANC, health products, and the number of qualified human resources available; it also involved observing providers' practices for compliance with standards and asking pregnant women about their satisfaction. Public health specialists were recruited and trained to understand the rationale for the study in order to limit biases arising from poor understanding of the data-collection tools. The questions administered to providers during interviews were phrased to minimize recall bias.

However, some biases—particularly observation-related biases—could not be avoided because the presence of an observer during antenatal care visits likely influenced providers' behavior.

4.3. Limitations and Challenges

It is important to note that the limitations of our study may be related to the sample size and the study method selected. Moreover, our study was not without challenges. These included: workload overload, which made it difficult to conduct interviews with providers; consequently, appointments were scheduled to facilitate exchanges. The presence of outsiders within the maternity unit made pregnant women attending FANC reluctant; therefore, to prevent information withholding, adopting the attire of health personnel facilitated contact and discussion with pregnant women, particularly regarding certain questions perceived as sensitive. In addition, the absence of FANC protocols and the unavailability of normative documents made it impossible to collect certain data.

4.4. Comparison of the Results with Those of Other Studies

4.4.1. Structural Component

1) FANC protocol

The protocol subcomponent of ANC was rated as poor, with a score of 16.67% in the maternity ward of the OKT district hospital. This weakness is explained by the absence of a normative ANC document in the maternity ward describing ANC processes and guidelines. This is contrary to WHO standards on quality of care, which state that any antenatal service must have written and updated clinical protocols for ANC practices [11].

2) Qualified human resources

In our study, none of the providers had received continuing education in FANC, and they are often supervised through activity reports. This is not con-

sistent with WHO guidelines, which state that all maternity staff should be able to benefit, at least once every 12 months, from continuing education and refresher sessions related to routine care and the detection of pregnancy complications during ANC visits [12]. Moreover, ANC is performed only by midwives (57.78%) and gynecologists (42.22%). This result is similar to Thiam A. [13] and to Kadjé M.C. [14], where ANC was provided predominantly by midwives and obstetric nurses. This result differs from those reported by N. Goita [15] and from the study conducted in Lubumbashi in 2024 [8], which respectively showed that 66.5% of midwives and 33.5% of obstetric nurses provided ANC without any physician involvement, and, in the second case, ANC was provided by general practitioners, 30.7% by A1 nurses, and 23.1% by A2 nurses.

3) Resources (material and financial)

Regarding the availability of material and financial resources, this subcomponent was rated as good, with a score of 95%. This result is identical to that reported by Thiam A. [13], which demonstrated that the center had good-quality equipment (good score: 94%) despite insufficient quantities. In contrast, the study of Saizonou J. *et al.* [16] and that by Wokden J.S. [17] respectively reported the opposite. On the one hand, of the 15 items of equipment expected, 13 were available and functional for 19 of the 30 observation days, yielding a poor score for this criterion (54.9%); on the other hand, an inadequacy of appropriate material resources and equipment was noted, resulting in a poor score of 57.6%.

4) Medical products and consumables

Our study showed that all medical products and consumables were available throughout the study period and received a high score (100%). This may be explained by the fact that monthly inventory checks of health products and medicines are conducted, along with reports every five months prepared by the pharmacy manager on consumption, available and usable stock, and expired items. This result is consistent with the study of Saizonou J. *et al.* conducted at the Suru-Léré district hospital in Benin in 2014 [16] and that of Wokden J.S. [17], which showed that the medicines used for FANC were available throughout the study period and achieved good scores of 100% and 75%, respectively.

5) Physical environment

The physical environment subcomponent received a poor score (42.86%). This result may be explained by the lack of educational materials for all pregnant women attending antenatal care, the presence of a nonfunctional handwashing facility, the absence of a spacious waiting room, and noncompliance of antenatal care infrastructure with required standards. This finding is consistent with those reported by Thiam A. [13] and Saizonou J. *et al.* [16], but contrasts with that of Wokden J.S. [17].

4.4.2. Process Component

1) Home

With regard to the reception subcomponent, it was rated as poor, with a score of 51.67%. This result may be explained by the high volume of pregnant women

attending antenatal services, the package of ANC activities and the insufficient time available to attend to all pregnant women who come to the ANC. and by pregnant women. Our results are consistent with those reported by Kadje M.C. [14], Thiam A. [13], Saizonou J. *et al.* [16], the study of Salifou K. *et al.* conducted in the main maternity wards of Parakou [18], where ANC was not explained in advance, greetings were not systematic, the team did not introduce itself to the pregnant women, and efforts to build rapport were insufficient, yielding poor reception scores of 22.5% and 58.4%, respectively. By contrast, it differs from Wokden J.S. [17] and Thiam A. [13], in which the various reception criteria, including introductions and rapport building, were implemented, with good scores of 100% and 98.82%, respectively.

2) Recording/interview of the pregnant woman

This subcomponent achieved a good score of 80%; however, several shortcomings were identified, notably limited assessment of risk factors, the absence of questions on lifestyle, and insufficient screening for pregnancy danger signs, with corresponding low scores (57.78%, 2.22%, and 24.44%). This may be explained by the lack of continuing education among the providers included in our study. This finding is consistent with those reported by Thiam A. [13] and Saizonou J. *et al.* [16], who respectively showed that questioning about danger signs and assessment of lifestyle were less frequently performed, resulting in low scores (17.8% and 40%), and that medical history and risk factors were not systematically explored, yielding a low interview score of 51.8%. By contrast, it differs from the results of Thiam A. [13], in which the interview was conducted appropriately, achieving a high score of 98%.

3) Physical examination

In our study, this subcomponent performed well, with a score of 80%. Nevertheless, shortcomings were observed: cardiac auscultation and speculum examination were infrequently performed, yielding low scores of 35.56% and 11.11%, respectively. This may be explained by the fact that speculum examination, for example, is conducted only in cases of complaints of burning during urination.

This result is consistent with Kadje M.C. [14], Thiam A. [13], Saizonou J. *et al.* [16] and with the study of Salifou K. *et al.* conducted in the main maternity wards of Parakou [18], Wokden J.S. [17], and Tangara M.S. [19].

4) Discussion of the progress of the birth and emergency plan

In our study, the birth and emergency plan was rarely discussed, resulting in a low score of 2.96%. This finding can be explained by the fact that the plan is discussed only when the pregnant woman is at term. The results reported by de Saizonou J. *et al.* [16] and Wokden J.S. [17] are consistent with our finding, as the plan was insufficiently discussed, with low scores of 25% and 43%, respectively. In contrast, our results differ from those reported by Daouda Y.K. [20] and Thiam A. [13] where the birth plan was discussed adequately with pregnant women, with high scores of 60% and 61.4%, respectively.

5) Promotional recommendations

With regard to this subcomponent, the results of our study showed that pregnant women rarely received advice on dietary hygiene, the environment, and danger signs to monitor during pregnancy, resulting in a poor score of 5.78% for this component. This finding is consistent with that of N. Goita [15] where lifestyle assessment and counseling were provided in 40% of cases; that of Saizonou J. *et al.* [16], in which the educational counseling parameter was provided in 22.65% of cases; and that of Salifou K. *et al.* [18], where counseling was absent, with a poor score (00%).

6) Conclusion of pregnancy

In our study, a conclusion regarding pregnancy status among pregnant women was rarely documented, resulting in a low score for this subcomponent (26.11%).

In some cases, this may be explained by a lack of information on prenatal assessments, making it difficult to classify pregnancy status for decision-making. This finding contrasts with the results reported by Kadje M.C. [14], Thiam A. [13], and Atade S.R. [21], in which pregnancy status was concluded with high scores of 100%, 85.7%, and 68.3%, respectively.

4.4.3. Results Component

1) Satisfaction among pregnant women

Pregnant women's satisfaction is a key outcome of the quality of healthcare and health services; it determines attendance and use of health services. Word-of-mouth communication remains highly prevalent in Africa, and particularly in Benin [22]. A pregnant woman dissatisfied with focused antenatal care (FANC) could inform ten or more others, who would refrain from attending the health facility or would decide to go only late in an emergency [23]. In our study, only 4% of pregnant women were satisfied with respect to waiting time, unlike the studies by Atade S.R. [21], Ntwali M.P. [24], and Wokden J.S. [17], in which satisfaction with waiting time was 60.3%, 60%, and 67%, respectively. Our finding may be explained by a lack of space for providing antenatal care (ANC), an insufficient number of providers, and the multiple tasks assigned to them.

2) Accessibility of prenatal care

Financial and geographic accessibility is an indicator of the utilization rate of prenatal services. In our study, 14.67% of pregnant women were able to pay for their prenatal care without difficulty, and 8.67% were able to pay for their medications; these results are consistent with those reported by Saizonou J. *et al.* [16], Atade S.R. [21], and Tembely M.B. [25]. This may be explained by low household income. These findings differ from those of Thiam A. [13], who reported a 95% satisfaction rate regarding medication costs.

5. Conclusions

This study on the quality of focused antenatal care (FANC) at the OKT district hospital concluded that the quality of FANC was poor. The reasons for this poor quality include the absence of FANC protocol documents; inadequate training of

qualified human resources; the lack of a waiting room in the physical environment of the FANC unit; and failure to comply with the various steps of the FANC delivery process, notably discussion of the birth and emergency preparedness plan, strict adherence to the content of health promotion counselling, and formulation of a conclusion regarding the woman's pregnancy, as well as dissatisfaction related to long waiting times and the high costs of care and medications.

These weaknesses should be addressed as part of efforts to improve the quality of FANC, which would contribute to higher-quality FANC and greater satisfaction among pregnant women. Our evaluation therefore made it possible to identify strengths to reinforce and weaknesses to correct in order to provide sustainable solutions for improving the quality of FANC at the OKT district hospital. However, further studies would be of interest to clarify which factors are associated with the level of FANC quality in the maternity ward.

Conflicts of Interest

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

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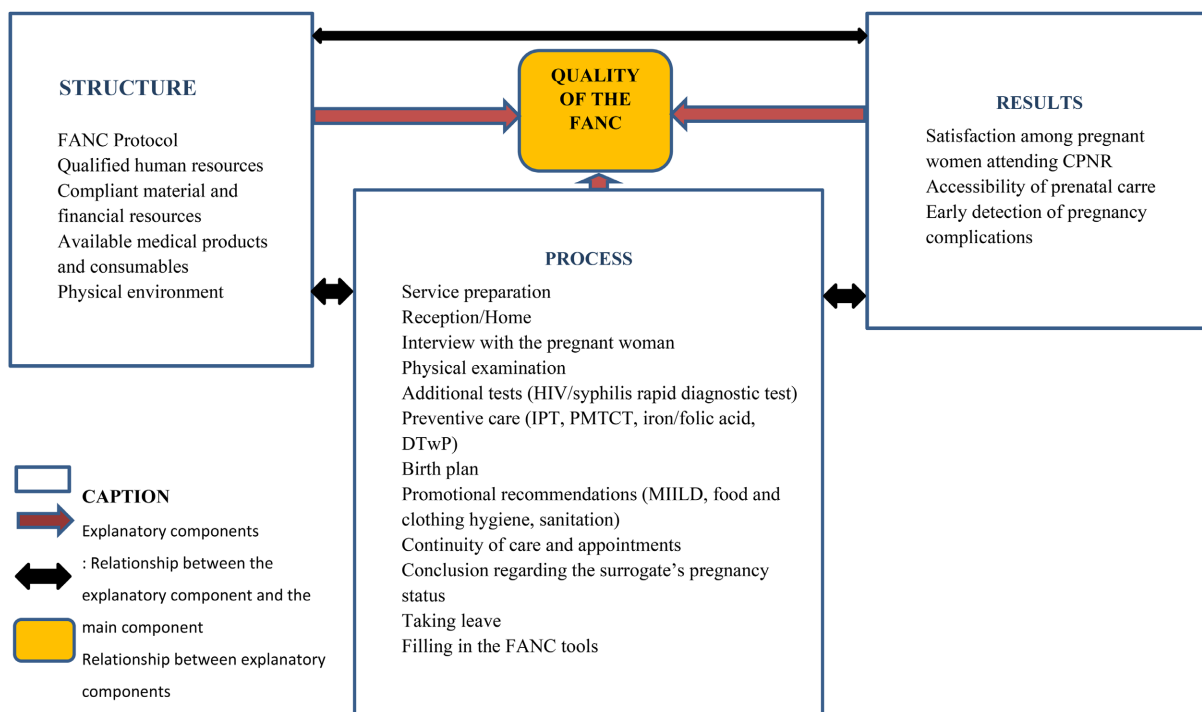
Annexes

Table A1. Assessment of the “Structure,” “Process,” and “Outcomes” components and their subcomponents for evaluating the quality of ANC in the maternity ward of ‘HZ-OKT in 2024.

Components	Subcomponents	Expected score	Score obtained	%	Quality appraisal (Varkevisser measure)	Quality assessment (discriminative criteria)
Structure	FANC Protocol	06	01	16.67	Bad	Bad
	Qualified human resources	07	05	71.43	Acceptable	
	Compliant resources (material and financial)	20	19	95	Good	
	Medical products and supplies	05	05	100	Good	
	Physical environment	07	03	42.86	Poor	
	Overall structure	45	33	73.33	Acceptable	
Process	Service preparation	90	90	100	Good	Bad
	Home	180	93	51.67	Poor	
	Recording/Interview of the Pregnant Woman	450	351	78	Acceptable	
	Physical examination	900	720	80	Good	
	Additional examinations	360	344	95.56	Good	
	Preventive care	225	149	66.22	Acceptable	
	Birth and emergency plan	270	8	2.97	Bad	
	Promotional advice	225	13	5.78	Bad	
	Continuity of care and appointments	180	124	68.89	Acceptable	
	Conclusion on the surrogate’s pregnancy	180	47	26.11	Incorrect	
	Taking leave	90	90	100	Good	
	Correct completion of the FANC tools	135	135	100	Good	
	Full process	3285	2164	65.87	Acceptable	
Results	Satisfaction among pregnant women	2100	1260	60	Acceptable	Bad
	Accessibility of prenatal care (Financial and Geographic)	900	616	68.44	Acceptable	
	Early detection of pregnancy complications	1305	1090	83.52	Good	
	Overall results	4305	2966	68.89	Acceptable	

Table A2. Unimplemented aspects of the CPNR and deficiencies identified during implementation of the CPNR in the maternity ward of the OKT district hospital in 2024.

Explanatory components	Subcomponents	Quality assessment
Structure	Absence of a CPNR protocol	Incorrect.
	Physical environment (lack of a spacious waiting room; absence of educational and informational materials for pregnant women)	Incorrect.
	Inadequate reception of pregnant women	Poor
Process	Lack of discussion of the birth plan and emergency procedures	Incorrect.
	Advice not provided to pregnant women	Bad
	Failure to provide pregnancy termination services to pregnant women	Incorrect
Results	Pregnant women's dissatisfaction was related to long waiting times, the unavailability of supplies and medications, limited awareness of pregnancy danger signs, and the infrequent receipt of health-promotion counselling on exclusive breastfeeding, clothing hygiene, and environmental hygiene.	Bad
	diet; the importance of using MIILD; the high cost of medical care and medical products	
	Underinvestigated risk factors	Poor
Conclusion on the quality level of the CPNR	-	Bad

Conceptual framework**Figure A1.** Conceptual framework for evaluating the quality of focused antenatal care in the maternity unit of the OKT district hospital in 2024.