

Accessibility to primary health care services in the Buea municipality, Cameroon: Stakes and challenges for an emerging society

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Abstract

Primary health care is essential for promoting healthcare, preventing diseases, and reducing disparities in healthcare services. Buea, the capital city of the Southwest Region of Cameroon, faces significant challenges in accessing quality primary health care (PHC) despite government efforts and the 1974 Decentralization Law aimed at promoting equitable healthcare in the municipality. This research poses a question: «how far does accessibility to PHC influence the health of the local population of the Buea municipality? ». The objective is to investigate the extent to which accessibility to PHC impacts the health of the local population. The hypothesis states that the population of Buea municipality faces significant challenges in accessing PHC. Employing a mixed-methods approach, data were collected through structured questionnaires, and interview guides from some 105 respondents in 07 health areas. Quantitative data were analyzed using descriptive and inferential statistics, while qualitative data underwent thematic analysis. The findings, presented using tables, graphs, and pie charts created with Excel software 22 version, revealed significant disparities of about 80% in healthcare infrastructure, personnel shortages, financial constraints, and long travel distances that limit healthcare utilization and adversely affect health outcomes of the residents. The study recommends expanding healthcare infrastructure, improving transportation, enhancing human resource capacity, implementing financial support mechanisms, and strengthening local governance to address these barriers.

Keywords: primary healthcare, accessibility, local development, health effects

Résumé

Les soins de santé primaires sont essentiels pour promouvoir la santé, prévenir les maladies et réduire les inégalités d'accès aux services de santé. Buea, capitale de la région du Sud-Ouest du Cameroun, est confrontée à d'importantes difficultés d'accès à des soins de santé primaires de qualité, malgré les efforts du gouvernement et la loi sur la décentralisation de 1974 visant à promouvoir l'équité en matière de soins de santé. Cette recherche pose la question suivante : « Dans quelle mesure l'accès aux soins de santé primaires influence-t-il la santé de la population locale ? ». L'objectif est d'analyser l'impact de l'accès aux soins de santé primaires sur la santé de cette



population. L'hypothèse stipule que la population de la municipalité de Buea rencontre des difficultés importantes pour accéder aux soins de santé primaires. Une approche mixte a été utilisée pour la collecte de données auprès de 105 ménages répartis dans 7 aires de santé, au moyen de questionnaires structurés et de guides d'entretien. Les données quantitatives ont été analysées par des statistiques descriptives et inférentielles, tandis que les données qualitatives ont fait l'objet d'une analyse thématique. Les résultats, présentés sous forme de tableaux, de graphiques et de diagrammes créés avec le logiciel Excel version 22, ont révélé d'importantes disparités (environ 80 %) en matière d'infrastructures de santé, le manque de personnel, de contraintes financières et d'allongement des distances à parcourir, autant de facteurs qui limitent l'accès aux soins et ont un impact négatif sur la santé des habitants. L'étude recommande de développer les infrastructures de santé, d'améliorer les voies d'accès, de renforcer les capacités en ressources humaines, de mettre en œuvre des mécanismes de soutien financier et de consolider la gouvernance locale pour surmonter ces obstacles.

Mots clés : soins de santé primaires, accessibilité, développement local, effets sur la santé

Introduction

Access to primary health care is crucial worldwide for promoting health equity, preventing diseases, managing chronic conditions, and improving individual health outcomes. Primary healthcare services simply refer to the first level of contact between a patient and the healthcare system from which essential health services such as preventive care, curative care, promotive care and rehabilitative care are provided. In the 1950s and 1960s, Community-based health care initiatives focused on preventive care and community involvement, forming the foundation for modern primary health care. A significant turning point occurred with the Alma-Ata Declaration in 1978 (WHO 1978), which emphasized that "Health is a Human Right" and advocated for Universal Health Coverage (UHC) urging global prioritization of primary health care. That same year, the WHO launched the Health for All (HFA) Initiative to achieve universal essential health care by the year 2000. The Millennium Development Goals (MDGs) in the year 2000 built on these efforts, setting health targets like reducing child mortality and improving maternal health.

Globally, access to PHC differs greatly. People in high-income countries generally have better access to comprehensive PHC services, while those in low-income countries encounter significant barriers such as limited healthcare infrastructure and staff shortages. The COVID-19 pandemic worsened these inequalities worldwide by reducing the utilization of PHC services, especially in low and middle-income countries, as many avoided hospital-based care out of fear of infection or due to restrictions (Ejuande *et al.*, 2023).

In Africa, PHC was initially implemented through a series of vertical programs, which focused on specific diseases such as malaria, tuberculosis, and HIV/AIDS. In addition, many African countries face significant challenges in providing universal access to PHC. According to the World health statistics conducted by the WHO 2023, indicate that about 60% of the population of Sub-Saharan Africa face several challenges in access to essential healthcare services. The African Unions "Agenda 2063" emphasizes the need for improve health infrastructure in rural areas to ensure equitable access to healthcare (African Union, 2021)

Cameroon's health sector transitioned from the 2001-2015 Health Sector Strategy to a new 2016-2027 strategy aligned with the Growth and Employment Strategy Paper (GESP) and Sustainable Development Goals (SDGs). This strategy focuses on enhancing healthcare accessibility, quality, and innovation to support Cameroon's goal of becoming an emerging economy by 2035. Also, the 1974 Decentralization Law to improve the provision of basic facilities as well as the provision of primary healthcare services to various municipalities within the national territory was a great initiative by the government.

Paradoxically, a strategic town like Buea in the South West Region, which has once been the Capital of German Kamerun in 1901, still faces remarkable deficiency in the provision of PHC facilities. In fact, according to the Ministry of public health (MINSNTE) 2004, about 40% of the population do not have access to quality health care while close to 60% have financial difficulties to afford basic healthcare services. Moreover, the few PHC present within the Buea municipality are largely unevenly distributed. The new layouts and more than $\frac{3}{4}$ of the villages experience barriers including inadequate infrastructure, financial constraints, and a shortage of qualified health personnel (Amoako *et al.*, 2021). The inadequate number of healthcare professionals serving these communities also contributes to the challenges faced in delivering quality primary health care services leading to deteriorating health of the local population (Nkeng *et al.*, 2018). This paper will therefore investigate and explain the challenges to access PHC services within the Buea Health District, as well as proposing solutions.

1. RESEARCH METHODOLOGY

1.1 Location of the Study Area

The town of Buea, former capital of German Kamerun (1902-191) boasts landmarks like the Bismarck Fountain and German Burial Ground. Buea's blend of natural beauty and rich history makes it a captivating destination. The Buea municipality is located in Fako Division of the South West Region of Cameroon with a population of about 200,000 inhabitants (BUCREP 2005) and a current estimate of 500,000 inhabitants living in 67 villages. The main ethnic group is Bakweri, mostly occupying the villages while the urban spaces is cosmopolitan (Buea Communal Development Plan, 2012). Figure 1 depicts the study area with a left-side legend explaining symbols for easy navigation.

Figure 1 shows the administrative boundaries of the Buea municipality which is different from the territorial delimitation from the Ministry of Public Health (MINSANTE). MINSANTE establishes that the Buea Health District (BHD) shares boundaries with Mutengene to the south, Mount Cameroon to the west, and Ekona to the east. The BHD consists of 7 health areas which are; Bokwango, Bova, Buea Road, Buea Town, Molyko, Muea, and Tole. BHD covers a total surface area of 870 km². The BHD had an estimated population of 81,478 inhabitants (BUCREP 2010; Ettamba Agborndip *et al.*, 2020) and about 51,469 inhabitants in the Buea municipality as of September 2025.

1.2- Research Design

1.2.1. Descriptive Research Design

This study employed a descriptive research design to examine the accessibility to primary healthcare services in the Buea Municipality. It aimed to provide a clear overview of how easily residents can access essential healthcare, identify strengths and weaknesses in the current system, highlight barriers to care, and offer insights for improving healthcare accessibility and quality in these communities.

1.2.2. Quantitative Approach

We used a quantitative approach to gather in-depth information about the study area, specifically to collect numerical data on the accessibility to primary healthcare services in the Buea Municipality. Through questionnaires, interview guide and other data collection tools, specific data were gathered on various aspects of healthcare accessibility, such as distance to healthcare facilities, availability of healthcare services, and satisfaction with care received. Table 1 represents the population sample size per locality.

Sampling Techniques and Procedures

Sampling Procedure: A random sampling technique was adopted to select the sample population from the larger population. This approach enabled us to obtain a representative sample, ensuring that the findings would be generalizable to the broader population.

Sample Size and Distribution: The sample size was set at 105 participants selected from the 07 health zones in the Buea health district.

Rationale for Area Selection: The selection of the study area was based on the empirical observation of barriers to access PHC services. Beside, this study aimed to identify the specific challenges, community participation in Community Health and develop targeted recommendations to improve the accessibility of PHC services.

1.3. Source of Data Collection

Primary Data sources. Questionnaires were distributed across the study areas. A total of 105 questionnaires were administered to the populations of the 07 health areas which are: Bokwango, Bova, Buea Road, Buea Town, Molyko, Muea, and Tole. Also, interview guides were used to conduct interviews with the institutional and non-institutional stakeholders, including local authorities and healthcare providers, in various localities within the Buea municipality. Field Observation was conducted to see the current state of Primary Health Care services such as health centers and pharmacies in the study area. *In-situ* and indirect observations were used to gather data on the current state of health centers, the availability and location of the PHC.

Secondary Data Sources. They were gotten from preexisting sources like the archives of the Regional Delegation of Public Health for the South West Region, the Buea Urban Council, and Wikipedia research.

1.4. Data Analysis

Descriptive Analysis: This included descriptive statistics to summarize the data, inferential statistics to identify relationships and patterns, and thematic analysis to identify key themes and concepts.

Statistical Analysis. We performed statistical analysis to examine the data and identify significant relationships and trends. This involved the use of statistical software (Excel version 2022) to calculate frequencies, percentages, as well as to conduct inferential statistics such as chi-square tests.

Test of Hypothesis: To test the hypotheses, we used the chi-square test which is a statistical method of testing hypothesis. The significance level was set at 0.05; this helped in deciding between two options: rejecting the null hypothesis (H0) in favor of the alternative hypothesis (H1), or failing to reject H0, based on the observed data.

Data Presentation: Data were presented using tables and charts, providing a clear and concise visual representation of the findings. The presentation also showcased the current state of healthcare facilities, including the availability of services and basic infrastructure. Additionally, pictures captured from the field highlighted the challenges faced in the study area.

2- RESULTS OF STUDY

2.1. Socio-economic and Demographic profile

The socio-economic status and demographic profile of the respondents are important determinants in the outcome between accessibility to PHC services and population's health in the Buea health district (BHD). The level of education attained, gender, profession/monthly income, age group were the main components of socio-economic and demographic profile identified and discussed in the framework of this research. They play a dual function which may either improve the health of an individual or deteriorate it. Table 2 portrays the socio-economic and Demographic Profile of Respondents in the 07 health zones concerned.

Table 1 reveals a female dominant population of about 59.05% against 40.95% for the male population due to biological and behavioral factors as well as occupational factors. The presence of two X-chromosomes in women often serve as protection against certain diseases, unless in case where she is homozygous for a given deleterious allele. As seen by Emily J. Davis & al. 2020, women with Alzheimer's live longer than men with the disease. Moreover, by virtue of them having a second X chromosome, women get two "doses" of a protective protein from a gene that only exists on this female sex chromosome. The youths, especially the boys in the Buea municipality have of late engaged in smoking and drinking of liquor, wine and beer. Moreover, some young men have joined arm groups in the ongoing socioeconomic crisis plaguing the two English speaking regions of Cameroon. These of course account for the decrease in the number of men compare to the women within the field of study. Moreover, the women population is more educated than their men counterpart who mostly dropout from secondary and vocational studies. Dropout from school is recurrent in the technical education and professional training systems than in the general educational system. Findings revealed that the educated strata of the population have greater awareness of disease infection, takes precautions and implements diverse strategies to ameliorate their health situation than the less educated population who often ignores and minimizes health risk.

About 75% of the populations are stakeholders in the informer sector and about 45% of the active population earns a monthly salary which is less than one hundred thousand francs CFA. There is equally an increasing number of seasonal activities and irregular income earnings such as vendors of umbrella and other rainy-equipment. Peasant agriculturalists are not left out from this category of activities since they provide the food needed by the urbanites. Besides, low income per month resulting from unstable jobs like car washing account for the prevailing financial inaccessibility observed in the Buea municipality. Table 3 depicts some health centers in the Buea health District.

Table 3 presents some health centers found within the Buea health district. The Molyko Health zone is experiencing increasing number of healthcare facilities compared to the other six health zones. This situation is justified by the fact that Molyko harbors the bulk of the urban population who came in for educational and economic purposes. The dense population of Molyko increases the demand for primary health care services as follows:

- **preventive care** such as vaccinations and screening
- **curative care**; diagnosis and treatment of common illnesses

- **promotive care**; health education and counseling
- **rehabilitative care** such as physical therapy

The Muea and Buea road health zones are equally experiencing some dynamisms in the provision of PHC facilities while Bokwaongo, Bova and Tole health zones are almost stationary especially from 2016 when the socio-political crisis began in the two English speaking regions of Cameroon and the outbreak of Covid-19 in December 2019 in Cameroon. Most of activities in these health centers came to a standstill and only became effective in 2023.

This situation further explains the existing disparities in the provision of PHC observed in the Buea health district. It should however be noted that these health centers and health facilities are largely owned and controlled by private individuals who are profit oriented. So, the desire to gain more profit has eventually been their driver in terms of business location and the recruitment of medical personnel. The cluttering of the health centers is common in areas of dense population and business proprietors are willing to pay high rent at the centers.

2.2. Causes of inaccessibility to PHC services

2.2.1. Insufficient number of PHC infrastructures

The Cameroon ministry of public health made a distinction according to the status of a health infrastructure as public, private denominational, and private secular/profit) and by their category from 1 to 6. The first category is the Reference hospitals the second category is Central hospitals, the third category is the Regional and assimilated hospitals. The fourth category is the district and assimilated hospitals, fifth category is the Sub-Divisional Medical Center and assimilates and the last category is the Integrated and assimilated Health Center.

It is heart aching to know that the Headquarter of the South West region of Cameroon lacks the category 1 and 2 hospitals which are very crucial in this 21st century. Besides, the South West region is a gateway to migrant populations from Nigeria and Equatorial Guinea, a negative impression on the Cameroon's health sector and other sectors can arise just in their first contact.

Analyzing the health situation on a different angle, the first law of demand and supply depicts the health situation in Buea, owing to the ever increasing number of population of about 200,000 inhabitants (BUCREP 2005) to about 500,000 without corresponding increase in the number of PHC facilities. The presence of the University of Buea and other higher learning institutions, as well as enterprises have accounted for the inflow of population into the municipality. Since its creation in 1993 with approximately 768 students, the University of Buea now has an enrolment of over 33,000 students and over 1,600 staff. This has greatly contributed to the growing number of her population in recent years and leading to the creation of new layouts to accommodate the growing population and address urban development challenges. Some of the layouts are found in localities of Bokova, Bomaka, Bolifamba, Molyko and Upper Muea, with land being made available through a land surrender scheme by the Cameroon Development Corporation (CDC) (BCDP 2012). Howbeit, these new layouts just as many other localities in the Buea municipality are not fully benefiting from the government initiative to provide PHC facilities to the general population. As such, there are dotted health facilities within the BHD as presented in figure 2.

The BHD is considered as the leading HD within the South West Region in terms of health infrastructures, medical personnel and other administrative functions. Thus, other satellites HD are depending on the BHD for medical care. Howbeit, this later has only one referral hospital known as the Buea Regional Hospital

which is not sufficiently equipped to handle some specialize health cases and the technical bench is still dangling. Photo 1 depicts a PHC facility in the Buea Health District.

2.2.2. Distance

The geographical location of Medical Centers and pharmacies is a real constraint to access PHC services in the Buea municipality. A rising proportion of about 30% of the local population does not have easy access, they are compelled to cover approximately 2km to the nearest health center. Road network in the entire municipality is a real nightmare, the terrain is made of undulating high and low lands with many rocks and gravels due to volcanic eruptions. The jagged relief nature renders circulation of vehicles difficult and even the motorcycles transporting passengers from the hinterlands toward the heart of the town find it challenging. In some neighborhoods where vehicles and motorcycles cannot access, the parents and companions are obliged to track, ascend and descend hills. Thus, long distances and craggy terrain constitute a major obstacle to access PHC services.

2.2.3. Insufficient number of qualified medical personnel

The ongoing socio-political crisis plaguing the North West and South West regions of Cameroon make it challenging to medical personnel to live and work without fear of attacks or simply become victim of the crisis through a stray bullet (Meva'a Abomo D. Ejuande E.W. & Ndewe A.A. 2021). About 20% of the medical personnel reside out of the BHD against 5% who reside out of the South West regions.

Another major challenge is the lack of qualified health personnel, and according to the World Bank (2019), in sub-Saharan Africa, there are an average of 0.2 doctors per 1,000 inhabitants in rural areas, compared to a global average of 1.5. This lack of qualified personnel compromises the ability of health systems to meet the needs of the populations and ultimately prevent epidemics outbreaks.

2.2.4. Frequent rupture in essential drugs

The World Health Organization describes essential drugs as any substance or composition having curative and preventive properties of healing, relief and prevent illnesses. Essential drugs are expected to be in sufficient quantities with appropriate prescriptions and at affordable prices to the general public. In the South West region, the Cameroon Baptist Convention (CBC) located at Mutengene is authorized by the Ministerial Order N*0617/A/MINSANTE/SG/DPML/SDP/SA of March 2, 2017 for drug manufacturing while the MEDCDM Ltd, Ministerial Order 0917/A/MINSANTE/SG/DPML/SDP/SA of March 16, 2020 and PEDMIX Plc, Ministerial Order 0375/A/MINSANTE/SG/DPML/SDP/SA of March 1, 2022 are both authorized as drug distributing agencies. Though there is abundant of ministerial texts on drug manufacturing and distribution in Cameroon and in the South West region in particular, about 80% of government-own integrated health centers are always in constant rupture of essential drugs such as injectable Diclofenac 75mg/ml, Paracétamol solution 500mg/100ml, Dexaméthasone 20mg (anti-inflammatory), Diazéppam 5mg/ml antiepileptic (or injectable solution in case of intoxication), injectable antimalarial Artemether 80mg/ml, metronidazole 500mg (antiamibian), fluconazole 50mg/5ml (antifungal), magnesium sulphate 5g/10ml (antihypertension), male condoms, metformine 1000mg (antidiabetics) and vaccines like antituberculosis BCG.

The District hospital equally witnesses the issue of drug shortages which mostly result from administrative bottleneck, negligence to assume responsibility and lack of will to fully exercise duty. The private-own health centers and clinics also experience the same challenges though with lesser impacts; this is so because they are oriented toward profit-making while minimizing cost. Pharmacies, drug-stores and drug hawkers

are not left out from the issue of frequent rupture in essential drugs. Drug hawkers who often get supply from Nigeria are always on the frontline to satisfy the mass of the population with low cost drugs as they parade the streets and quarters.

Additionally, the cost of these drugs is expensive to the common man. A civil servant who earns a meager sum of 42,000 FCFA (Central African Franc) per month would find it difficult to provide adequate medical care from such a token. Moreover, the African custom is in favor of large family sizes, the underemployed depending on the working class thereby placing more burden on the few working class in the family. This usually leads to a vicious cycle of poverty.

2.3. Respondents Views on Access to Primary Health Care

Table 4.2 presents an analysis of respondents' perceptions regarding access to Primary Health Care (PHC) services. The key aspects examined include the level of availability, operating days, operating hours, nearness to PHC facilities, number of PHC facilities, and respondents rating of their overall health. These factors collectively provide insight into the accessibility and utilization of PHC services from the respondents' perspective as shown on table 4.

Photo 2 depicts a dire situation in Small Soppo Village, where an injured man faces significant barriers to accessing medical care due to the absence of roads and transportation. This scenario highlights the community's lack of healthcare infrastructure and mobility challenges, which likely contribute to limited utilization of healthcare facilities.

Community Participation

Table 4.4 examines community participation in health initiatives, focusing on awareness of community health services, participation in these services, frequency of community participation, and motivation for participating. By analyzing these factors, this table provides insight into the dynamics of community involvement in health initiatives, shedding light on the extent and nature of community engagement in promoting health and wellness as shown on table 5.

Test of Hypothesis in three selected localities (Bokwaongo, Bokwai and Small Soppo)

H1: Residents of Buea Municipality face significant barriers to primary health care services and it impacts their health outcome.

H0: Residents of Buea Municipality do not face significant barriers to primary health care services and it does not impact their health outcome. Table 6 presents Contingency while Table 7 presents Summary of all calculated chi-square.

Degree of freedom 2

P-value= 12.59

Chi square=016.93

Interpretation of Results

Since the calculated χ^2 (16.9) is greater than the critical value (12.59), we reject the null hypothesis (H0) and support the alternative hypothesis (H1) that residents of Buea Municipality face significant barriers to primary health care services and it impacts their health outcome.

3. DISCUSSION OF FINDINGS

3.1 Accessibility to PHC in the Buea Health District

In the Small Soppo village, the absence of local health facilities such as hospitals and pharmacies presents a major obstacle. Residents are compelled to travel long distances to the Buea Regional Hospital to access medical care. This significant travel burden confirms that distance is a critical barrier to timely and effective healthcare, supporting the hypothesis that residents face substantial barriers to PHC services. The lack of reliable transport infrastructure and the high cost of travel further exacerbate these difficulties, often resulting in delayed treatment or complete avoidance of health care.

In Bokwaongo village, while there is an Integrated Health Center providing some PHC services, residents face several barriers that limit effective access. These include the high cost of treatment, inadequate numbers of healthcare personnel, and insufficient health facilities to meet the community's needs. Importantly, some residents reported negative experiences with healthcare providers, citing instances of rudeness and unprofessional behavior by nurses, which discourages utilization of local services. Despite the proximity of the Integrated Health Center, many residents prefer to seek care at the more distant Buea Regional Hospital due to the limited services available locally, such as the absence of pharmacies.

In Bokwai village, the fieldwork identified a few PHC facilities, including small local pharmacies, although some operate without proper authorization, raising concerns about the quality and safety of medications provided. Additionally, there is a community PHC center that offers universal health coverage, which is a positive step toward improving access. However, the limited number and scale of these facilities suggest that many residents may still face challenges in obtaining comprehensive and reliable healthcare services.

3.2. Effects of PHC on Wellbeing of the Local Population

The study reveals that where PHC services are accessible, there is a positive impact on the health and wellbeing of the population. For instance, in Bokwaongo village, the Integrated Health Center provides a range of services including preventive care, emergency treatment, and routine health services. This availability contributes to improved health outcomes such as reduced incidence of preventable diseases and better maternal and child health indicators.

In Bokwai village, although some local pharmacies operate without proper authorization, they still offer essential services such as first aid and minor emergency treatment. In critical cases, residents often transport patients quickly to other PHC facilities within Buea Municipality, particularly the Buea Regional Hospital, which is better equipped to handle complex medical needs.

Conversely, in Small Soppo village, the lack of adequate PHC facilities and limited transportation options compel many residents to rely heavily on traditional herbal remedies for common ailments. During emergencies, residents must hire taxis or seek private vehicles to rush patients to the Buea Regional Hospital, which, despite being some distance away, remains the closest and most comprehensive healthcare provider. Figure 3 illustrates patient referral and Movement Flow from Bokwaongo, Bokwai, and Small Soppo Villages to Buea Regional Hospital.

Figure 3 illustrates the healthcare-seeking behavior of residents in the villages of Bokwaongo, Bokwai, and Small Soppo, highlighting the flow of patients to the Buea Regional Hospital. Due to limited accessibility and inadequate primary healthcare (PHC) facilities within their own communities such as the absence of fully equipped hospitals, pharmacies, or comprehensive clinics, many residents are compelled to travel to the Buea Regional Hospital for more complete medical care. The arrows depict the direction of patient

movement, underscoring the central role of the Buea Regional Hospital as the primary healthcare provider for these populations.

In Bokwaongo, approximately 60% of residents seek care at the Regional Hospital despite the presence of one integrated health center in the village. This is largely due to dissatisfaction with the quality and range of services offered at the local center, prompting many to travel for better care. Small Soppo experiences even higher patient movement, with around 80% of residents attending the Regional Hospital. This high volume is attributed to the village's lack of any PHC facilities and the relative proximity of the Regional Hospital, making it the most accessible option. The remaining 20% of Small Soppo residents utilize other nearby facilities such as Mount Mary Hospital and the Buea Town Health Center.

Conversely, in Bokwai, only about 30% of residents travel to the Regional Hospital, largely because of the greater distance from this area. Instead, 40% of the population access care at other nearby primary healthcare centers, while the remaining residents utilize the services available within their community.

This pattern of healthcare-seeking behavior highlights critical gaps in local PHC infrastructure across these villages and emphasizes the urgent need for strengthening healthcare accessibility and service quality at the community level to reduce the heavy reliance on the Regional Hospital.

3.3 Role of Community Participation in PHC Provision

Community participation is widely recognized as a vital component in enhancing the provision and utilization of primary health care (PHC) services. Active involvement of local residents in health committees, awareness campaigns, and support for community health workers can significantly improve service delivery, health education, and overall community health outcomes.

However, the findings from this study indicate limited community participation in the provision of PHC services in Bokwaongo, Bokwai, and Small Soppo villages. Many residents demonstrated a lack of awareness about the concept and importance of community participation in health initiatives. This limited engagement may be attributed to barriers such as insufficient health education, low levels of awareness, and challenges related to accessibility and communication.

4. RECOMMENDATION AND CONCLUSION

Establishing more local health facilities like pharmacies, clinics and hospitals in underserved areas such as the layouts, Small Soppo is essential to improve access to primary health care there by enhancing the equal distribution of Health Care in Buea. Local PHC reduce the need for long-distance travel, enabling early diagnosis and treatment, and providing vital preventive and emergency services. These facilities enhance community trust, promote health education, and lower healthcare costs by minimizing reliance on distant hospitals. Proper staffing, equipment, and integration with the wider health system are crucial to maximize their effectiveness and improve overall health outcomes in rural communities.

Moreover, improving road infrastructure and transport services reduces travel time and costs by enhancing road quality, traffic flow, and connectivity in Buea municipality. Key strategies include investing in maintenance, especially in Small Soppo and Bokwai villages, optimizing traffic in Molyko, adopting digital solutions like installing traffic light, and promoting multimodal transport like reintroducing motto bikes. These improvements lead to faster, safer travel, lower vehicle operating costs, increased better access to PHC in Buea.

Also, increasing government and NGO support for subsidized healthcare and community health programs focuses on providing affordable care to vulnerable populations. Governments fund programs through subsidies to local communities to enhance on community health services and targeted services for disadvantaged groups, while NGOs complement these efforts with additional funding and specialized community initiatives. Together, they improve healthcare access, especially in underserved and rural areas, by reducing costs and addressing specific local health needs.

Furthermore, enhancing community involvement ensures services effectively meet local needs by engaging residents in planning and decision-making, fostering partnerships, and maintaining responsive, and inclusive programs. This approach improves service relevance, equity, trust, and outcomes while empowering communities and promoting sustainability.

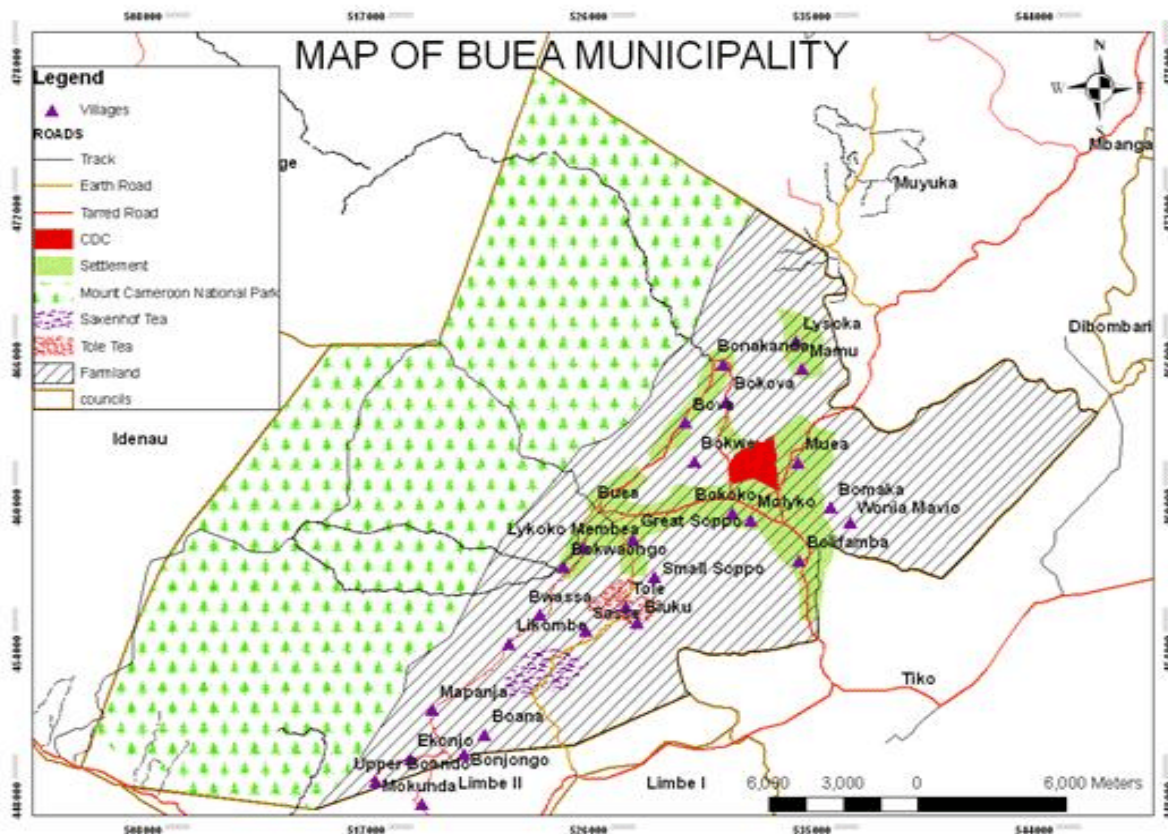


Figure 1. Location of the Buea Municipality

Source: GREMPCO 2012

Table 1: Target Population Sample size

Localities	Number of Questionnaires Administered	Percentage
Bokwango	15	14,29 %
Bova	15	14,29 %
Buea Road	15	14,29 %

Buea Town	15	14,29 %
Molyko	15	14,29 %
Muea	15	14,29 %
Tole	15	14,29 %
Total	105	~100%

Table 2: socio-economic and Demographic Profile of Respondents

Variables	Attributes	Frequency	Percentage
Gender	Male	43	40.95%
	Female	62	59.05%
	Total	105	100.00%
Monthly income	1-50000	13	12.38%
	51000-100000	39	37.14%
	101000-150000	27	25.71%
	151000-200000	17	16.19%
	+200000	9	8.57%
	Total	105	100.00%
Level of Education	Primary	30	28.57%
	Secondary	38	36.19%
	Higher	37	35.24%
	Total	105	100.00%

Source: Fieldwork 2025

Table 3: Identification of some health centers in the Buea health District

Nº	Health District	Code_District	Health zone	Code_Zone	Health Center
1.	Buea	1204	Bokwaongo	120401	CSI Bokwaongo CSI
2.	Buea	1204	Bokwaongo	120401	CSI Bwassa Likombe CSI
3.	Buea	1204	Bova	120402	Bokova CSI
4.	Buea	1204	Bova	120402	Bonakanda CSI
5.	Buea	1204	Bova	120402	Bova CSI
6.	Buea	1204	Buea Road	120403	Buea Road HD
7.	Buea	1204	Buea Road	120403	Great Soppo CSI
8.	Buea	1204	Buea Road	120403	Hope Outreach Foundation
9.	Buea	1204	Buea Road	120403	Military Hospital
10.	Buea	1204	Buea Road	120403	Mount Mary Hospital
11.	Buea	1204	Buea Road	120403	Police Health Centre Clerks



12.	Buea	1204	Buea Road	120403	Regional Hospital of Buea
13.	Buea	1204	Buea Road	120403	St Veonica Hospital
14.	Buea	1204	Buea Town	120404	Buea Town CSI
15.	Buea	1204	Molyko	120405	Bebetta Memorial Community
16.	Buea	1204	Molyko	120405	Health For All Foundation
17.	Buea	1204	Molyko	120405	International Community
18.	Buea	1204	Molyko	120405	Molyko CSI
19.	Buea	1204	Molyko	120405	Monica
20.	Buea	1204	Molyko	120405	New Generation Health Center
21.	Buea	1204	Molyko	120405	Solidarity Clinic
22.	Buea	1204	Molyko	120405	St Albert Médical Center
23.	Buea	1204	Molyko	120405	St Joan Of Arc Clinic
24.	Buea	1204	Molyko	120405	St Luke Hospital
25.	Buea	1204	Molyko	120405	St Monica University Health
26.	Buea	1204	Molyko	120405	Touch Of Faith Clinic
27.	Buea	1204	Molyko	120405	University Health Center
28.	Buea	1204	Molyko	120405	Ellomeh Group LLC
29.	Buea	1204	Molyko	120405	Access Care Health Center
30.	Buea	1204	Muea	120406	Good News Health Center
31.	Buea	1204	Muea	120406	Good Samaritan Health Centre
32.	Buea	1204	Muea	120406	Kahwa Clinic
33.	Buea	1204	Muea	120406	Keba Health Centre
34.	Buea	1204	Muea	120406	Life Span Nursing Home
35.	Buea	1204	Muea	120406	Living Hope Médical Cabinet
36.	Buea	1204	Muea	120406	Lysoka CSI
37.	Buea	1204	Muea	120406	Mile 16 CSI
38.	Buea	1204	Muea	120406	Muea CMA
39.	Buea	1204	Muea	120406	St Michael Health
40.	Buea	1204	Tole	120407	Cameroon Tea Estate Health
41.	Buea	1204	Tole	120407	Community Health Foundation
42.	Buea	1204	Tole	120407	Tole CSI
43.	Buea	1204	Tole	120407	Tole Clinic

Source: MINSANTE 2018, fieldwork 2025



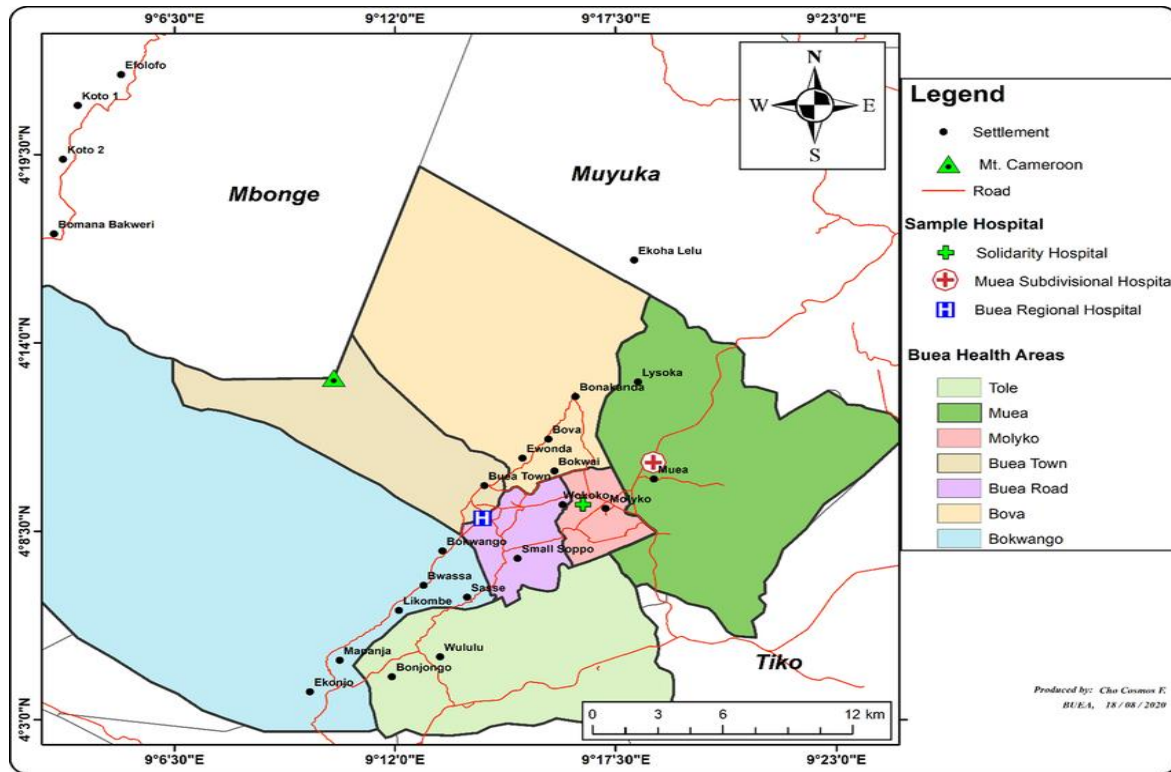


Figure 2: BHD portraying health areas and health facilities



Photo 1: Integrated Health Center Bokwaongo

Source: Fieldwork 2025

Table 4: Respondents view on Access to Primary Health Care

Variables	Attributes	Frequency	Percentage
Availability	Always available	30	28.30%
	Sometime available	50	37%
	Rarely available	15	19.60%

	Never available	10	15%
	Total	105	100.00%
Operating Days	Monday to Friday	43	40.95%
	Monday to Saturday	37	35.24%
	Monday to Sunday	20	19.05%
	Only on weekends	5	4.76%
	Total	105	100.00%
Operating hours	8 hours	5	4.76%
	12 hours	35	33.33%
	16 hours	45	42.86%
	24 hours	20	19.05%
	Total	105	100.00%
Nearness to PHC	<100 meters	5	4.76%
	100-300 meters	30	28.57%
	300-500 meters	25	23.81%
	>500 meters	45	42.86%
	Total	105	100.00%
Rating of Overall PHC facilities	Excellent	10	9.52%
	Good	30	28.57%
	Fair	45	42.86%
	Poor	20	19.05%
	Total	105	100.00%



Photo 2: Injured person man struggles to access medical care in Small Soppo village

Source: fieldwork 2025

Table 5: Respondents view on Community Participation

Variables	Attributes	Frequency	Percentage
Awareness of Community Health Services	Yes	60	57.14%
	No	45	42.86%
	Total	105	100.00%
Participation in Community Health Services	Yes	45	42.86%
	No	60	57.14%
	Total	105	100.00%
Frequency of Community Participation	Regularly	40	38.10%
	Rarely	35	33.33%
	Never	30	28.57%
	Total	105	100%
Motivation for Participating in Community-Based Health Initiatives	Global concern	30	28.57%
	Desire to help others	30	28.57%
	Sense of community responsibility	25	23.81%
	Obtain a favor	20	19.05%
	Total	105	100.00%

Table 6: Contingency Table

Localities	Barrier Type				Total
	Geographic	Economic	Social	Technical	
Bokwaongo	1	8	6	4	19
Bokwai	6	4	3	2	15
Small Soppo	12	2	1	2	17
Total	19	14	10	8	51

Table 7: Summary of all calculated chi-square

Locality	Geographic	Economic	Social	Technical	Total
Bokwaongo	5.22	1.48	1.38	0.35	8.43
Bokwai	0.03	0.003	0.0012	0.052	0.086

Small Soppo	5.08	1.53	1.63	0.17	8.41
Total					16.93

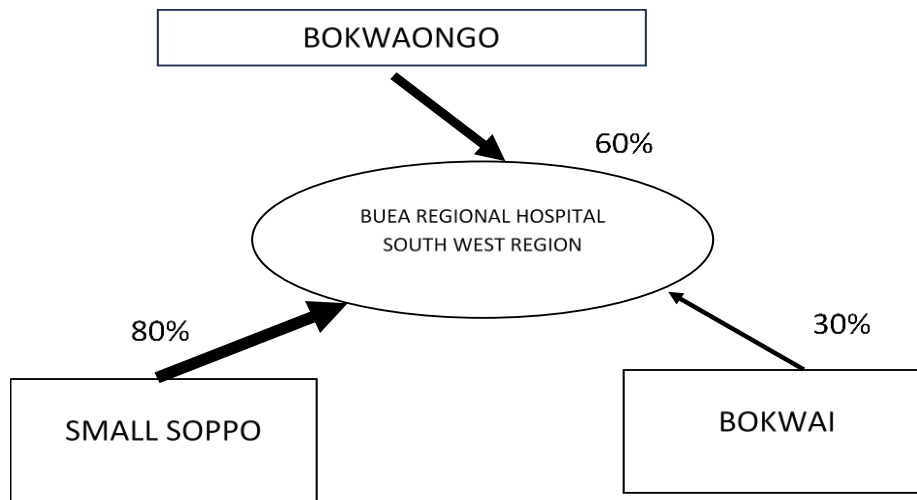


Figure 3.1: Patient Referral and Volume of Movement Flow from Bokwaongo, Bokwai, and Small Soppo Villages to Buea Regional Hospital

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