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Research Article

# Sustainable Development Goal No. 3 of 2030 Agenda: An Evaluation of Universal Health Coverage Level Achievement in Cameroon

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## Abstract

The Universal Health Coverage (UHC), a key concept of SDG 3, is a critical issue for global health improvement. In Cameroon, this objective is part of the priorities outlined in the President's political agenda. However, its realization remains uncertain. It's within this context that this work aims to assess the level of progress towards UHC in Cameroon over the past 9 years. The study was conducted in Cameroon and evaluates the Universal Health Coverage level achievement until 2025. For this purpose, a synthetic index was designed to measure the level of UHC attainment, based on a set of 10 individual indicators. Each individual indicator is assigned a weight proportional to its importance in the process of achieving UHC. These weights and the scores for each indicator were determined through interviews with key stakeholders involved in the UHC process, as well as the population. The calculation of the index shows that the level of UHC attainment in Cameroon is 6.4%. This shows that the issue of UHC in Cameroon remains a major concern, as the process has not made any substantial progress over the past 9 years. The level of achievement is very low compared to the expected result, with only 5 years remaining before the target deadline. Contribution: This study has highlighted the real level of progress in the UHC process in Cameroon. Unlike other analyses that focus solely on the availability of specific health services within the population, the index developed in this study allows for a comprehensive evaluation of all efforts made towards achieving UHC.

## Keywords

UHC, Cameroon, SDG, Progress, 2030 Agenda

## 1. Background

Universal Health Coverage (UHC) refers to a set of health and social objectives that guarantee access to quality healthcare for everyone, regardless of an individual's capacity for financial resources. It therefore consists of ensuring that the right to health is fulfilled as a fundamental human right, by dissociating the access to services from the ability to pay.

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Based on (i) the principle of universality, (ii) national solidarity and (iii) social responsibility, the UHC promotes a policy of social justice to reduce inequalities in people's access to quality health care and to encourage health insurance.

Universal Health Coverage was given a political endorsement through United Nations General Assembly Resolution A/67/L.36, adopted on 12 December 2012 [1]. This political commitment has made universal health coverage one of the priorities of the 2030 Agenda for Sustainable Development, adopted in September 2015. Goal 31 specifies that all countries should: 'Ensure that everyone has access to health insurance, including financial risk protection and access to essential quality health services, as well as to safe, effective and affordable medication and vaccines.'

Similarly, the African Union's 2063 Agenda focuses on population health [2]. In this respect, in July 2017, African countries committed to initiating the process of setting up a universal health coverage system.

In his speech to the nation on 31st December 2017, the Cameroonian Head of State highlighted the need to complete discussions on achieving Universal Health Coverage in Cameroon. Since then, several government initiatives have been undertaken.

On that basis, the National Development Strategy (NDS30) has identified the strengthening of the healthcare system as a priority. This involves: (i) improving the efficiency of the healthcare system, building on decentralization; (ii) implementing Universal Health Coverage; (iii) promoting the development of a local pharmaceutical industry; (iv) improving hospital performance and quality management in health facilities; (v) improving physical accessibility to healthcare; (vi) ensuring the availability of skilled and motivated healthcare staff; and (vii) improving healthcare governance (see NDS30, Axis 2, page 79, section 4.3.4) [3].

In addition, the Health Sector Strategy (HSS 2020-2030) [4], aligned with the NDS30 and 2035 VISION, is to ensure: 'Cameroon, a country where by 2035 universal access to quality health services is ensured for all social groups, with the full community participation'.

Despite all the progress made, Cameroon is still facing major health challenges, and the burden on its health system is increasing. The reduction of child and maternal mortality remains a critical issue, HIV/AIDS, malaria and other endemic diseases, as well as malnutrition, remain highly prevalent.

Since January 2020, the burden has increased considerably due to the COVID-19 pandemic, which has resulted in approximately 120,000 cases and 1,927 deaths as of April 21, 2022. In addition, economic, social, geographical and ethnic disparities, as well as inequalities between men and women, remain significant in the healthcare sector, and cases of chronic non-communicable diseases are increasing rapidly, raising substantial challenges in terms of prevention and treatment.

Based on the above, and despite a proven political will, implementing universal health coverage (UHC) in Cameroon raises some relevant questions, including: At what level is Cameroon in achieving of Universal Health Coverage five years before the deadline? While recognizing that many efforts have been made by the government, its financial and technical partners and households, the objective of this paper is to assess the progress made by the country towards achieving Universal Health Coverage. More specifically, can we yet talk about Universal Health Coverage in Cameroon? And if so, at what percentage?

## 2. Presentation of UHC

Universal health coverage (UHC) is an essential goal for any country wishing to provide its entire population with the health services they need, without financial barriers. To achieve it, UHC requires a structural transformation of the entire health system, covering a comprehensive package of quality essential health services, including health promotion, prevention, treatment, rehabilitation and palliative care.

According to the World Health Organization (WHO), achieving universal health depends on four prerequisites [5]:

(a) A strong, efficient and well-managed health system able to provide high-quality health supplies and services. (b) A sufficient workforce of well-trained and motivated health workers. (c) The availability of appropriate drugs and health equipment. (d) The control of healthcare costs to avoid financial pressure on individuals and the system.

These fundamentals are necessary to ensure that healthcare services are both accessible and sustainable for all individuals, regardless of their financial situation. Universal health coverage (UHC) is usually confused with universal health insurance (UHI), which is a health insurance and only a step on the way to UHC, which comes at the end of the process.

## 3. The Health System Context in Cameroon

### 3.1. Physical Accessibility to Health Services

In Cameroon, health is more focused on treating diseases, suggesting that the country does not have a health system, but a health care system. The entire national health policy is focused on building hospitals, with improving people's health as the main activity, which results in a high number of patients suffering from various illnesses. The health system is defined as all the resources and activities necessary to ensure health by promoting, preventing the development of risk factors and/or diseases, and reducing the professional and social consequences of diseases. It is therefore important to highlight the fact that the best healthcare system is not the one that treats more patients, but the one that has the least number of patients. The health system covers all social life dimensions, whereas the healthcare system refers to the arrangements in place to manage

disease.

However, in Cameroon, the disease management system itself is facing huge, serious difficulties:

### 3.1.1. Human Resources

According to Ministry of Public Health (MINSANTE) data, on 21 September 2021, Cameroon's healthcare system had a total of 39,720 employees, including 11,346 civil servants, 4,846 contract staff, 3,412 decision-makers and 20,116 temporary staff. A needs analysis shows a gap of approximately 2,000 specialized medical doctors, 500 general practitioners and 30,000 nurses [6].

***Table 1.*** *Estimated Number of Healthcare Personnel Needed.*

| Type of Personnel | Required Number |
|---|---|
| Specialist Doctors | 2000 |
| General practitioners | 500 |
| Nurses | 30000 |
| Others | 22500 |
| Total | 55000 |

Source: Ministry of Public Health of Cameroon, 2021.

#### (i). Progression of the Number of Medical Doctors and Specialists

The growth in the number of doctors was slow, although the creation of new medical schools and an increase in training capacity helped to increase the supply. In 2010, the country had approximately 1,200 medical doctors for 20 million inhabitants, while in 2015 this number increased to 1,842, representing a modest increase but insufficient given the growing population [7]. Moreover, this growth was not proportional among medical specialties. Specialized doctors, who represent about 10% of all doctors in the country, are particularly rare in rural areas. In 2015, Cameroon had only 240 specialists in general medicine, surgery, pediatrics, gynecology and other specialist areas [5].

The number of specialized medical doctors remains a major weakness in the health system. WHO recommends that developing countries should have at least one specialist per 100,000 inhabitants, but Cameroon, with less than 240 specialists per 20 million inhabitants, remains far from this target. This situation is even more critical in rural and remote areas, where specialists are almost non-existent.

#### (ii). Health Professional Migration: Brain Drain

The migration of healthcare professionals, particularly doctors and nurses, seeking employment in countries with more attractive working conditions and remuneration is another leading factor in the shortage of medical personnel. Around 10-15% of medical school graduates leave the country each year to seek employment abroad, principally in North America and European countries. This brain drain is a significant loss for the country and exacerbates the shortage of healthcare professionals. The brain drain is driven by the difficult working conditions, underpayment and limited opportunities for ongoing training in the country [8].

This migration has a particularly significant impact on public hospitals and rural areas, where a high proportion of trained professionals are missing out, creating an even greater gap in already underserved areas.

To provide a solution to all these problems, the President of the Republic has prescribed the recruitment of 9944 healthcare staff over 5 years, starting in 2025. However, this solution has had a very limited impact.

### 3.1.2. Access to Quality Healthcare Services: Myth or Reality

After independence, African countries, including Cameroon, have recognized health as a right and promoted the use of a system that encourages access to healthcare for all. However, the health systems inherited from colonial periods and based on out-of-date health facilities are not adapted to the population distribution and to the health needs of these countries. During the 80s, healthcare systems in Africa were radically reorganized, with a strong decentralization and a strategy focused on prevention and primary healthcare. The WHO member countries officially launched this strategy in 1978. However, they soon faced the challenge of ensuring that WHO recommendations were reflected in the provision of health care. The main health indicators in Cameroon are questionable: the under-5 mortality rate is still above the WHO target. In 2015, it was estimated by the WHO at 87.9 deaths per 1,000 live births, above the target of 76 deaths per 1,000 live births. The data available on in-hospital maternal mortality per 100,000 deliveries show that this ratio was 135 and 107 deaths per 100,000 live births in 2014 and 2017 respectively. This high mortality rate compared with WHO standards can be explained by the difficulty of access to healthcare for a range of the population living below the poverty line in Cameroon.

#### (i). The Health Map

The number of healthcare facilities has improved, but there remains a problem of poor quality and inequitable distribution of health facilities across the country. There are still many medical deserts across the country, while some localities have numerous health facilities, which sometimes do not respect the location criteria.

In 2024, the National Institute of Statistics (NIS), through its fourth Cameroon household survey (ECAM 5), showed that 38.6% of the population, i.e. around 10 million people, live on less than 1.5 US dollars a day [9].

Despite the existence of a national health technology

strategy document and efforts to build and modernize health facilities, the physical accessibility of quality healthcare is still very poor (A health map consists of two dimensions: quantitative and qualitative. The quantitative dimension refers to the number of health facilities. In this regard, Cameroon has experienced a growth in the number of health facilities over the past few years. The qualitative dimension, on the other hand, reflects the geographic distribution of these facilities across the national territory). This is directly linked to the ongoing inequality in the redistribution when analyzing the national health map, as well as to the obsolescence and lack of maintenance of most health infrastructures and equipment.

Furthermore, according to WHO standards, the population is still not adequately covered by medical personnel, despite the Government's recruitment efforts with the support of its partners: HIPC (Heavily Indebted Poor Countries) Fund, C2D (Debt Reduction and Development Contract), etc. The ratio of healthcare professionals to the population in Cameroon remains very low (0.63 per 1,000 inhabitants) compared with the international standard (2.3 per 1,000 inhabitants) [10].

### (ii). Geographic Disparities: A Regional Comparative Analysis

1) Regions with the best health service coverage: Centre and Littoral region:

The Centre and Littoral regions, which concentrate the main health infrastructures of the country, respectively host about 40% and 30% of the country's medical workforce. The Centre region, where the capital Yaoundé is located, concentrates about 40% of the country's medical doctors, although it has only 18% of the country's population [11]. In the same vein, Douala, the second largest city of the country, located in the Littoral region, has the majority of specialized hospitals and those with the most advanced equipment, attracting many specialized doctors. Under-Served Regions: Far North, Adamawa, and East.

2) Regions with less health service coverage: Far North, Adamaoua and East

Although approximately 18% of the country's population lives in the far north, only 8% of the country's medical doctors are available in this region [12]. Because of its remoteness and limited infrastructure, this region especially has a shortage of specialized doctors. Similarly, the Adamaoua region, which has 7% of Cameroon's population, has less than 5% of medical doctors, and specialized medical doctors are rare.

Both the East and the North regions of the country experience an inequitable distribution of medical personnel. The lack of medical doctors in these regions has a direct impact on the quality of care. The population usually has to cover long distances to reach a health facility; this delay affects both the diagnosis and access to treatment.

3) The Case of Villages and Peripheral Areas Remote areas and villages

Rural areas, particularly in the North and East regions, are particularly affected by the lack of medical professionals. Villages such as Moulvoudaye, Mokolo and Figuil (in the Far North region) and remote areas in Adamaoua experience a total absence of medical doctors and nurses. Health facilities in these areas are often under-equipped and under-staffed, and the population has access only to basic healthcare services, since specialized care is non-existent. Efforts made by the government and international partners to deploy mobile units in these areas have not yet provided a sustainable solution to this issue.

## 3.2. The Issue of Health Financing

Health financing is mainly provided in Cameroon by the national budget through the Ministry of Public Health and out-of-pocket payments from households (In addition to the Ministry of Public Health, several other ministries and public institutions also manage significant health components. For example, the Ministry of Defense (MINDEF) operates a military health system that is accessible to the general public and covers the country's military regions. The National Social Insurance Fund (CNPS) also manages a network of health facilities, which is among the most extensive in the country. Furthermore, faith-based organizations, including Catholic and Protestant churches, play a key role in healthcare provision). There is also funding from local authorities, some private health insurance companies, NGOs and development partners.

According to forecasts, total current health expenditure represents 5% of the GDP [13] (MINSANTE 2022). Public and private domestic funding represents 13% of the total expenditure, while external sources of funding represent almost 9%. Out-of-pocket payments by households account for more than 70% of healthcare expenditure. This situation highlights the significant burden placed on the population.

According to civil society organizations and the private sector, this is a critical issue that needs to be tackled. Discussions began in December 2016, with the development of a national health financing strategy, intending to reduce direct payments by at least 30%. The results of the fifth Cameroon household survey (ECAM 5) [9], revealed that almost 4% of households estimated that they suffered impoverishment due to health-related expenses. It is important to mention that in Cameroon, the government plays a central role in health financing through its investment and subsidies for the treatment of some diseases. Health is a key sector in Cameroon's development strategy, and that is why, for over 8 years, the country has allocated between 3.5% and 4.2% of its total budget to the Ministry of Public Health.

In addition, several special funds are available to respond to health crises. However, despite the promotion of human capital as mentioned in the NDS30 and the ratification of the Abuja Declaration recommendations in 2001, requiring an allocation of 15% of the budget to the health sector, Cameroon is still struggling to achieve this percentage.

*Table 2. Annual Budget Allocation to the Ministry of Public Health over the Last Eight Years (in Billion FCFA).*

| Year | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|
| Annual Allocation | 174 | 207.9 | 188.81 | 197.12 | 207.0 | 228.17 | 255.3 | 297.2 |
| % of Total Budget | 3.8% | 4.2% | 4.3% | 3.5% | 3.5% | 4.0% | 4.0% | 4.0% |

Source: Ministry of Finance (MINFI), Finance Laws (LDF) 2018–2025 [14].

The data show that, although the current cover system aims to promote access to healthcare for all, less than 10% (just 6.4%) of the population is covered by a health social protection mechanism. In addition, the majority are not covered by any financial risk protection mechanism. This explains the burden of direct payments on households. Also, the field of mutualization remains very limited, with only 2% of the population being members of health mutual [15].

## 4. Methodology

In this work, the level of achievement of the UHC is measured using a synthetic index that we have developed. As the UHC is an objective to be achieved, its level of achievement can be measured using a scale from 0 (nothing has been done) to 100 (UHC is fully effective). To that end, we define variables that are specific objectives or specific UHC indicators. The variables are weighted according to their relevance to the process of achieving UHC.

The UHC achievement index is therefore a composite index with a value between 0 and 100. The fact that there is no effective UHC does not necessarily mean that the index scores will be zero, we are measuring the level of effort made, showing how far we are on the path of achieving UHC. So, it's about assessing how far we have progressed.

### 4.1. Individual Indicators

To calculate the UHC achievement index, we selected 10 individual indicators (Table 3). These are key indicators drawn from UHC dimensions which are physical and financial accessibility to healthcare. As mentioned above, these indicators represent the specific objectives of the UHC, which itself is an overall objective.

*Table 3. Individual Indicators of UHC and Their Assigned Weights.*

| | Individual Indicators | Definitions | Weights (%) |
|---|---|---|---|
| 1 | Availability of a UHC functional technical framework | Set of reforms designed to make the prerequisites of UHC effective | 20 |
| 2 | Availability of a project proposal for Universal Health Insurance (UHI) | Document giving precise details of how the UHI is to be set up | 10 |
| 3 | Existing law on UHC adopted and implemented | A set of legal rules governing the process to achieve UHC | 20 |
| 4 | Existence of a functional UHC funding mechanism | A set of financial instruments enabling funding to be allocated to UHC | 10 |
| 5 | Effectiveness of hospital reform | Hospital Reform is defined as a major, radical change to the existing hospital situation in Cameroon, to improve its functioning | 10 |
| 6 | Level of health system governance | Governance is a collective decision-making process designed to ensure the vitality and performance of healthcare organizations or systems | 10 |
| 7 | Equal access to health facilities | Ability to access and use health facilities | 5 |
| 8 | Equal access to healthcare personnel | Possibility to meet a healthcare personnel | 5 |
| 9 | Availability of medicines and other supplies | The availability and accessibility of medicines and other necessary supplies | 5 |

| | Individual Indicators | Definitions | Weights (%) |
|---|---|---|---|
| 10 | Control of healthcare costs | Mechanisms to limit fluctuations in healthcare-related costs | 5 |

Source: Autors

### 4.2. The UHC Achievement Index

The UHC cannot be measured using a single indicator. This is why the UHC achievement index is a synthetic index. It is a weighted average of a series of individual indicators (Table 3).

Our index formula is as follows:

$$UHC = \sum_{i=1}^{10} \beta_i I_i$$

Where $I_i$is the individual indicator derived from specific objective i and $\beta_i$ represents the weight assigned to indicator i.

Box 1: Difference between the UHC achievement index and the WHO & Health Newborn Network indices.

Achieving the UHC requires the completion of several intermediate stages, which correspond to specific objectives linked to the UHC. To achieve this, a process must be defined and implemented not only to achieve UHC-specific objectives but also to achieve UHC overall objectives. Assessing UHC achievement is, consequently, equivalent to assessing the effectiveness and level of achievement of UHC through individual indicators, which is the central objective of the index presented in this paper.

However, the index proposed by the WHO only measures the coverage of health services and does not consider the transformation and reforms that must be brought by the UHC. In addition, the universal health coverage and accountability index proposed by the Health Newborn Network is also aligned on the measurement of health service coverage, but focuses much more on under-five child health.

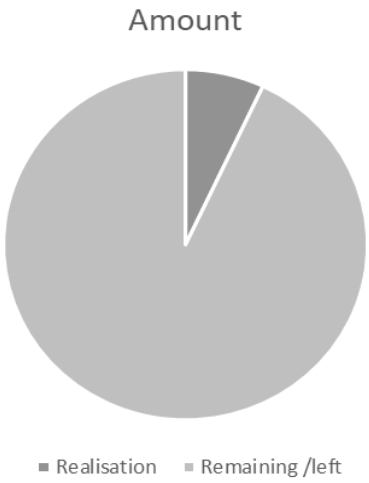
In conclusion, the UHC index includes the other indexes as it considers the entire process for achieving the UHC.

### 4.3. Sample and Data

The UHC achievement index in Cameroon is calculated for the period 2016-2025 (2016 marks the beginning of the implementation of the Sustainable Development Goals (SDGs) and the initial discussions on Universal Health Coverage (UHC) in Cameroon). The data are the result of a survey conducted among health system managers (02), health professionals (40) and the population (150) on their appreciation of actions implemented within the UHC framework. It is a score assigned to each individual indicator. This score is between 0 and 1 (Appendix, table 5). The weights of individual indicators were defined based on a consensus of the people included in our sample.

## 5. Results and Analysis

Based on our calculations, the UHC achievement index is 6.4%. This result shows that UHC does not yet have an effective foundation. Less than 10% of the path towards UHC has been completed in Cameroon. So there is still a significant gap to be filled [16].




Source: Autors

***Figure 1.*** *Level of UHC Achievement in Cameroon.*

After the adoption of the 2030 Agenda, Cameroon created a reflection committee on UHC achievement. Several activities were conducted by the national technical group (Using a participatory and learning-based approach, the National Technical Working Group has conducted several studies and analyses since 2015, with key steps involving technical validation), resulting in the definition of the key basic elements for the political choice of implementing a Universal Health Coverage system in the country. The Technical Group mentioned that all proposed elements were based on both lessons learned from UHC international experiences and, above all, from Cameroon's context.

Following the work of the Technical Group, it was agreed that the next steps required to make significant progress towards achieving UHC would include:

1) Adopting a law on the UHC;

2) Setting up a national UHC Management Committee;
3) Defining the population's financial contribution;
4) Developing an investment case for infrastructure and technical equipment modernization in health facilities.
5) targeting the poor and the indigent;
6) Elaborating a communication plan;
7) Affiliating / registering eligible people;
8) Elaborating agreements frameworks with stakeholders partners;
9) Signing accreditation contracts with healthcare and service partners;
10) setting up an information management system.

However, 7 years after the Technical Group's suggestions, no progress has been made. All these steps were not implemented. In addition, several weaknesses were identified in the Technical Group's work, which focused more on Universal Healthcare Coverage than on other aspects of the UHC. Practically all discussions on the subject remained silent until the new management team decided to resume work in 2023.

Unfortunately, no progress has been made, as the technical group's suggestions remain ignored, in favor of existing and running projects, a decision that significantly compromises the implementation of the UHC in the country.

Health vouchers project, the programs to fight malaria, HIV and tuberculosis, the kidney failure patient care system, etc., have been erected as UHC rather than the initial reflection on the subject. These existing projects have been implemented in the country for at least 15 years, so long a time before the 2030 Agenda was adopted. That is why, it is not correct to consider them as the UHC, which is a restructuring vision for the entire health system.

Five years from the deadline, Cameroon has made very limited progress towards achieving universal health coverage. So, it's important to understand: What are the bottlenecks in Cameroon's progress towards universal health coverage?

## 6. Discussions: Obstacles to Achieving Universal Health Coverage (UHC) in Cameroon

Our assessment is based on three main points covering all the challenges faced by Cameroon in achieving the UHC vision.

### 6.1. Misunderstanding of Universal Health Coverage

Despite many efforts made, there is still the realistic issue of achieving the objectives of these various health policies. Projects in the health sector have an insignificant success rate. This failure is due to several reasons. In this section, we will address the most significant.

The majority of health policies implemented in Cameroon result from external influences and initiatives. Usually, we have programs developed for a group of member states of the international organization funding the program. This situation usually leads to inadequate health policy development that does not meet the country's socio-economic needs. A policy that is not adapted to the socio-economic environment in which it will be implemented is already a failure.

The fundamental law of the interaction between supply and demand is generally not considered during the policy design phase. In a purchasing process, the offers submitted by suppliers have a significant impact on the final outcome performance.

A policy to be implemented must therefore:
1) create an enabling environment for the submission of high performing proposals;
2) properly contract the content of the proposal;
3) Anticipate and tackle the effects of regulation changes that may occur during the lifecycle of the project.

Any improvement in people's health can only occur if there is an improvement in the quality of healthcare supply. If the supply does not exist, then even existing demand cannot be met. This demonstrates how important it is to design an optimal system providing quality healthcare that can regulate the health market balance.

When we analyze some of the policies implemented in Cameroon, we notice that healthcare supply generally seems to be a less important element. The HSS 2016-2027 tries to address this situation, but its content remains limited. That is why our work is essential. But the greatest difficulty in implementing the SSS remains not only its alignment with the document of growth and employment strategy, which has not produced any results, but also with the SDGS, which have not been contextualized [17].

The UHC project fails to consider the value of providing a solid, sustainable, quality service. We should remind that achieving UHC depends on two major axes: physical accessibility to quality healthcare services and the reduction or elimination of the financial barrier. Unfortunately, not all dimensions were considered during the initial reflections conducted by the National Technical Group. The tendency has been to copy the French model, which is focused on a single dimension: reducing the financial barrier to access to healthcare services.

Although Universal Health Coverage (UHC) is a commendable goal, attempts to implement it in certain African countries reveal significant gaps from its true definition. UHC is not limited to the establishment of insurance mechanisms, but rather requires a comprehensive approach that includes improving the quality of care, ensuring the accessibility of health infrastructure, and promoting equity in access to services for all populations [18].

UHC vision differs fundamentally depending not only on the continent but also on the country in which it is applied. In developed countries, where health systems are already solid and efficient, the emphasis is more on demand financing. However, countries such as Cameroon, which still have very

weak health systems, should consider UHC dimensions globally. By copying the models of developed countries, the project produced is simply difficult to implement, which explains the delays that Cameroon has experienced on the path to UHC for almost 10 years.

### 6.2. Failure to Meet Prerequisites

The misunderstanding of UHC has the direct consequence of not observing the prerequisites. A prerequisite is something that must be achieved before doing anything else. In Cameroon, no UHC prerequisite as defined by the WHO is effective. However, efforts to address this concern were made in 2017 through the development of a national health financing strategy. Unfortunately, this work was unsuccessful, since it was neither adopted nor implemented.

More seriously, given current health conditions, the country wants to push for the introduction of a Universal Health Insurance, a measure that is likely to damage the health system and consequently the population's health, since it is important to remember that the introduction of an Universal Healthcare Coverage in a weak health system generates several negative externalities (Box 2).

Box 2: How to understand the externalities of the Government's project on UHC in Cameroon?

To help the Cameroonian population understand the logic behind the UHC project, I will use a simple example.

A mother in the neighborhood makes doughnuts every morning. She produces 100 doughnuts at 25 FCFA each. Let's assume that one doughnut satisfies the demand of one person (which means that a production of 100 doughnuts satisfies 100 people).

However, the demand in the neighborhood is for 150 doughnuts (150 people to be served). We are thus faced with an imbalance, where supply is lower than demand (a gap of 50 doughnuts).

The question we then face is: how can we reduce this gap to fully satisfy the demand of the 150 people?

According to the philosophy of the UHC project of the Ministry of Public Health (MINSANTE), the Cameroonian government suggests that the solution to reducing this gap should be to lower the price of doughnuts (similar to how health insurance works in the context of healthcare). This clearly shows that government policy on this issue seems to be inappropriate to address such an important problem.

What should be understood is that in a situation where supply is lower than demand, lowering the price actually worsens the gap. Let's go back to our example: by reducing the price of the doughnut from 25 FCFA to 15 FCFA, the demand will increase, for example, from 150 to 200, as more people who only had 15 FCFA and were previously interested in the doughnuts but couldn't afford them will now become customers. This increases the gap (from 50 to 100). Now, we have the mother producing only 100 doughnuts, while 200 people need doughnuts. The market is even more imbalanced, which will generate several negative externalities.

First, indirect costs related to purchasing the doughnuts will arise. For example, people will have to wake up very early to have any chance of buying their doughnuts; the waiting time will also increase, which constitutes a significant cost, as this time could have been used for more productive purposes, etc.

Furthermore, an environment of corruption will also emerge. Since demand now greatly exceeds supply, corruption networks will form to get served.

All of this will result in an increase in the cost of the doughnuts. While the price will be reduced, the indirect costs caused by the market imbalance will increase. Therefore, the solution proposed by the government will have no effect on improving lives.

Source: Ze, 2020 [17]

### 6.3. Challenges in Mobilizing UHC Financing

Despite the growing budget allocated to the Ministry of Health, Cameroon is still experiencing difficulties with UHC funding. According to estimations, the country needs around 1,400 billion FCFA [14].

The government's contribution is estimated at CFAF 985 billion, the household's contribution to be collected through membership fees is approximately CFAF 350 billion, and donors' contributions are estimated at CFAF 50 billion. From this perspective, and beyond the population's direct contributions, the government must explore new funding opportunities that can help to increase financial resources. But to date, there is no effective UHC financing mechanism in the country.

## 7. Conclusion

The Millennium Development Goals (MDGs), adopted in 2000, were a turning point in the global effort to improve people's well-being, especially in health.

Although progress has been made, particularly in reducing child mortality and combating some diseases, the MDGs have not achieved all their objectives, particularly in sub-Saharan Africa. While laudable, these goals were both too ambitious and not well adapted to local realities, which has limited their achievement in several regions [19]. The Sustainable Development Goals (SDGs) were introduced in 2015, with a more inclusive and universal framework. Among them, MDG 3, which aims to 'ensure healthy lives and promote well-being for all at all ages', sets Universal Health Coverage (UHC) at the center of discussions. WHO highlights that UHC is an essential instrument to guarantee that all people, regardless of their economic status, have access to quality healthcare without facing financial barriers [5].

Universal Health Coverage (UHC) is a core component of MDG 3, which aims to ensure that 'all people have access to quality essential health services without facing financial barriers" [20]. This is not only about providing health services, but also about making them accessible to all, regardless of

their economic condition or geographical location. This includes prevention, treatment, rehabilitation and palliative care. UHC is a pillar for reducing health inequalities, and its success depends on governments' financial commitment and effective health systems management [21].

## 8. Recommendations

After analyzing the results, we formulate some recommendations with the aim of improving the process of achieving UHC in Cameroon.

*Table 4. Some recommendations.*

| Dimensions of UHC | Principals recommendations | Actions |
|---|---|---|
| Physical accessibility to quality health care | Structure the Cameroonian health system | 1) Adopt a legal framework defining the content of UHC in Cameroon,<br>2) Assess capacity needs,<br>3) Improve operational research,<br>4) Strengthen advocacy for better management of the health system. |
| | Strengthen the health system | 1) Improve the quality of the health map,<br>2) Improve the pharmaceutical system,<br>3) Increase the supply of laboratories and technical platforms,<br>4) Strengthen the information system,<br>5) Improve the health financing management,<br>6) Implement a local health policy. |
| | Improve the performance of the health system | Improve the quality of health services (acces/coverage, equity, quality/security, reactivity/humanization of care, efficience) |
| Financial accessibility to quality health care | Implement UHI | 1) Carry out a feasibility study,<br>2) Select financing mechanisms,<br>3) Define the level of population coverage,<br>4) Evaluate the services to be offered and define a cost control mechanism,<br>5) Define the payment option for providers,<br>6) Define an organizational structure for UHI,<br>7) Set up the UHI and establish a monitoring and evaluation mechanism. |

Source: authors

## Abbreviations

| | |
|---|---|
| C2D | Debt Reduction and Development Contract |
| CFAF | CFA Franc |
| CNPS | The National Social Insurance Fund |
| COVID-19 | Coronavirus Disease 2019 (COVID-19) |
| ECAM | Cameroon Household Survey |
| GDP | Gross Domestic Product |
| HIPC | (Heavily Indebted Poor Countries |
| HIV/AIDS | Human Immunodeficiency Virus/ Acquired Immunodeficiency Syndrome |
| HSS 2020-2030 | Health Sector Strategy |
| NIS | National Institute of Statistics |
| NGO | Non-Governmental Organization |
| MDG | Millennium Development Goals |
| MINDEF | Ministry of Defense |
| MINFI | Ministry of Finance |
| MINSANTE | Ministry of Public Health |
| NDS30 | National Development Strategie 2030 |
| SDG | Sustainable Development Goals |
| UHC | Universal Health Coverage |
| UHI | Universal Health Insurance |
| WHO | World Health Organization |

## Author Contributions

**Albert Ze:** Conceptualization, Investigation, Methodology, Project administration, Software, Supervision, Validation, Writing – original draft

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## Conflicts of Interest

The authors declare no conflicts of interest.

## Appendix

***Table 5.*** *weigth and scores of individual indicators.*

| | Individual indicators | Weightings (%) | Scores | Weighting * scores |
|---|---|---|---|---|
| 01 | Existence of a functional technical framework for universal health coverage (UHC). | 20 | 0 | 0 |
| 02 | Existence of a project document for Universal health Insurance (UHI). | 10 | 0 | 0 |
| 03 | Existence of a law on UHC, adopted and implemented. | 20 | 0 | 0 |
| 04 | Existence of a functional financing mechanism for UHC. | 10 | 0 | 0 |
| 05 | Effectiveness of hospital reform. | 10 | 0 | 0 |
| 06 | Level of governance in the health system. | 10 | 0.2 | 2 |
| 07 | Equality of access to health care infrastructure. | 5 | 0.4 | 2 |
| 08 | Equality of access to healthcare personnel. | 5 | 0.08 | 0.4 |
| 09 | Availability of medications and other equipment. | 5 | 0.1 | 0.5 |
| 10 | Healthcare cost management | 5 | 0.3 | 1.5 |
| | UHC Index | | | 6.4 |

Source: Autors

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