

# Postpartum Family Planning at the Timbuktu Hospital in Mali

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## Abstract

**Introduction:** Postpartum family planning is the prevention of pregnancies during the 12 months following childbirth. Few studies have been devoted to postpartum family planning in Mali. Our work will contribute to reducing unmet need for family planning. **Objective:** To study the use of contraceptive methods in the postpartum period in the obstetrics and gynecology unit of Timbuktu hospital. **Materials and Methods:** This was a descriptive and analytical cross-sectional study with prospective collection of data from January 1, 2022 to December 31, 2023. All women who gave birth having chosen and benefited from a contraceptive method were included. The statistical test used was the Fisher test with a significance threshold fixed at 5%. **Results:** The frequency of contraception in the postpartum period was 17.03%. The average age of clients was 26.14% with extremes of 14 and 45 years. They were paupiparous at 56.4% with an inter-birth interval of less than 12 months at 12.3%. More than half of the counseling (58.5%) was done during postnatal visits. The methods chosen were implants at 48.1%, injectable progestins at 21.3%, intrauterine device at 14.7%, miro-progestin pills at 13.5%, tubal ligation at 1.4% and condoms at 1%. The regular follow-up rate was 51.1% of cases and 25.6% had no follow-up. **Conclusion:** The overall rate of postpartum family planning of 17.08% remains low. Improving FP staff skills will reduce unmet needs and contribute to increasing contraceptive prevalence in Timbuktu.

## Keywords

Family Planning, Postpartum, Counseling, Contraceptive Methods, Timbuktu Hospital

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## 1. Introduction

Worldwide, 95% of women want to avoid pregnancy in the 2 years following childbirth but only one in three women use a contraceptive method postpartum. The recommended birth interval is at least 24 months. Postpartum family planning (PPFP) is defined as the prevention of unintended pregnancies and closely spaced pregnancies during the first 12 months after delivery [1] [2]. The postpartum period is a particular and delicate moment since the woman is often more concerned about her newborn and her role as a mother than about her future as a woman. Contraception is a priority in the postpartum period. Worldwide, 222 million women would like to prevent or delay pregnancy, but they do not have access to contraceptive methods. Addressing these unmet needs would allow women to control their own fertility and reduce maternal deaths by a third [3]. Despite the efforts of the Malian Government and all of its technical and financial partners, the area of sexual and reproductive health is marked by very little improvement in indicators. According to EDMS-VI, modern contraceptive prevalence increased from 1% in 1987 to 6% in 2001 and to 16% in 2018. Unmet needs for family planning increased from 26% in 2012-2013 to 24% in 2018. The total fertility rate is 6.3 children per woman, the maternal mortality rate is 325 per 100,000 live births and neonatal mortality is 33‰. [4]. The reasons for these unmet needs are multiple, including the unavailability of contraceptive services and methods, fear of social disapproval or partner opposition, the high cost of contraceptives for women in rural areas, the weight of family pressure, the weight of unfounded rumors, the lack of information from spouses or partners, the unavailability of healthcare personnel, the fear of side effects and concerns for their health [5]. All health providers must strive to provide up-to-date information on the different contraceptive strategies, to screen for possible contraindications and to prescribe effective contraception to each woman who wishes it before leaving the maternity ward [6]. Very few studies have been devoted to PFPP in Mali and particularly in the Timbuktu region. Therefore, this work that we have carried out will contribute to the knowledge of the use of contraceptive methods in the postpartum period at the Timbuktu hospital.

## 2. Materials and Methods

We carried out a descriptive and analytical cross-sectional study with prospective data collection from January 1, 2022 to December 31, 2023 (*i.e.* 2 years) in the functional obstetrics and gynecology unit of the Timbuktu Hospital. It concerned all women who gave birth in our unit during the study period. All wom-

en who gave birth in our department who chose and benefited from a contraceptive method were included in this study. Clients who did not meet the eligibility criteria of the World Health Organization (WHO), clients who did not choose a method and women who gave birth in other countries were not included in this study. Other structures but who came to consult our unit in the postpartum period. This was a systematic collection of all clients meeting the inclusion criteria. Data collection was carried out on an individual survey form including the sociodemographic and clinical characteristics of the women giving birth and data relating to the different methods of contraception. We recorded in the department all cases of contraception used postpartum during the study period. Counseling and prescription were done by obstetrician-gynecologists and midwives. Those who gave birth were reviewed according to the appointment criteria of Mali's June 2019 policies, standards and procedures. The variables studied were age, educational level, parity, inter-birth interval, times of counseling and use of contraceptive methods with their follow-up. The data were entered and analyzed using SPSS 21 software. The statistical test used was Fisher's exact test with a significance threshold set at 5%. Our study is purely scientific and makes it possible to evaluate the aspect of contraception in the postpartum period. The results of this study will be made available to all reproductive health/Family Planning interventions. Before using each method, we ensured that each woman gave birth had made an informed choice. Anonymity was the rule in this study.

### 3. Results

From January 1, 2022 to December 31, 2023, the Maternity Unit of Timbuktu Hospital admitted 2992 women who gave birth; among which 511 clients benefited from a method of contraception in the postpartum period, *i.e.* a frequency of 17.08% (Table 1).

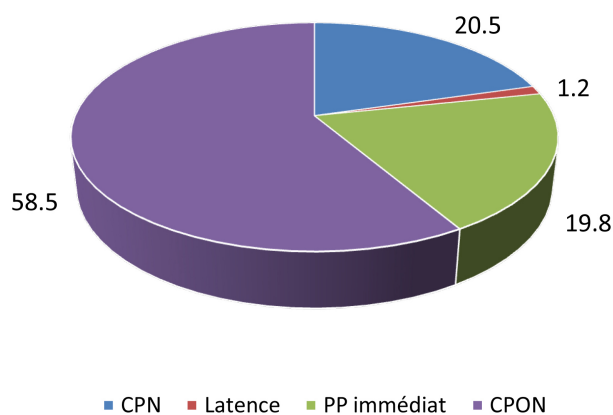
**Table 1.** Sociodemographic and obstetric characteristics of clients.

| Client characteristics   | Workforce | %    |
|--------------------------|-----------|------|
| <b>Ages (year)</b>       | -         | -    |
| ≤19                      | 100       | 19.6 |
| 20 - 29                  | 246       | 48.1 |
| 30 - 39                  | 136       | 26.6 |
| ≥40                      | 29        | 5.7  |
| <b>Educational level</b> | -         | -    |
| Out of school            | 164       | 32.1 |
| Primary                  | 134       | 26.2 |
| Secondary                | 184       | 36.0 |
| University               | 29        | 5.7  |

## Continued

|                                |       |            |
|--------------------------------|-------|------------|
| <b>Parity</b>                  | -     | -          |
| Primiparous                    | 48    | 9.4        |
| Pauciparous                    | 288   | 56.4       |
| Multiparous                    | 114   | 22.3       |
| Large multiparous              | 61    | 11.9       |
| <b>Birth interval (months)</b> |       |            |
| <12                            | 63    | 12.3       |
| 12 - 24                        | 327   | 64.0       |
| >24                            | 121   | 23.7       |
| <b>Averages and extremes</b>   |       | <b>Age</b> |
| Average                        | 26.14 | 3.35       |
| Minimum                        | 14    | 1          |
| Maximum                        | 45    | 13         |

Customers aged 20 to 29 were more represented with 48.1%. The average age was 26.14 years with extremes of 14 and 45 years. The majority of clients were in school, *i.e.* 67.9%, pauciparous in 56.4% and large multiparous in 11.9%. The inter-birth interval of less than 12 months was 12.3% and more than 24 months at 23.7% (**Figure 1**).



**Figure 1.** Distribution of clients according to the time of counseling.

Counseling was done in 58.5% during the postnatal visit, in 20.5% during prenatal consultations, 19.8% in the immediate postpartum and during the latency phase in 1.2%.

The methods chosen were implants at 48.1%, injectable progestins at 21.3%, intrauterine device at 14.7%, miro-progestin pills at 13.5%, tubal ligation at 1.4% and condoms at 1% (**Table 2**).

**Table 2.** Distribution of clients according to choice of contraceptive method.

| Contraceptive method  | Workforce  | Percentage |
|-----------------------|------------|------------|
| Implants              | 246        | 48.1       |
| IUD                   | 75         | 14.7       |
| Microprogestin pills  | 69         | 13.5       |
| Injectable progestins | 109        | 21.3       |
| Condoms               | 5          | 1.0        |
| Tubal ligation        | 7          | 1.4        |
| <b>Total</b>          | <b>511</b> | <b>100</b> |

We found a statistically significant relationship between age and the type of contraception chosen ( $\text{Chi}^2 = 78.992$ ,  $P < 0.001$ ). The implant was the method most chosen by clients aged 19 and under at 60%; at 52.44% by 20 to 29 year olds and 40.44% for 30 - 39 year olds. Women aged 40 and over chose the IUD in 55.17% (**Table 3**).

**Table 3.** Distribution of clients according to choice of contraceptive method and age.

| Age               | Methods    |           |                      |                      |          |                |            | Total |
|-------------------|------------|-----------|----------------------|----------------------|----------|----------------|------------|-------|
|                   | Implants   | IUD       | Micro progestin pill | Injectable progestin | Condom   | Tubal ligation |            |       |
| ≤19 years old     | 60         | 5         | 12                   | 20                   | 2        | 1              | 100        |       |
| 20 - 29 years old | 129        | 25        | 38                   | 52                   | 2        | 0              | 246        |       |
| 29 - 39 years old | 55         | 29        | 16                   | 33                   | 1        | 2              | 136        |       |
| ≥40 years old     | 2          | 16        | 3                    | 4                    | 0        | 4              | 29         |       |
| <b>Total</b>      | <b>246</b> | <b>75</b> | <b>69</b>            | <b>109</b>           | <b>5</b> | <b>7</b>       | <b>511</b> |       |

Follow-up after administration of the method was regular in 51.1% of cases and 25.6% had no follow-up. We noted two cases of pregnancy after IUD expulsion in clients who did not come for follow-up (**Table 4**).

**Table 4.** Distribution of clients according to follow-up after administration of the method.

| Follow up    | Workforce  | Percentage |
|--------------|------------|------------|
| Regular      | 261        | 51.1       |
| Irregular    | 119        | 23.3       |
| No following | 131        | 25.6       |
| <b>Total</b> | <b>511</b> | <b>100</b> |

#### 4. Discussion

Unintended and closely spaced pregnancies increase maternal, neonatal and

child mortality and morbidity rates and this is why the WHO recommends at least a 24-month birth interval [1]. The first 12 months after childbirth present a high risk of unintended pregnancies [7]. PFPP is a key intervention in reducing maternal, neonatal and child mortality and morbidity, by preventing unintended pregnancies and births. Too close together [8]. The importance of PFPP has long been neglected [9]. In our study, customers aged 20 to 29 were the most represented with 48.1%. The average age was 26.14 years with extremes of 14 and 45 years. The majority of clients were in school, *i.e.* 67.9%, pauciparous in 56.4% and large multiparous in 11.9%. The birth interval of less than 12 months was 12.3% and 23.7% for more than 24 months. Dao SZ [10] in his study found a frequency higher than ours (26.1%), the average age higher (29.5 years) with a minimum age of 18 compared to 14 in our study. Our results are much lower than those reported by Chrissy Bwazi and colleagues in Malawi, *i.e.* 75% usage [11]. Pauciparous and large multiparous women were more represented at the CSRef of Commune II with 42.5% and 19.3% respectively compared to 56.4% and 11.9% at the Timbuktu hospital. The intergenetic interval of less than 12 months of 35.4% was higher than that of our study, *i.e.* 12.3%. Antenatal visits, delivery services, and subsequent contact with the health system are promising avenues for reaching postpartum women with unmet need and desire to use family planning services [7]. The best time to do postpartum FP counseling is the prenatal period [1]. The importance of counseling during the prenatal period constitutes a major factor for the use of a contraceptive method in the postpartum [12]. In our study, counseling was done during the postnatal visit in 58.5%, in 20.5% during prenatal consultations, in the immediate postpartum in 19.8% and during the latency phase in 1.2% of cases. The preferred time for counseling at the Timbuktu hospital is the postnatal visit (58.5%) unlike the practice at the CSRef in Commune II [8] where the prenatal period (61%) is favored. Among the clients who received counseling during ANC, 81% confirmed and benefited from the contraceptive methods already chosen while 9% changed methods. In contrast to our practice, in Malawi, Chrissy Bwazi and colleagues reported that all women had benefited from counseling before postnatal care visits and 66% of them claimed to have received clear information on family planning [11]. Women who received counseling during the prenatal period tend to choose a contraceptive method postpartum [13]-[16]. Contraceptive methods must take into account the anatomical and physiological modifications of the postpartum [17]. The most chosen methods were implants (48.1%), injectable progestins (21.3%), the intrauterine device (14.7%), micro-progestin pills (13.5%), tubal ligation (1.4%) and condoms (1%). In the Dao SZ study [10], the choice of methods is similar for implants (47.1%) and micro-progestin pills (12.5%), plus intrauterine device (29.6%) and condoms (3.2%), less for injectable progestins (8%). Among intrauterine devices, these were interval IUDs. In a study on the insertion of the IUD in the postpartum period in commune II of Bamako [8], it was a postplacental IUD in 43.2%, immediate postpartum in 21.6%, per or trans-caesarean section in 32.6% and interval in 2.6%. We found a statistically

significant relationship between age and the type of contraception chosen ( $\text{Chi}^2 = 78.992, P = 0.000$ ). Clients under 20 years of age had chosen in priority implants (60%) followed by injectable progestins (20%) and microprogestogen pills (12%). The choice of clients aged 20 to 29 was implants (52.4%) followed by injectables (21.1%) and microprogestins (15.4%); while clients aged 30 to 39 chose implants (40.4%) followed by injectable progestins (24.3%) and the IUD (21.3%); for those aged 40 and over it was the IUD (55.2%) followed by injectables and tubal ligation at 18.3%. The similar study in commune II [10] reports that the most used methods varied in the orders of choice and proportions. Thus, clients aged between 20 and 29 years old chose implants (23.9%) followed by injectables (14.6%) and condoms (6.7%) while for clients aged between 30 and 39 years old, it was These included the IUD (38.4%), implants (25.6%), injectable progestins (12.5%) and pills (8.4%). In Munery J's study [18], more than half of the clients chose microprogestogen pills. Monitoring clients after administration of a contraceptive method is important because it allows side effects and complications to be detected and managed. In our study, follow-up after administration of the method was regular in 51.1% of cases and 25.6% had no follow-up compared to 73.2% with regular follow-up depending on the method and 7.5%, having done no follow-up according to Dao SZ [10]. Yogesperan K [19] reported 47% irregular follow-up in his study. We noted two cases of pregnancy in clients who had received an IUD but who had not carried out any post-insertion follow-up. The IUD was expelled in one client but was present in the other. The results showed inadequacies in the application of family planning service procedures in Mali; especially counseling that is done at late times. The corrective actions will consist of training and monitoring the maternity staff of the Timbuktu hospital in Mali's Reproductive Health Policy, Standards and Procedures.

## 5. Conclusion

Postpartum family planning helps reduce unmet need. The overall utilization rate of 17.08% requires improvement, particularly through systematic counseling during prenatal care. To this end, it is essential to improve the skills of staff in Family Planning to contribute to increasing contraceptive prevalence in Timbuktu.

## 6. Limitations of the Study

Our study is a practical evaluation of postpartum family planning practice in a hospital setting. The results are not representative at the scale of the population of the Timbuktu region or Mali. It must be supplemented by other studies on women's knowledge and attitudes towards family planning.

## Conflicts of Interest

The authors declare that there is no conflict of interest in this work.

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