

## Evaluation of the Quality of CPN in a Community Health Centre in Rural Area (CSCoM/Sido) in Mali

Sylla Mala<sup>1</sup>, Traoré Soumaila A<sup>2\*</sup>, Traoré K<sup>3</sup>, Cissé M<sup>1</sup>, Coulibaly O<sup>1</sup>, Goita D<sup>1</sup>, Coulibaly M<sup>1</sup>, Diallo S<sup>4</sup>, Sidibé Assitan B<sup>4</sup>, Cissouma A<sup>2</sup>, Touré O<sup>2</sup>, Coulibaly M<sup>2</sup>, Cissé A<sup>2</sup>, Kanté M<sup>2</sup>, Traoré B<sup>2</sup>, Diassana M<sup>2</sup>, Diallo A<sup>2</sup>, Dembélé Y<sup>5</sup>, Traoré S<sup>6</sup>, Diassana M<sup>7</sup>, Camara F<sup>8</sup>

<sup>1</sup>CSRéf Bougouni

<sup>2</sup>Hôpital de Sikasso

<sup>3</sup>Clinique Périnatale Mohamed VI

<sup>4</sup>ONASR

<sup>5</sup>CSRéf Sikasso

<sup>6</sup>CSRéf Koutiala

<sup>7</sup>Hôpital Fousseyni Daou de Kayes

<sup>8</sup>DRS Kayes

DOI: <https://doi.org/10.36348/sijog.2025.v08i05.005>

| Received: 07.04.2025 | Accepted: 13.05.2025 | Published: 16.05.2025

\*Corresponding author: Dr Soumaila Alama TRAORE

Gynécologue-obstétricien, Maître de recherche, Hôpital de Sikasso (Mali)

### Abstract

**Introduction:** Prenatal consultation is a preventive medical act used to detect and treat possible complications arising during pregnancy. The aim of our study was to evaluate the quality of prenatal consultations in a rural community health center. To do this, we assessed the quality of services, determined prenatal consultation procedures and determined the degree of satisfaction of pregnant women who come to this community health center for prenatal consultations.

**Methodology:** This was a prospective, descriptive study in 2022, involving 98 pregnant women systematically surveyed from October 1 to December 31, 2022, to assess the quality of care and services. All pregnant women who came to the Sido Community Health Center for a prenatal consultation during the study period and who agreed to take part in the study were included in the study. Pregnant women who refused to comply with the recruitment conditions, and those who came for reasons other than a prenatal consultation, were not included in the study.

**Results:** At the end of our study, we found that the majority of our pregnant women were aged between 20-29 years, i.e. 56.8%, with an average age of 23.23 years. Antenatal consultation activities were carried out by midwives in 50% of cases, obstetric nurses in 19.4% of cases and matrons (unqualified personnel) in 36.6% of cases. Hand washing before examining a new gestational carrier was 18.36%, and gestational carrier satisfaction was 94.9%.

**Conclusion:** There are certain areas for improvement, such as the omission of certain procedures, either through ignorance of their importance, or through negligence and inadequate technical facilities, in this case the absence of an ultrasound scanner in the health area.

**Keyword:** Evaluation; quality; prenatal consultation.

Copyright © 2025 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

## INTRODUCTION

Prenatal consultation is a preventive medical procedure used to detect and treat possible complications that may arise during pregnancy. It also helps determine the delivery route. Improving the comfort and experience of each pregnant woman requires regular monitoring of the pregnancy [6]. The WHO recommends at least four (4) prenatal consultations at regular intervals during pregnancy [7]. To be effective, prenatal care must be

carried out early in pregnancy and, above all, it must continue with a certain regularity until delivery. According to EDSM-5 [8], just over a third of women (35%) had their first prenatal visit early in pregnancy, i.e., less than 4 (four) months; On the other hand, in 14% of cases, the first visit only took place from 6-7 (six to seven) months of pregnancy, thus compromising the number and regular spacing of prenatal visits recommended by the WHO. The effectiveness of prenatal care also depends on the type of examinations

carried out during consultations as well as the advice given to women. It appears that, according to women's statements, childbirth (25% or 417 women) is the event following which fistulas occur most frequently [8]. The quality of care is a key aspect of maternal health. All women, whether pregnant or not, need quality maternal health services during pregnancy, childbirth and the postpartum period to protect their health and that of their children [9]. The complexity of care processes, the diversity of care provision, the variability of observed practices, the continual updating of knowledge and the improvement of medical technologies, the need to control the risks of practices and finally the economic dimension of care make it possible to understand why achieving this objective makes a structured approach to evaluation and improvement essential [2]. In order to contribute to the smooth running of maternity care for women in the rural commune of Sido, we carried out a study that focused on the quality of CPN at the Sido community health center

## METHODOLOGY

This was a prospective, descriptive, and evaluative study involving 98 pregnant women systematically identified during the study period from October 1 to December 31, 2022, to assess the quality of care and services. It took place at the Sido Community Health Center. The Sido Community Health Center is located 200 km from Bamako on National Road 7 (RN7). It is the capital of a health area covering 20 villages with an estimated population of 19,528 in 2022. The sample size was calculated using Raosolf.inc, a sample size calculator. The margin of error is 5%; the confidence interval is 95%. The target population size is 98. Data collection was conducted through an interview with the pregnant women; observation of the tasks of the

providers and a reading of documents such as notebooks and/or pregnancy monitoring registers. We carried out a systematic recruitment of pregnant women until reaching the sample size. All pregnant women who presented at the Sido community health center for a prenatal consultation during the study period and who agreed to be part of the study were included in this study. Pregnant women who refused to comply with the recruitment conditions, and those who presented for reasons other than CPN were not included in the study. It consisted of the description of the production capacities (premises, human resources, equipment of the center); and that of the organization of work. Observations were made with the utmost discretion and remaining totally passive. The observation guides used allowed for rapid response to questions. The opinion of the pregnant women was requested upon leaving the consultation room after the observation. A questionnaire for the opinion of the pregnant women and a questionnaire for the observation of CPN were developed for this purpose. Data were entered and analyzed using SPSS version 25 software. Free and informed consent was obtained from the various targets after detailed information and explanations before the interviews began. They were reassured that they would not run any risk by refusing to participate. The confidentiality and anonymity of the information collected were guaranteed.

## RESULTS

### 1. Sociodemographic characteristics:

The average age was 23.23 years, with extremes of 16 and 36 years.

The sociodemographic characteristics are presented in Table 1.

**Table 1: Sociodemographic profile of pregnant women**

Caractéristiques	Nombre (%)
<b>Age in years</b>	
< 19 years	26 (29,6)
20 – 29 years	50 (56,8)
30 – 99 years	12 (13,6)
<b>Education level</b>	
Not in school	68 (69,4)
Primary	14 (14,0)
Secondary	14 (14,0)
Higher education	1 (1,0)
Medersa	1 (1,0)
<b>Occupation</b>	
Housewife	96 (98,0)
Shopkeeper	2 (2,0)
<b>Marital status</b>	
Single	5 (5,1)
In a union	93 (94,9)
<b>Distance traveled*</b>	
Less than 15 km	75 (76,5)
More than 15 km	23 (23,5)
<b>Partner's occupation*</b>	

Farmer	79 (80,6)
Shopkeeper	10 (10,2)
Civil servant	1 (1,0)
Other	8 (8,2)
<b>Gestation</b>	
Primigravida	28 (28,6)
Paucigravida	15 (15,3)
Multigravida and major multigravida	50 (51,0)

### Clinical and Paraclinical Examination During Pregnancy

High blood pressure was the most common associated pathology, accounting for 8.16% of patients. Cardiopulmonary auscultation was not performed on any pregnant woman. Speculum examination was not performed on any pregnant woman. Danger signs were explained to all pregnant women. Regarding additional examinations, blood typing, hemoglobin level, blood glucose, blood weight, HIV screening, and albumin testing were performed on 99% of our pregnant women;

ultrasound and Emmel test (60%), however, rubella serology was not performed on any pregnant woman. Half of the pregnant women (50%) were consulted by the midwife. A gestogram was not available throughout our survey. Other elements of the obstetric examination such as measurement of uterine height, palpation of the abdomen, search for the MAF, auscultation of the BCF, position of the fetus, vaginal examination, discussion of the delivery plan, explanation of the progress of the pregnancy, appointments were procedures performed in 90% to 100% of cases.

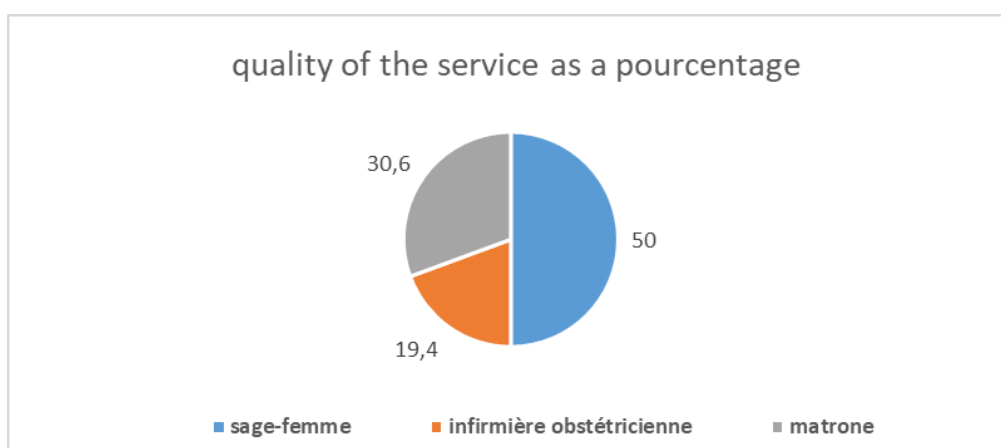


Figure 1: Distribution of pregnant women according to the provider's qualification

### Study of ANC procedures and pregnant women's opinions

The sheet was not placed on the table during all prenatal visits (0%). However, examination gloves were used and the table was cleaned between examinations in 100% of cases. The health worker requested the previous

pregnancy record from 57.5% of pregnant women. Seventy-six point three percent (76.3%) of pregnant women thought the premises were old but clean; however, 48.2% of pregnant women found the restrooms dirty. 94.9% of pregnant women were satisfied with their prenatal visit.

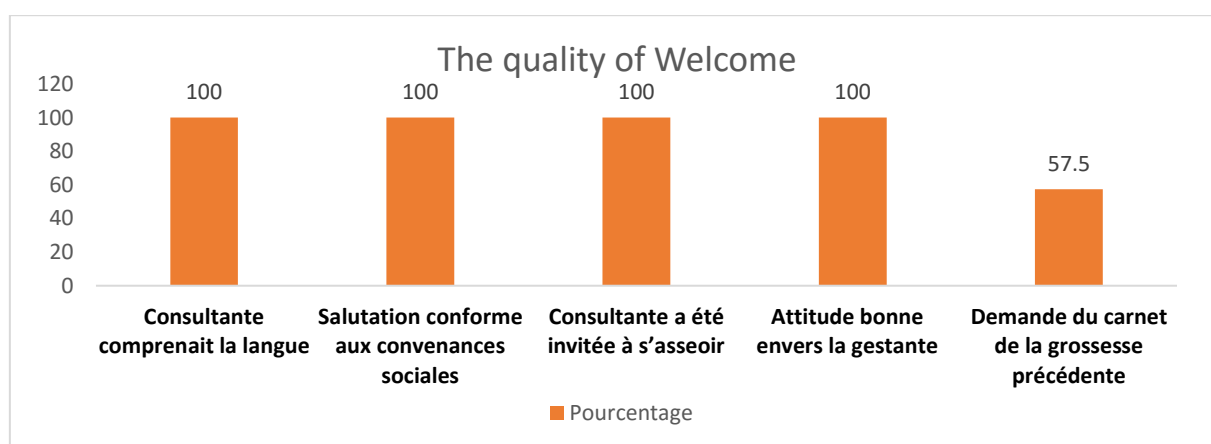


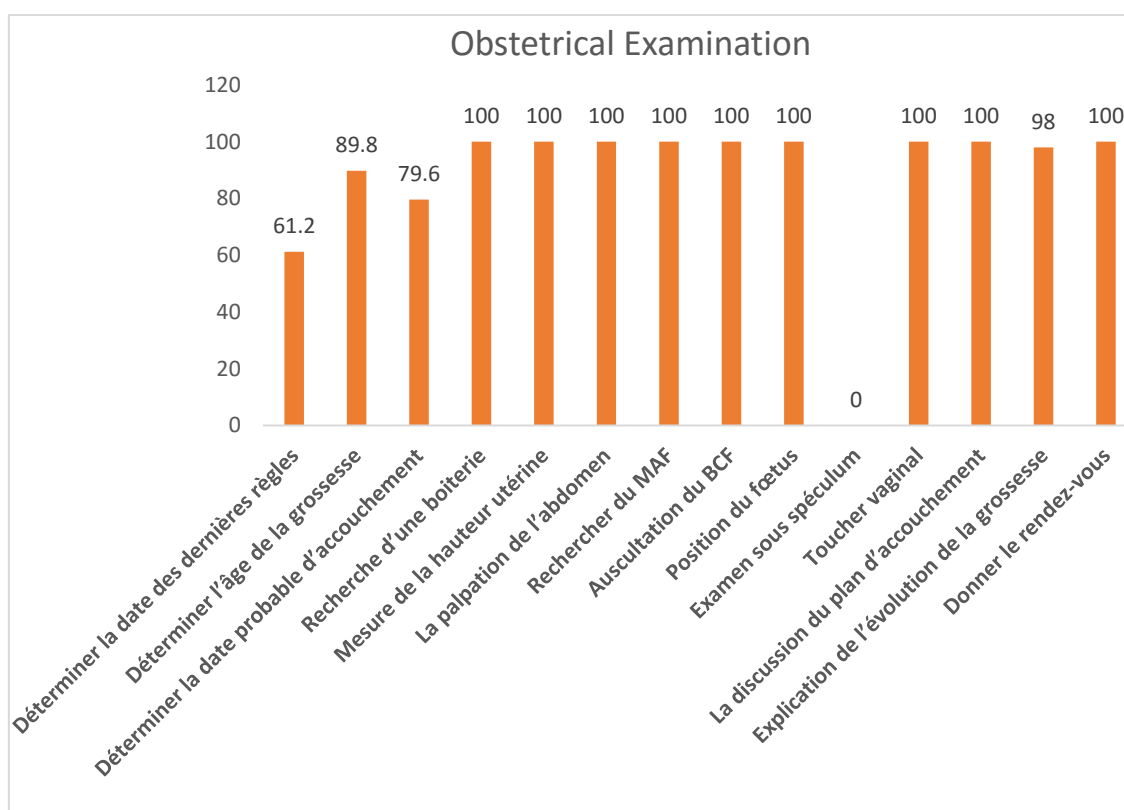
Figure 2: Distribution of pregnant women according to the quality of reception

**Table 2: Distribution of pregnant women according to the quality of the general examination**

General examination	Effective	Percentage
The pregnant woman was weighed	97	99
The height was measured	98	100
The temperature was taken	98	100
The pregnant woman's blood pressure was taken	98	100
The conjunctiva was examined	97	99
The edema was checked	97	99
The cardiopulmonary auscultation was performed	0	0
The pregnant woman was assisted in descending	98	100

**Table 3: Distribution of pregnant women according to advice received for health promotion**

Advice received	Production workforce	Percentage
On rest	92	95,8
On diet	95	97,9
On family planning	96	98
On STDs/AIDS	93	96,9
On danger signs	98	100

**Figure 3: Distribution of pregnant women according to obstetric examination****Table 3: Distribution of pregnant women according to the performance of preventive care**

Preventive care	Effective	Percentage
Tetanus vaccination	92	93,9
Supervised administration of Sulfadoxine Pyrimethamine	87	88,8
Iron folic acid supplementation	98	100
Deworming	98	100
Antimalarial chemoprophylaxis	96	98

## COMMENTS AND DISCUSSION

During our study, the majority of our pregnant women were between 20 and 29 years old, or 56.8%, with a mean age of 23.23 years. The age ranges were 16

and 36 years, respectively. In our study, 19.6% of pregnant women were adolescents under 19 years old. This result is close to that of CISSOUMA.B [15] and BADIAGA.C [16], who found 21% and 24.7%, respectively. Housewives represented 94.9%, a rate higher than that of CISSOUMA.B [15] (71%) and that of BADIAGA.C [16] (67.9%). Regarding the accessibility of the center, 23.5% of pregnant women lived within a radius of more than 15 km. The majority of our pregnant women were not in school with 69.4% of cases or at secondary level (14.3%). These rates are comparable to those of COULIBALY S. [17] who found at ASACOBOL II 54.2% of pregnant women not in school and 27% with a primary level. According to the world fertility survey, it is inversely proportional to the level of education of women and women who are not in school have on average twice as many children as those who have had 7 years or more of schooling [18]. The housekeeping profession was the most found in our study, i.e. 98% of cases. Knowledge of obstetric history is essential in the care of pregnant women because it determines the conduct to be adopted for a favorable outcome of the pregnancy. Obstetric history was sought in the majority of our pregnant women. The respondents were primigravida in 28.6%, this rate is higher than that of Traoré. I at ADASCO [19] 21.0% and similar to that of Maiga. A.S at Csref CI [20], 29.0%. CPN activities were carried out by midwives in 50% of cases, obstetrician nurses in 19.4% of cases and midwives in 36.6%. These results are different from those of Zoumana D [21] who found that all consultations were carried out by qualified personnel. During our study all pregnant women were greeted with a friendly tone and were asked to sit down. Our results were similar to those of NIANGALY H [22]. Reception is one of the most important factors in the satisfaction of pregnant women. General examination elements such as weighing, height measurement, blood pressure measurement, conjunctival examination and edema screening were performed on pregnant women, with percentages between 99% and 100%. However, cardiopulmonary auscultation was not performed by the providers. The date of the last period was only requested in 61.2% of cases; this result is lower than that of Zoumana B.D[23] who had 100%. Knowing the start of the pregnancy allows us to better monitor its progress, to recognize intrauterine growth retardation, excess uterine volume and to presume the date of delivery, in order to avoid complications. We noted that the gestogram was not available throughout our survey. Other elements of the obstetric examination such as measurement of uterine height, palpation of the abdomen, search for the MAF, auscultation of the BCF, position of the fetus, vaginal examination, discussion of the delivery plan, explanation of the progress of the pregnancy, appointments were actions performed in 90% of cases. 100% of cases. Speculum examination was not performed at all during CPN. The non-use of the speculum in our study is due to the lack of interest shown by the staff in this examination. Post-counseling HIV/AIDS screening for the PMTCT program was

systematically performed on all pregnant women. All of our women had Rh blood grouping; Goita N. [24] had 99%, this could be explained by the fact that blood grouping is systematic and available in our study center. Ultrasound today represents the most important means of diagnosis and monitoring of pregnancy. It was requested in 60.2%. This rate is lower than that of Coulibaly T.O [24] 81.5%. The hemoglobin level, BW, Emmel test, albumin and sugar (urine) were requested in 92% to 100%. This could be explained by the fact that providers attached importance to these examinations. However, rubella was not requested in any of our patients. Preventive measures included iron supplementation, malaria chemoprophylaxis, insecticide-treated mosquito nets, deworming, and tetanus prevention. These measures were carried out in 98% to 100% of cases. On the other hand, the supervised dose of sulfadoxine pyrimethamine (SP) was given to 88.8% of pregnant women, this could be explained by the fact that SP was given from 13 weeks of pregnancy, respecting an interval of at least one month between doses. Hand washing before examining a new pregnant woman was done in 18.36% of cases. This fundamental principle of infection prevention was not satisfactory and would be due to the absence of a water point in the CPN room. This rate is much lower than that of Zoumana D [21] who found that the practice of hand washing between two consultations was systematic. The gloves used were loose gloves, however we reported that the examination table sheet was not used or changed at each consultation. Regarding the degree of satisfaction of pregnant women with the cleanliness of the premises, 76.3% of pregnant women found the premises clean but old and 48.2% found the toilets dirty. Pregnant women stated that the order of arrival was respected; that the providers were courteous; that they paid sufficient attention to them; that they respected confidentiality and their privacy. They were comfortably seated in 95.9% to 100% of cases. It was noted that all pregnant women had the ticket for the CPN, which allowed the order of arrival to be respected. Wait times were long for 12.2% of respondents. Pregnant women's satisfaction was 94.9%. Providers explained PMTCT, syphilis, malaria, and hygiene during pregnancy from the first ANC visit.

## CONCLUSION

The study conducted at the Sido Community Health Center from October 1 to December 31, 2022, allowed us to analyze prenatal care according to ANC standards and procedures in Mali. Our work revealed the need to improve the reception of pregnant women at the center, strengthen hygiene, respect the privacy and confidentiality of pregnant women, strengthen ongoing training for providers, and improve the technical platform with qualified personnel and equipment, especially ultrasound scanners.

## REFERENCES

1. WHO. World Society Report: Give Every Mother and Child a Chance, 2005 Edition 26 1P Good Direction No. 29 2002.
2. WHO. Chronic Maternal Mortality: Removing Women from the Fatal Cycle, Geneva WHO 1986 40 (5) 193 – 202.
3. Mali Demographic and Health Survey (EDSM V) 2012-2013 P 106, 108, 203.
4. Bathily B. Evaluation of the Quality of Prenatal Consultations at the Dravela and Dravela-Bolibana Health Centers in Commune III of the Bamako District.
5. Matillon Y. Evaluation in Medicine: A Growing Approach. Rev prat (Paris) 1992, 42(15): 1917-1919p. NX 4000
6. Cissouma B. Evaluation of the quality of prenatal consultations at the Mopti CS Ref, Toguel CSCOM, ASACOTAMB, medical thesis 2008.
7. Badiaga C. Evaluation of the quality of prenatal consultations at the Kati CS Ref, medical thesis 2008.
8. Coulibaly S. Study of the quality of prenatal consultations at the ASACOBOL II health center in commune II of the Bamako district, from November 2012 to January 2013. 196 cases. 116 pages.
9. WHO. Procedures in Reproductive Health. Volume 3, 2018 Edition.
10. Traore I. Evaluation of the quality of prenatal consultations at the "ADASCO" community health center in Daoudabougou in commune V of the Bamako district. Medical thesis 2008-2009. 91 pages.
11. Maiga A.S. Evaluation of the quality of prenatal consultations at the referral health center in commune I of the Bamako district. Medical thesis 2008.M216.86 pages.
12. Diarra Z. Evaluation of the Quality of Prenatal Consultations at the Bougouni Reference Health Center, Medical Thesis 2019
13. Niangaly H. Evaluation of the Quality of Prenatal Consultations at the Mopti CSComs. Medical Thesis 2016; 85 pages.
14. Daou B. Z. Evaluation of the Quality of Prenatal Consultations at the Kalabancoro Reference Health Center. Medical Thesis 2018; 53 pages.
15. Coulibaly O.T. Evaluation of the quality of prenatal consultations at the reference health center of Commune I. medical thesis 2012; 109 pages.