



## Original Article

## Evaluation of the Offer of Family Planning Services in a Rural Area of The Bamboutos Division in the West Region of Cameroon: A Cross Sectional Study

### *Évaluation de l'offre des services de planning familial dans une zone rurale du Département des Bamboutos au Cameroun*

Félix Essiben<sup>1</sup>, Pierre Marie Tebeu<sup>2</sup>, Arielle Lando<sup>3</sup>, Charlotte Tchente Nguetack<sup>4</sup>, Rostand Njiki Dounou<sup>5</sup>, Robinson Enow Mbu<sup>6</sup>

## ABSTRACT

1. Faculty of Medicine and Biomedical Sciences, UYICentral Maternity- Yaoundé Central Hospital
2. Department of Obstetrics and Gynecology, The University of Yaounde I
3. Regional health Delegation, Limbe, South West, Cameroon
4. General Hospital, Douala
5. United Nations Population Fund (UNFPA), Country Office, Republic of Tchad
6. Central Maternity, Yaoundé Central Hospital, Yaounde

**Auteur Correspondant:**  
Dr Félix ESSIBEN. Email : [essibenx@yahoo.com](mailto:essibenx@yahoo.com)

**Keys words:** family planning, contraception, Bamboutos, Cameroon

**Mots clés:** planning familial, contraception, Bamboutos, Cameroun

**Abbreviations**

UNFPA: United Nations Population Fund  
FP: Family Planning  
WHO: World Health Organization  
SFR: Synthetic Fertility Rate  
DHS: Demographic and Health Survey  
IUD: Intra Uterine Device

Received: 14 October 2017  
Accepted: 3 December 2017

**Background and aim.** The rate of utilization of contraceptive methods in Cameroon is low. The western region has a high fecundicity index and among the women in union using any contraception (30.2%), only 32.5% of them are using a modern method. This study aimed at improving the offer of family planning (FP) services by identifying factors limiting its expansion. **Methods.** We conducted a descriptive cross-sectional study from 1st January to 31<sup>st</sup> December 2011 in the Bamboutous health district of the West region of Cameroon. We included exhaustively public and private health institutions. The characteristics of health institutions, providers and various FP services offered were obtained from registers and interview of health care providers. Data was analyzed using Epi info software version 3.5.1. **Results.** Of the 68 health facilities in the Bamboutous health district, 25 (36.8%) offered FP services. Among them, 18 were public (72%), 21(84%) had been existing for over 5-years period and the service offer was integrated (88%). There was often no pipe-borne water (72%). Eighteen of 25 FP institutions had no personnel who had ever received any formal training in FP (72%). Unmet contraceptive need was estimated at 34.7%. The different contraceptive methods received by women were more often injectables (37.3%) and implants (12.6%). Male condom represents 30.8%. **Conclusion.** The health services in the Bamboutous division are poorly furnished with FP activities in spite of met-needs of 65.3%. Improving on the service offer for FP as well as the training of health care providers is highly recommended.

## RÉSUMÉ

**Introduction.** La planification familiale permet d'améliorer le bien-être des populations à travers le contrôle des naissances. Nous avons évalué l'offre de services de planning familial en zone rurale où les taux de fécondité sont les plus élevés. **Méthodologie.** Nous avons réalisé une étude transversale rétrospective sur une période allant du 1<sup>er</sup> janvier au 31 Décembre 2011 dans les districts de santé des Bamboutos à l'ouest du Cameroun. Nous avons inclus de façon exhaustive les formations sanitaires publiques et privées dispensant des services de planning familial. Les caractéristiques des formations sanitaires, des prestataires de soins et les offres de services de planning familial ont été colligés à partir des registres et de l'interview des prestataires de soins. Les logiciels Epi info version 6 et SPSS version 16 ont été utilisés pour analyser les résultats. **Résultats.** Des 68 formations sanitaires des Bamboutos, 25 (36,8%) disposaient d'un service de PF. La plupart des services étaient dans les structures publiques (72%), existaient depuis moins de 5 ans (84%), étaient des services intégrés (88%), n'avaient pas de l'eau courante (72%). 68% du personnel de PF n'avaient reçu aucune formation en PF. Les besoins non couverts en contraception moderne étaient de 34,7%. Les méthodes contraceptives féminines étaient injectables dans 37,3 % des cas et des implants dans 12,6% des cas. La prévalence contraceptive des préservatifs masculins était de 30,8%. **Conclusion.** L'offre de contraception dans les Bamboutos n'est pas satisfaisante. La prévalence contraceptive est faible du fait de l'insuffisance en équipements et en personnel formé en PF.

## INTRODUCTION

Family planning (FP) is a concept that includes contraception, sterilization and the management of the infertile couple. It refers to all the means which contribute to avoid transiently and reversibly (contraception) or permanently (sterilization) pregnancy and the treatment of couple infertility, including that of possible etiologies.[1]

Family planning constitute with focalized prenatal care, assisted delivery, and emergency obstetric care, the four pillars for reducing maternal and infant mortality rates as proposed by World Health Organization (WHO) in 1987.[2, 3]

Several studies have demonstrated that family planning, particularly modern methods of contraception plays a role in the reduction of maternal and neonatal mortality since they reduce the incidence of unwanted pregnancies and high risk deliveries [4, 5, 6].

Maternal mortality remains a major problem in Cameroon. In 2011, the maternal mortality rate was 782 per 100,000 births, [7 ] somewhat higher than the 2004 rate which was 669 per 100,000 births [8 ]. Meanwhile, the rate of contraceptive use decreased from 26% in 2004 to 24% in 2011 with a modern contraceptive prevalence of only 14%.[7 ] .

In 1995, sub-saharan Africa had the lowest potential demand for contraception and the lowest prevalence of contraceptive use in spite of inconsistent data between countries and regions. [9, 10] This does not seem to have improved in time. In 2010, Maiga et al [10] and Utoo et al [11] reported a prevalence of 15.4% and 44% in Burkina Faso and central Nigeria, respectively. The prevalence of contraceptive use has improved with family planning outreach programs [6]

In Cameroon, the crude birth rate in 2011 was estimated at 38.1 %, with 41.3 % in rural areas and 34.6 % in urban areas.[12 ] Synthetic Fertility Rate (SFR) for women of 15 to 49 years was on average 5.1 children per woman, with 6.4 in rural areas and 4.0 in urban areas in 2011.[7] The western region of Cameroon has a SFR of 6.0, higher than the national average. According to Demographic and Health Survey (DHS) 2011, at the national level 26.1% of women in union wanted no more children. In the western region of Cameroon, 30.2% of women in union are using any contraception method, yet only 32.5% of them used a modern contraceptive method. [7]

Nevertheless the unmet need for family planning is considerable. Ajong et al [13] in 2016 describe a prevalence of unmet need for family planning at 20.4% in Yaoundé, the capital of the country. In the region where the study was conducted, Nansseu et al [14] found lack of knowledge to be a limiting factor in the use of modern contraception, and almost one half of all women not on any form of contraception expressed a desire for use thereof with appropriate information on the subject. This study aimed at improving offer of family planning services in the

Bamboutos health district, through the identification of limitations to its expansion.

## MATERIAL AND METHODS

This was a cross-sectional descriptive study with both retrospective and prospective components. It covered a period of one year from 1<sup>st</sup> January to 31<sup>st</sup> December 2011. It was carried out in the Bamboutos division, West region of Cameroon in the Batcham, Mbouda, and Galim health districts.

After obtaining the approval of the National Ethics Committee and permission from the divisional health authorities, we targeted all health facilities in the division, and included comprehensively all public and private health facilities which had a family planning service. We excluded from the study all health facilities which did not record statistic data on FP. The information on the characteristics of health facilities, health care providers and the family planning services offered were collected from registers and the interview of caregivers. Variables studied were: number and type of health facilities housing a FP service, presence of pipe-borne water, type of FP services, years in existence of the FP service, quality and qualifications of FP service providers, duration, type and seniority of the FP training and different contraceptive methods offered in the FP services.

The information was collected using a pre-designed questionnaire. The Epi Info version 3.5.1 software was used to analyze the results. Frequencies of qualitative variables were calculated. We estimated the contraceptive need by using the population of three districts which stood at 350.000 inhabitants with about a half represented by women, with women of childbearing age representing 49.7% of the female population.

## RESULTS

All The 03 health districts of the Bamboutos division had some health facilities which offered FP services. Among all the 68 health facilities of the department, 25 (36.8%) had a FP Service (Table 1).

Table 1: Distribution of health facilities housing a FP service in the Bamboutos division. 2011

Variables	Batcham N=23	Galim N=9	Mbouda N=36	Total N=68
FP Service	9	9	7	25
No FP Service	14	0	29	43
<i>FP : family planning</i>				

Of the 25 health facilities offering family planning services, 18/25 (72%) were state owned. Running water was present in 7 of 25 health facilities (28%); 21/25 (84%) had been operational for at least 5 years and 22/25 (88%) had a holistic approach integrating FP with other related services (Table 2).

Table 2: Characteristics of health facilities in health districts. 2011

Variables	Health facilities N=25	
	n	%
<b>Category</b>		
Public facility	18	72
Secular private health facility	3	12
Religious private health facility	4	16
<b>Presence of pipe-borne water</b>		
Yes	7	28
No	18	72
<b>Type of FP service</b>		
Integrated service	22	88
Specialized service	3	12
<b>Duration of existence of the FP service (years)</b>		
< 5	4	16
≥ 5	21	84

FP : family planning

These FP services used 25 health personnel, amongst which, 19 (76%) were state registered nurses (SRN), 17 (68%) had received no specific training in FP. For 8/25 (32%) health personnel which were trained, the training did not exceeded 35 days and this training was at least 10 years ago for 7/8 (87.5%) providers (Table 3).

Table 3: Distribution of the quality of service provided in the different health institutions

Variables	Health Institution (N=25)	
	n	%
<b>Quality FP services providers</b>		
Medical doctor	1	4
Midwife	2	8
SRN	19	76
Nurse midwife	2	8
Brevet� Nurse midwife	1	4
Nursing Aid	1	4
<b>Qualification of FP services providers</b>		
Provider who received comprehensive training in FP	6	24
Provider who received training in just one FP method	2	8
Untrained provider	17	68
<b>Duration of the training received in FP</b>		
<b>Duration of overall training</b>		
14 days	2	25
28 days	3	37.5
35 days	1	12.5
<b>Duration of specific training</b>		
14 days	1	12.5
28 days	1	12.5
<b>When last trained (years)</b>		
< 10	1	4
≥10	6	24
No training	18	72

FP : family planning

Among all 7 modern FP methods offered, hormone based injectables were the most offered method (533/4700; 37.3%), followed by the male condom (440/4700; 30.8%), Implants (180 / 4700; 12.6%), pills (177/4700; 12.4%), Intra Uterine Device (IUD) (46/4700; 3.2%) and the female condom (31/4700; 2.2%) (Table 4).

Table 4: Quality Distribution of the care offered according to the health districts in Bamboutos. 2011.

Variables	Batcham	Galim	Mbouda	Total
	N= 1234 n(%)	N= 1340 n (%)	N= 2126 n (%)	N= 4700 n (%)
<b>Consultants who received 1<sup>st</sup> FP care according to category of healthcare facility</b>				
Public facility	322 (26.1)	284 (21.2)	270 (12.7)	876 (18.6)
Secular PHF	0 (0)	58 (4.3)	522 (24.6)	580 (12.3)
Religious PHF	132 (10.7)	0 (0)	41 (1.9)	173 (3.7)
<b>Different contraceptive methods offered</b>				
Pills	13 (5.1)	11 (3.2)	153 (18.4)	177 (12.4)
IUD	0 (0)	0 (0)	46 (5.5)	46 (3.2)
Norplant	14 (5.5)	6 (1.7)	160 (19.2)	180 (12.6)
Injectables	26 (10.2)	130 (38.0)	377 (45.3)	533 (37.3)
Tubal ligation	5 (2.0)	0 (0)	17 (2.0)	22 (1.5)
Male condom	196 (77.1)	178 (52.0)	66 (8.0)	440 (30.8)
Female condom	0 (0)	17 (5.0)	14 (1.7)	31 (2.2)

Table 4 (continued): Quality Distribution of the care offered according to the health districts in Bamboutos. 2011.

Variables	Batcham N= 1234 n(%)	Galim N= 1340 n(%)	Mbouda N= 2126 n(%)	Total N= 4700 n(%)
<b>Contraceptive prevalence of different methods</b>				
Pills	24 (1.9)	25 (1.9)	343 (16.1)	392 (8.3)
IUD	0 (0)	0 (0)	56 (2.6)	56 (1.2)
Norplant	20 (1.6)	15 (1.1)	312 (14.8)	342 (7.3)
Injectables	95 (7.7)	300 (22.4)	896 (42.2)	1291 (27.5)
Tubal ligation	5 (0.4)	0 (0)	20 (0.9)	25 (0.5)
Male condom	1090 (88.3)	975 (72.8)	78 (3.7)	2143 (45.6)
Female condom	0 (0)	25 (1.9)	30 (1.4)	55 (1.2)

PHF : private health facility. IUD: intrauterine device

The contraceptive prevalence of the male condom was the highest (2143/4700; 45.6%) followed by injectables (1291/4700; 27.5%), pills (392/4700; 8.3%), the Norplant (342/4700; 7.3%), IUD (56/4700; 1.2%), the female condom (55/4700; 1.2%) and tubal ligation (25/4700; 0.5%) (Table 4). The unmet need in the Bamboutos division was 34.7% (1429/4115) (figure 1)

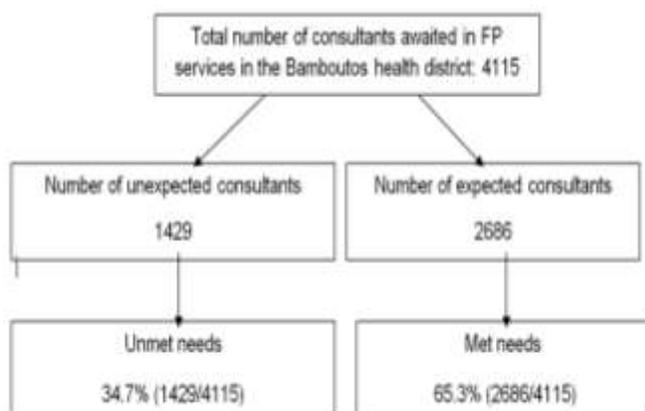


Figure 1: Met and unmet needs of modern contraception in the Bamboutos. 2011

## DISCUSSION

Access to FP services increases the contraceptive prevalence in a given population. Primary care in FP should be provided to all women of childbearing age who come in contact with reproductive health service to improve contraceptive prevalence. In the western region, 94% of births take place in health institutions.[7 ] But few health care facilities (36.8%) had a FP Service, unevenly distributed in the Bamboutos division. This could limit access to information and the adoption of contraceptive methods illustrated by the high rate of unmet modern contraception needs. The remoteness of FP services and the hardness of daily life are limiting factors in access to care.[9, 15, 16 ]

Public health institutions provide for most of the FP services, similar findings were made by Vishnu et al [17] in a rural area of India. This can be explained by the fact that health facilities in rural areas are often state owned. Additionally, contraception being a low income-generating service, secular health institutions see no financial interest in it. Low purchasing power is a barrier to access to contraceptive methods.[15 ]

Most FP services were integrated to meet up with the shortage in the number and quality of staff. We found only one doctor for the 25 health facilities which had a FP service. Most women in Bamboutos had consulted for FP in an integrated service for the integration of FP services improves on the offer for FP services.[16 ]

The first FP care was given by unqualified personnel, who had received no training in FP. Most services had a single provider which was often a State Registered Nurse. No provider had undergone more than a month of training and those who had been trained, received training at least 10 years ago with no refresher course. The lack of information for clients and the quality of training of health care providers limits access to FP.[15 ] Most of women receive their family planning information in the hospital, from the health personnel [ 11, 18 ]

In general, contraceptive prevalence in Africa in 2011 ranged between 2.8 and 75.8% [19], rural areas were poorly served.[16, 20 - 22] The overall modern contraceptive prevalence in the Bamboutos division was 5.5%. It was lower than the overall prevalence of the western region (16.4%) and even lower than the national prevalence of 14.4%.[7 ] Between 2004 and 2011, contraceptive prevalence in the western region did not change.[7, 8 ] The country went through a period of economic crisis during which very little investment in infrastructure and personnel was made in the health sector. The fact that public health facilities are the major source of contraceptive services in rural areas [17], the low number of health facilities providing FP service and lack of staff training and supplies could explain the low contraceptive prevalence.

Male condoms and injectable contraceptives are the most used methods in the Bamboutos because their immediate cost is low, accessibility is great and their application is easy. Similar findings were made by other authors in the same region [14] But when their use of short lasting contraceptive methods is prolonged, their failure rate become higher. This is because the cost increase higher and may secondarily be inaccessible,[3] compared to long-lasting methods.

The prevalence of male condoms was higher in Bamboutos but it was lower than the prevalence in the rest of the region and in rural areas in general.[7 ]

The prevalence of IUD and tubal sterilization was very low. Their overall prevalence was declining in the western region.[7 , 8 ] The reason for this could be the lack of trained personnel in FP and inconsistent availability of inputs.

## CONCLUSION

The contraceptive offer does not meet the needs of the population in Bamboutos division. Contraceptive prevalence is low in Bamboutos because of the low offer of FP services, the inadequate equipment of existing health structures, the poor quality of FP providers despite the availability of all FP methods.

## DECLARATIONS

### Ethics approval and consent to participate

This study was approved by National Ethics Committee and permission from the divisional health authorities

### Consent for publication

Not applicable

### Availability of data and material

All data generated or analyzed during this study are included in this published article

### Competing interests

The authors declare that they have no competing interests

### Funding

This study received no grants from any funding agency be it public, commercial, or non-profit organizations.

### Authors' contributions

TPM conceived and designed of the study. AL collected the data. EF and TNC have been involved in analysis and interpretation of data and drafting of the manuscript. NDR review of the article. MRE supervised the study. All authors have read and approved the final manuscript.

### Acknowledgements

The authors wish to acknowledge the authorities of the authorities of Mbouda District Hospital, Galim District Hospital and Batcham District Hospital as well as the staff of the services who allowed us to carry out the study.

## REFERENCES

1. World Health Organization. Family planning / Contraception. Available at : <http://www.who.int/mediacentre/factsheets/fs351/en/>
2. Mother-Baby Package: Implementing safe motherhood in countries 1997. Available at : [http://www.who.int/maternal\\_child\\_adolescent/documents/who\\_dhe\\_msm\\_9411/en/](http://www.who.int/maternal_child_adolescent/documents/who_dhe_msm_9411/en/)
3. World Health Organization. Maternal mortality. Available at <http://www.who.int/mediacentre/factsheets/fs348/en/>
4. Stover J, Ross J. How increased contraceptive use has reduced maternal mortality. *Matern Child Health J.* 2010 Sep;14(5):687-95. doi: 10.1007/s10995-009-0505-y. Epub 2009 Jul 31.
5. Sutherland EG, Otterness C, Janowitz B. What happens to contraceptive use after injectables are introduced? An analysis of 13 countries. *Int Perspect Sex Reprod Health* 2011; 37(4):202-8.
6. Brown W, Ahmed S, Roche N, Sonneveldt E, Darmstadt GL. Impact of family planning programs in reducing high-risk births due to younger and older maternal age, short birth intervals, and high parity. *Semin Perinatol.* 2015 Aug;39(5):338-44. doi: 10.1053/j.semperi.2015.06.006. Epub 2015 Jul 10.
7. National Institute of Statistics. Demographic and Health Survey and Multiple Indicators (DHS-MICS) 2011; final report 2012. Available at : [http://www.cnls.cm/docs/Rapport\\_EDS\\_2011\\_au\\_Cameroun.pdf](http://www.cnls.cm/docs/Rapport_EDS_2011_au_Cameroun.pdf) [French].
8. National Institute of Statistics. Demographic and Health Survey (DHS), 2004. Available at: <http://dhsprogram.com/publications/publication-FR163-DHS-Final-Reports.cfm> [French]
9. Bongaarts J, Bruce J. The causes of unmet need for contraception and the social content of services. *Stud Fam Plann.* 1995 Mar-Apr;26(2):57-75.
10. Maïga A, Hounton S, Amouzou A, Akinyemi A, Shiferaw S, Baya B, Barros AJ, Walker N, Friedman H. Trends and patterns of modern contraceptive use and relationships with high-risk births and child mortality in Burkina Faso. *Glob Health Action.* 2015 Nov 9;8: 29736. doi: 10.3402/gha.v8.29736. eCollection 2015.
11. Utoo BT, Mutahir TJ, Utoo PM. Knowledge, attitude and practice of family planning methods among women attending antenatal clinic in Jos, North-central Nigeria. *Niger J Med.* 2010 Apr-Jun; 19(2):214-8.
12. Socio-demographic statistics 2015. Available at : <http://www.statistiques-mondiales.com/cameroun.htm> [French]

13. Ajong AB, Njotang PN, Yakum MN, Essi MJ, Essiben F, Eko FE, Kenfack B, Mbu ER. Determinants of unmet need for family planning among women in Urban Cameroon: a cross sectional survey in the Biyem-Assi Health District, Yaoundé. *BMC Womens Health*. 2016 Jan 20; 16:4. doi: 10.1186/s12905-016-0283-9.
14. Nansseu JR, Nchinda EC, Katte JC, Nchagnouot FM, Nguetsa GD. Assessing the knowledge, attitude and practice of family planning among women living in the Mbouda health district, Cameroon. *Reprod Health*. 2015 Oct 9;12:92. doi: 10.1186/s12978-015-0085-9.
15. Decker M, Constantine NA. Factors associated with contraceptive use in Angola. *Afr J Reprod Health* 2011;15(4):68-77.
16. Mekonnen W, Worku A. Determinants of low family planning use and high unmet need in Butajira District, South Central Ethiopia. *Reprod Health* 2011;8:37. doi: 10.1186/1742-4755-8-37.
17. Vishnu Prasad R, Venkatachalam J, Singh Z. Unmet Needs of Family Planning Among Women: A Cross-Sectional Study in a Rural Area of Kanchipuram District, Tamil Nadu, South India. *J Obstet Gynaecol India*. 2016 Oct; 66(1):488-93. doi: 10.1007/s13224-016-0854-6. Epub 2016 Mar 22.
18. Ajong AB, Njotang PN, Kenfack B, Yakum MN, Mbu ER. Knowledge of women in family planning and future desire to use contraception: a cross sectional survey in Urban Cameroon. *BMC Res Notes*. 2016 Jul 18;9:347. doi: 10.1186/s13104-016-2155-7.
19. World Health Organization. World health Statistics 2011. Pp 31-38. Available at: [http://www.who.int/whosis/whostat/EN\\_WHS2011\\_Full.pdf](http://www.who.int/whosis/whostat/EN_WHS2011_Full.pdf) [french]
20. Townsend JW, Sitruk-Ware R, Williams K, et al. New strategies for providing hormonal contraception in developing countries. *Contraception* 2011;83(5):405-9.
21. National Agency of the Statistics and the demography of Senegal. Demographic and Health Survey and Multiple Indicators of Senegal. Available at : <https://dhsprogram.com/pubs/pdf/FR258/FR258.pdf> [french]
22. World Health Organization. Evaluation of family planning activities led in health services. Geneva: WHO; 1975. Available at: [http://apps.who.int/iris/bitstream/10665/38760/1/WHO\\_TRS\\_569\\_fre.pdf](http://apps.who.int/iris/bitstream/10665/38760/1/WHO_TRS_569_fre.pdf) [french]