Strategic Health Purchasing Progress Mapping in Cameroon: A Scoping Review

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ABSTRACT
Many low- and middle-income countries are adopting far-reaching health financing policies using strategic health purchasing (SHP) approaches to address their health sector challenges. However, limited efforts have been directed toward analyzing the SHP activities nationwide. Our objective was to explore the scope and development of SHP in Cameroon. We conducted a scoping review applying the framework developed by Arksey and O’Malley and modified by Levac et al. to identify and extract data from relevant SHP studies and documents published between 2000 and 2019, which focused on Cameroon. Among the existing 30 health financing schemes, 5 present the elements of SHP: (1) national health insurance (NHI), (2) performance-based financing (PBF), (3) voucher system, (4) private health insurance, and (5) mutual health organizations. The findings suggest that the governance function of purchasing is very challenging due to the multiple purchaser markets and the resulting fragmentation of the health financing system. In addition, the misalignment of the different benefit packages across schemes leads to considerable gaps and overlaps in the population coverage. The issue of multiple highly fragmented payment systems also remains a big concern across the different schemes, with tentative harmonization observed with NHI and PBF. Achieving the full potential of SHP in Cameroon will require (1) a defragmentation of the multiple schemes, (2) an effective oversight arrangement, and (3) an alignment of provider payment method to a coherent set of incentives across the system, with the ultimate aim of promoting equity, efficiency, and quality.

Introduction
Policy makers in low- and middle-income countries (LMICs) are faced with the challenge of improving the performance of their health systems. Attaining Universal Health Coverage (UHC) has become their central objective for reaching equitable and sustainable health outcomes and improve the well-being of their population. The road to UHC needs financing systems that enable people to access quality health services. As one of the core functions of healthcare financing, “purchasing” refers to the allocation of pooled resources to providers in order to deliver healthcare goods and services to the covered population, in accordance with the defined benefit package. It can be passive (i.e., not evidence-driven or aligned with strategic objectives in the health sector or resource allocations by defaulting to historical patterns and arrangements) or strategic. Purchasing health services in a strategic way entails active, evidence-based engagement in defining the service-mix, volume and selecting the provider-mix in order to maximize societal goals. It also entails defining institutional arrangements, service standards (quality), and monitoring arrangements.

If designed and undertaken strategically, health purchasing can promote quality, efficiency, equity and responsiveness in the provision of health services, and ultimately play a facilitator role in the progress toward UHC. Review of evidence suggests that strategic health purchasing (SHP) has been one of the main objectives in recent health financing reforms in LMICs for improving the quality of services and to foster the efficiency of the system. Several studies have reported positive links between SHP approaches and higher quality of care, satisfying unmet health needs and better outcomes.

Due to potential benefits of strategic health purchasing as well as the recommendations of the World Health Organization (WHO), many LMICs have undertaken
strategic health purchasing reforms in their health policies. By shifting from passive health purchasing to SHP, they expect to drive changes in service delivery and patient behavior through evidence-based engagement in defining the service mix, volume, selecting the provider-mix, defining institutional arrangements, service standards (quality), and monitoring arrangements in order to maximize societal objectives. Though a theoretical basis for SHP is similar, the implementation and experiences vary across the different health systems depending on how countries align the tools with the policy objectives.

Globally, limited efforts have been directed toward appraising and synthesizing at the same time various reforms countries are implementing regarding SHP, especially in the context of LMICs. While there is a considerable amount of literature on health purchasing in LMICs, it focuses mainly on various dimensions of the same scheme (e.g., PBF, health insurance) or in a single dimension (e.g., governance under PBF, provider payment under PBF, provider payment in community-based health insurance schemes, provider payment under health insurance scheme.) In understanding the implications of purchasing for health system performance, looking at all the purchasing dimensions in several schemes should be considered. Furthermore, it has been widely recognized that the increased interest in research in SHP is largely attributable to the needs to move beyond concepts and theory to practical application, as researchers are urged to produce evidence that adequately inform policy debate and actions. We aimed to fill these gaps by conducting a scoping review to describe the SHP functions, capacities and governance arrangements in Cameroon.

**Methods**

We conducted our scoping review applying the framework developed by Arksey and O’Malley, with the modifications suggested by Levac et al. In line with this approach, hereafter, we describe (1) the definition of the research question; (2) the identification of the relevant studies; (3) the selection of the studies; (4) the data charting; and (5) the collating, summarizing and reporting of the results.

**The Definition of the Research Question and Identification of Relevant Studies**

Our study sought to answer the following research question: ‘What is the state of SHP in Cameroon?’ We wanted to better understand the general picture of SHP interventions in order to inform policy action and investment in practical resources to support implementation. In our search strategy, since the issue of strategic health purchasing is relatively recent in the health financing landscape in Cameroon, we aimed to be as comprehensive as possible in identifying studies and reviews published in peer-review and non-peer-review journals. To achieve this, we searched PubMed, Embase and Cochrane. IS initiated a comprehensive search of bibliographic databases (with citation tracking) and DDMT and JMT validated the search strategy based on their opinion. We also searched Google Scholar and the website of the Cameroon Ministry of Public Health (MOPH).

We used the following search terms related with content and location: ‘purchasing’, ‘financing’, ‘insurance’, ‘voucher’, ‘cash’, ‘free care’, ‘subsidized care’, ‘mutual’, ‘incentive’, ‘contract’, ‘pay’, ‘capitation’, all combined with both ‘health’ and ‘Cameroon’.

In addition, we gathered documents based on previous research and through direct knowledge of the context. Through the citation tracking exercise, we identified a well-known national scholar (NCJ) who was actively involved in the development of the country health financing strategy. He served as an entry point by recommending us relevant local stakeholders to whom we were able to ask additional documents as relevant.

**Eligibility Criteria, Time Span and Language**

We included all articles: (1) that combined at least one aspect of the health purchasing outlined earlier, and (2) focused on Cameroon. As outlined in the introduction, our definition of strategic health purchasing is rather broad. As such, our search strategy allowed for the inclusion of studies that were not strictly labeled with SHP subject headings, but would fall within a gray area, as strategic health purchasing is a purposeful approach rather than all or nothing, with a continuum from passive to more strategic.

We searched for articles published between January 2000 and February 2020. We chose this time period because, according to Boulenger et al. the first contracting experiences in health financing landscape in Cameroon dated back to the early 2000s. We restricted our search to studies published in English and French that are the official languages in Cameroon.

At the identification stage, the first two authors independently carried out the first-stage title review of a total of 929 articles (PubMed = 427 articles, Google Scholar = 502 articles), of which 638 remained after removing duplicates and consensus reached on few disagreements. In addition, we collected 14 documents from the key policy makers as well as from the
website of the MOPH, giving a total of 652 articles and documents to be reviewed.

**The Selection of the Studies**

The first two authors reviewed the 652 abstracts. Their work occurred in two stages.

The first screening stage focused on identifying all articles that met the inclusion criteria. Inter-selection agreement between the two authors was 96.5%. This first stage led to the retention of 53 studies to be included in the review.

We could not retrieve the full-text for 2 out of the 53 abstracts included in the first stage of screening (1 conference abstract and 1 full-text not available—due to publication in journals that were not accessible through any of our library systems). After review of the full text, we excluded an additional 16 articles from the 51 retrieved. The following reasons for exclusion were included: 11 articles were not related to strategic health purchasing and 5 were not from Cameroon. Finally, after this second screening stage, we retained 35 articles for data extraction (Figure 1), including publications on mutual health organization (MHO) scheme,37–50 PBF scheme,33,34,51–60 voucher scheme,61 national health insurance (NHI) scheme,36,62 private health insurance (PHI) scheme,63 and multiple schemes64–68 (Annex 1). The articles were screened using both the title and the abstract.

**Charting the Data**

We relied on a data matrix (in Excel) developed by the Strategic Purchasing Africa Resource Center (SPARC) with its 11 technical partners, to organize information from the retained documents. The Framework has the advantage of combining multiple existing frameworks including WHO’s health financing progress matrices,70 work from the Resilient and Responsive health systems (RESYST) research consortium,8 and USAID/Health

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**Figure 1.** PRISMA diagram showing the selection of articles for review.69
Finance Governance Strategic Health Purchasing Progress Framework.\textsuperscript{71} The framework recognizes four key actors: the government representing the agencies that provide the regulatory framework and create mandates that define roles, rules and processes that guide the purchaser and healthcare providers; the citizens who represent the beneficiaries on whose behalf the purchasers transfer pooled funds; purchasers who transfer pooled funds on behalf of the population to healthcare providers; and the healthcare providers who receive funds from purchasers and deliver healthcare services to the population or citizenry.

The four key domains/elements of the framework include (1) the external factors and governance arrangements that directly and indirectly influence purchasing organizational arrangements; (2) the purchasing functions executed through the purchasing scheme(s); (3) other capacities that support the purchasing functions and other health system building blocks; and (4) the results and intermediate outcomes impacted by the purchasing organizational arrangements.

The first component intended to analyze the context, the governance arrangement, the regulatory environment, the purchasing market, and the management system. The second component was designed to capture the benefit package and service delivery standards, the contracting process, the provider payment as well as the provider monitoring. As for the third component, it helped to understand the capacities required for strategic health purchasing that are shared by other health financing or health system elements such as the health management and information system. We also relied on this component to review issues pertaining to communication with stakeholders. Finally, through the results component, the matrix sought to capture some intermediate results, including the effectiveness of resources allocation, the appropriateness of incentives, and the providers’ accountability. It also intended to measure progress on service delivery results and system outcomes such as equity, access, quality, financial protection, and financial sustainability. For completeness of information, the data extraction matrix is included as supplementary Appendix to this article (Annex 2).

We assessed all the schemes to identify those with components of the SHP approach. Specifically, we looked whether the scheme was allocated as pooled funds to providers with the aim of creating incentives to improve the efficiency and quality of the health system. We also looked if the scheme was implemented through an explicit performance objective of which interventions should be purchased, how, by whom and for whom.

Data extraction criteria were reviewed collectively \textit{ex ante} by all authors to make sure we have the same understanding. We worked together on one scheme (national health insurance) to ensure consistency in the extraction process and then the second, the third and the fourth authors extracted data in parallel for the remaining schemes. The first and fifth authors checked for consistency of the process by double-checking data extraction procedures on a number of randomly selected documents.

**Collating, Summarizing and Reporting the Results**

We used descriptive and narrative approach to synthesize information and present connected elements in order to portray the reality of the SHP in the context of our study. To ease understanding by the reader, we framed the summarized information according to the health purchasing functions (benefits package specification, contracting arrangements, provider payment, monitoring and information systems) and external arrangements that influence the functions (governance and provider autonomy).

All the team members worked together through the process of synthesizing findings, reworking to adjust the information completed in the excel matrix several times in an iterative manner with the SPARC team.

**Ethical Considerations**

Given the review nature of our study, we did not need to obtain ethical clearance before performing the review. All studies included were published and as such publicly available.

**Results**

We identified 30 financing schemes classified into the following groups: 19 free/subsidized health policies, 4 risk sharing mechanisms, 2 results-based financing, 4 government budget support and 1 payment at the point of service (see Table 1). Many schemes are related to vertical programs, with 19 of the 30 schemes focusing on specific disease control.

Five schemes where elements of strategic health purchasing approach could be analyzed, in addition to have been stated in policy as being the avenues to achieve UHC, were identified: (1) national health insurance, (2) performance-based financing, (3) voucher system, (4) private health insurance, and (5) mutual health organizations (MHO). Annex 3 gives a summary for each of the identified SHP schemes, and findings are summarized according to the main purchasing functions (Annex 4).
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mainly different
results Free/subsidy policy focused on disease control for the entire population
1. Subsidized treatment for diabetes
2. Free care for epilepsy
3. Free care for preventive treatment of onchocerciasis
4. Free care for HIV/AIDS
5. Free care for tuberculosis
6. Free care for leprosy
7. Free care for Buruli ulcer
8. Subsidized treatment for cancer
Free/subsidy policy focused on controlling a disease targeting part of the population
1. Free care for under 5 years (US) Malaria treatment
2. Subsidized malaria treatment for children more than 5 years and adults
3. Free IPT for pregnant women
4. Free LLI bed nets
5. Free care for malnutrition
6. Free treatment for intestinal helminthiasis
7. Free care for schistosomiasis
8. Free care for diabetes 0–18 years
1. Free care for family planning
2. Free care for indigents
Budget financing
1. Subvention for care in confessional facilities
2. Budget support for public health facilities
Budget support targeting a segment of the population
1. Medical evacuation funds abroad
2. Subsidized care for civil servants and health personnel
Prepayment mechanism
1. National health insurance
2. Social security
3. Private health insurance
4. Mutual health organization
Results based financing
1. Voucher
2. Performance-based financing
Payment at the point of service
1. Out-of-pocket payment

Table 1. Health financing schemes in Cameroon.

Governance
Each scheme has its own funding pooling mechanism as well as its own management procedures, usually in line with the source of funding. For example, PBF funding is mainly from credit and grant support of the World Bank. The fund is administered through a project management unit that uses the World Bank financial procedure. In all the five schemes, only the PBF and the insurance schemes have a clear legal mandate for strategic purchasing, and none has a mechanism to ensure clear accountability measures.

The accountability framework is undermined by the absence of a regulatory and policy framework in support of strategic purchasing practice. The implementation of the various schemes is constrained by lack of clarity in the responsibilities and roles of Government and across different ministries and purchasing agencies. In a variable scale, only the PBF and the NHII schemes explicitly included (or have planned to include) health purchasing and health providers autonomy in their design. However, the high centralization of the health administration gives very limited autonomy to public health purchasers to influence the achievement of both financial and health system objectives. In addition, it is not clear whether the autonomy is total or partial. For example, facilities are required to return portion of their incomes to the central level while they are at the same time granted with autonomy over decision-making in financial management. In practice, they are not always being able to work autonomously, due to pressure to comply with preexisting laws, leading them to abdicate their autonomy in financial decision-making.56

At the central level of the MOPH, there is a department in charge of organizing the health service delivery. The MOPH standards and protocols specify equipment and staff requirements according to the level of care. Yet, it remains questionable how effective are the mechanisms put in place to enforce these requirements. For the PBF and the voucher schemes, the MOPH oversees the provider selection and also delivers services in health facilities, creating a conflict of interest.

Community-based organizations play an important role in the verification process in the PBF program.72 The structure of the health purchasing organization and the stakeholders involved varied from one scheme to another. Generally, they lacked specific measures to balance powers. Board representatives of public health purchasing agencies are appointed by the Ministry of Public Health and this casts doubts about the patient’s voice. It is important to note that patient representatives are included in the board but excluded from decision-making due to the top down decision-making approach.

Provider Autonomy

Our results revealed that PBF gives financial and managerial autonomy to providers for them to decide on how best to deliver their services.53 In addition, all the schemes have put efforts to direct funds to frontline health providers in a flexible way. Within the PBF framework, health providers can decide on how to use their resources according to PBF principles.51,52,59 Health facilities are progressively granted autonomy over human resources and financial management, though there are some limits to this autonomy.56,58 With voluntary health insurance schemes, providers (mostly private) have autonomy concerning management. They are not influenced by the health purchasers in their management decisions. The situation is different with
public providers who are bounded to MOPH directives that prevent any autonomy over financial resources.

**Benefit Package**

The benefit package varies across the five schemes, and majority of schemes used the positive listing where all the benefits are listed exhaustively while MHOs made a combination of a positive and negative listing. Beneficiaries within a scheme receive the same benefit package and there is no difference in cost coverage. The NHI has the largest benefit package compared to the other schemes like private insurance and MHO, which tend to exclude chronic diseases in their package. The NHI benefit package encompasses 183 medical conditions to be covered progressively (starting with fewer than 183 medical conditions and the others are included with time), with emphasis on primary health care and which include 26.37% interventions for children, 13.74% interventions for pregnant women and 109 interventions to carter for the needs of the entire population (59.89%).\(^{62}\) PBF scheme incentivizes a broad of 44 indicators which include curative, preventive and promotional indicators with a focus on reproductive health activities and HIV services.\(^{53,60}\) As for the voucher program, it covers medical and non-medical services of pregnant women and their babies up to 42 days after delivery.\(^{61}\) MHOs have narrow benefit package, targeting mainly acute infectious conditions. Private insurances had benefit packages that vary according to the level of premium. The higher the premium, the broader the benefit package. There are two scenarios for the co-payments, depending on the company. In the first option, members pay co-payments when accessing care (the insurer covers the bulk of the medical expenses) in a predefined list of accredited health providers while in the second option, they can go to any health provider as they pay all the expenses upfront and claim for a reimbursement afterward. Studies indicate significant increase mortality due to non-communicable diseases between 1990 (29%) and 2017 (36%) in Cameroon.\(^{73}\)

However, almost none of the scheme has included intervention on non-communicable diseases in their benefit package. Throughout the five schemes, some groups of population have little or no coverage while others are covered by more than one mechanism (overlaps). For example, childbirth is (over)covered by the various schemes. The PBF program allocates subsidies to health facilities for each birth that takes place in a health facility, while health voucher systems, private insurance and mutual health insurance also reimburse the full amount or 80% of the delivery costs for each birth that takes place in the health facility. Clearly, the same beneficiary is able to benefit from the services offered under all three schemes. This also points out the issue of inequity across schemes, as none of them has explicitly integrated in their design, proven and sustainable equity mechanisms that are effective.

Although the five schemes have a clear benefit package, almost all of them lack a transparent process to revise these benefits package as well as to consider citizen needs apart from PBF which had an annual revision of indicators.\(^{60}\) The revision of the PBF benefit package is often motivated by policy changes (e.g., adoption of an international recommendation in the national strategy), changes in treatment guidelines/protocols, or challenges observed during quality assessments (e.g., indicators that are difficult for frontline managers to interpret). Yet, the revision process appeared more like an opportunistic process rather than a formalized approach with clearly established criteria. In addition, it should be noted that this process is mainly controlled by the regulators with which the implementing actors are associated, but members of the community or patients’ associations are excluded.

**Contracting Arrangements**

All the schemes have contracts in place between the purchaser and providers, and the contracting process is selective based on providers’ capacity to deliver the specific packages. For example, in the voucher scheme, health providers are selected based on their capacity to offer antenatal care and delivery, while in PBF, they are selected based on the existence of primary or complementary package of activities.

The five schemes have some quality standards in the providers’ contract, but the mechanism to verify this quality remains unclear for the NHI, private insurance and MHO. Voucher and PBF schemes have set the quality standards as prerequisite criteria for the signing of the contract as well as for its renewal. The quality standards are well defined in the provider contract and are also part of the evaluation. This quality is assessed regularly, and the quality score obtained by facilities is used as measures to give bonus payment to providers. For example, to be enrolled into the voucher scheme, facilities should have qualified staff and inputs to be able to do ANC and deliveries. On payments for quality, quality indicators are directly tied to bonuses which health facilities receive.

Almost all the purchasing agencies have explicitly defined service delivery standards except the private health insurance and MHO.\(^{40,64}\) The MOPH has developed standard operating procedures and clinical guidelines for NHI accredited facilities to ensure quality of
care to the population.\textsuperscript{36} For PBF and voucher schemes, there is an existing checklist to evaluate quality of care on a quarterly basis.\textsuperscript{60,61} For the NHI, it is planned that the health purchaser will sign the contract with accredited health providers, but the criteria are still to be defined.\textsuperscript{36}

The MHO scheme contracts providers who meet MOPH defined standards and protocols. Many studies reported MHO inability to influence the quality of care.\textsuperscript{42,45} Several studies alluded to cases of MHOs signing contracts with under-equipped and understaffed health facilities as well as facilities lacking essential medicines.\textsuperscript{40,41}

The various schemes dealt with all types of registered health providers, provided they are available. In urban areas, there is mostly a mix of public, private for-profit and private not-for-profit providers, while in rural areas, public and private not-for-profit providers are the main health providers, limiting therefore the choice of patients. Because of fewer facilities in rural areas, it is difficult to exclude facilities from the contracting process even if the quality or value for money they offer is low.

The private sector represents almost 45\% of all the health facilities in Cameroon and thus cannot be excluded. It is planned that both public and private health providers will receive the same level of direct unit costs under the NHI.\textsuperscript{36} This may be disadvantageous for private providers as the prices set for subsidy does not match real cost of services, and thus may not cover their charges.

**Provider Payment**

In the health sector, a large share of resources (84.8\%) is used to pay salaries and other administrative costs.\textsuperscript{57} Irrespective of the scheme, salaries are nonrelated performance-fixed wages. Non-wage compensation has increased sharply, distorting the wage scale and reducing the transparency of public resource management. For example, any civil servant attending official committee and working group meetings receives a per diem of 90 to 360 USD per session. These generous allowances have led to a sharp increase in the number of ad hoc committees and working groups, slowed down administrative processes and decision-making, and created institutions with overlapping mandates.\textsuperscript{57}

The Voucher and PBF schemes have a fixed and a variable payment.\textsuperscript{61} The variable remuneration depends on the health provider’s performance and ability to deliver quality services.\textsuperscript{60} Both schemes are able to incentivize staff through providing funds for salary top ups. Usually, guidance is given on the limits. In contrast, the general budget can usually not be used for bonus payments. Salaries are paid directly from central government. PBF facilities execute budget against business plan, with flexibility to adjust to changing priorities with approval from governance committee. Districts execute against annual budget law and are usually subject to ex-ante commitment control with varying degrees of rigidity.

With other schemes (private insurance, MHO), the objectives are stated in a memorandum of understanding that is signed between the contracting parties.\textsuperscript{57,66} Prominent among the clauses of the memorandum is the engagement of the health provider to follow the official clinical guidelines in healthcare delivery. However, this is not enforced or monitored by the health purchaser and there is no evidence of any influence of these providers’ practices on their payment.

Many payment methods co-exist. Besides the line-item budget to public providers, there are many other methods such as the fee-for-service and global budget. These payment arrangements are highly fragmented. Though the NHI scheme is still at conception level, provision has been made to harmonize the payment methods. It is hoped that it will be effective during the operational phase. The PBF has been identified as one of the most successful schemes in Cameroon as far as strategic health purchasing is concerned. Tremendous efforts are being made to harmonize payment methods and align them.\textsuperscript{74} However, it is not clear how this would be operationalized as the various schemes tend to disburse in parallel to how the government finances health activities. The public financial management rules in Cameroon set the basis for the control of public expenditures that are guided by overarching principles. Under the public financial management process, provider payment is a predetermined fixed budget, while it is a variable remuneration link to service provided under the five schemes.

It has been noticed that with the multiple funding flows having different levels of incentives, providers have the tendency to give preference to strategies that improve their personal gain.\textsuperscript{56,58} For example, studies reported that providers under PBF schemes develop strategies, such as the parallel drug management systems, to improve only the indicators paid for by the program, leaving out other activities and services that are not part of the scheme.\textsuperscript{58}

**Provider Monitoring**

Under the PBF scheme, the provider’s performance is monitored monthly by the health purchasing agency for the quantitative production and quarterly by the
regulators for qualitative performance.\textsuperscript{33,60} In the Voucher system, the purchasing agency routinely reviews provider performance. Regularly, experts from the agency visit the accredited health facilities to assess their performance.\textsuperscript{61} With the private health insurance and MHOs, though there are measures for providers’ performances to be monitored by their medical advisors, this is not done regularly.\textsuperscript{50}

The monitoring systems in place do not support decision-making to improve benefit packages, contracting and payment mechanisms. There are, however, attempts to use the information for feedback and performance bonuses, as evidence in three out of the five schemes under study. Such is the case with PBF\textsuperscript{58} and the voucher schemes.\textsuperscript{51}

The health information system has several parallel sub-systems. These multiple data systems contain relevant information, but because of their fragmentation they are not effectively interoperable and cannot therefore be used as a unique database to inform payment toward strategic health purchasing.

**Discussion**

Our review found that the different health financing schemes in Cameroon are balkanized and not comprehensively aligned. This is probably the result of the hygienist historical view of the Cameroon health system, rooted in the colonial period with health system organization around programs.\textsuperscript{75}

While the key findings from our research vary across the schemes due to differences in their design and specificity, there are several important, common patterns identified in relation to strategic health purchasing.

Our results are consistent with the increasingly common view in international health financing circles that a clear legislative mandate and formally defined objectives for the purchasing agency are the foundations on which other elements of governance—particularly accountability and transparency—are built.\textsuperscript{28,29,76,77} Strategic health purchasing goes beyond the simple notion of contract and encompasses power issues and stakeholders’ dynamics.\textsuperscript{78} Our findings suggest that the governance function of strategic health purchasing is very challenging in Cameroon, due to the multiple purchaser markets and the resulting fragmentation of the health financing system.

The absence of a policy and regulatory framework for strategic purchasing in Cameroon is exacerbated by a lack of clarity at the MOPH about the centrality of the five schemes to health financing reforms. This had the potential to reject the five schemes the advantages of monopsony power. This power is especially helpful in managing provider action for example in negotiating price or even service delivery configuration. In Thailand, for example, the National Health Security Office led the development of primary care networks which have increased access to health services and allowed for better management of financial resources.\textsuperscript{79}

As such, the lack of stewardship from the MOPH weakened strategic purchasing action of the different schemes. The size of the pooled funding matters and fragmentation into multiple schemes limits the potential efficiency gains of strategic health purchasing efforts. A purchaser needs to have purchasing power to be able to operate strategically and stimulate positive effects across the whole system.\textsuperscript{9}

In other words, deficits in governance arrangements are likely to make effective SHP difficult. The autonomy and flexibility given to the strategic health purchaser should come with measures for accountability. An important governance arrangement to achieve this is an oversight body that will ensure compliance with purchasing and accounting rules and have to hold the purchaser accountable for realizing the objectives defined by the government. In Cameroon, several platforms for promoting dialogue exist between multiple purchasers (health sectoral platform, health committee review, PBF steering committee, etc.). However, there is no oversight of the system as a whole, rather, there are several oversight arrangements, with no visible continuity and consistency between them.

WHO points out that the purchasing agencies need to have a clear mandate for being a strategic health purchaser based on legal provisions that specify its powers, i.e., decision-making space as well as a sufficient level of autonomy.\textsuperscript{7} Relating WHO’s view to our study, the lack of a well-defined mandate, coupled with an unclear division of power between the Ministry of Public Health and purchasing entities over key decisions can be one of the underlying causes of incoherent decisions on the benefit package, provider payment methods or contracting policies, or even conflict.

To respond to strategic health purchasing signals, providers need a certain level of autonomy while concomitantly being held accountable to the purchasing agency. Notably, autonomy and decision space of both purchasing agencies and providers need to be coupled with adequate capacities in the areas of health service delivery and quality, health financing management, negotiation and contracting. Moreover, with the fact that in Cameroon, most of the funds are already obligated for salaries and the public financial management rules do not comprehensively allow for a move away from rigid line items input-orientation, strategic health purchasing remains far from reaching its potential.
A key finding of this review is the misalignment of the different benefit packages, leading to considerable gaps in the population coverage (people not covered or very little covered) and overlaps (certain groups benefiting from possible coverage by several mechanisms). Misalignment of the benefit packages across the five schemes can lead to inefficient use of scarce resources. Instead of funding the same services, Cameroon government should consider directing resources toward priority interventions that are not covered by the different schemes, such as certain chronic diseases that increasingly constitute a huge burden of disease in the Cameroonian population. This misalignment increases inequities within the population as certain population groups are left out or pushed aside. This is the case of the elderly, who often suffer from chronic diseases and have to rely on their families to pay for health care. There is a strong need to wisely align the several benefit packages to seek equity, efficiency and coverage gains as seen for example in Thailand.\(^9\)

In Cameroon, beneficiaries are not always well informed of the content of the benefit package. Our results have shown that the relationship between the beneficiaries and the various schemes is weak. This manifests itself in various ways including in a benefit package that deviates not only from policy design for better alignment but also from burden of disease patterns as illustrated with the lack of consideration of noncommunicable diseases in the various benefit packages. Limited citizen engagement potentially weakens progress to UHC, and to the attainment of wider societal goals. This disconnect is more important in a country such as Cameroon that is considering mobilizing resources through mandatory contributory health insurance.\(^7\) Consequently, the weak citizen inclusion in the various schemes may undermine not only premium contributions but also willingness to contribute. Any benefit package definition must include evidence, but also inclusive dialogue and explanation of how choices are made.\(^7\) Therefore, there is a need to ensure that the benefit package definition is in line with the functional operations of the different care levels and to have a sufficiently explicit formulation of the benefits so that the population can easily understand what is covered and what is not.

It is hard to contain costs through changes in provider payment methods when there is insufficient capacity to regulate and control for balance billing.\(^6\) The existence of too many schemes, mostly related to vertical disease programs and based on fragmented funding flows, complicates the provider payment system and contributes to inefficiencies. This supports past research highlighting that too many purchasers might constitute a barrier to provide coherent incentives to providers to improve efficiency and performance.\(^8\)

The mixed payment arrangements remain highly fragmented and have not been adequately analyzed to understand how to shift to a system view of all provider payment methods. With this understanding, the issue will no longer be how to improve a particular program for example, but how to align it with the overall provider payment system. The Estonia case, where PBF has been integrated and aligned with an existing set of provider payment mechanisms, provides good lessons on how to build coherent payment mechanisms and strengthen the overall system.\(^5\)

Multiple funding flows and payment systems influence provider conduct as evidenced in our study where implementing actors tended to focus more on strategies that improved their personal gains.\(^58\) Since providers will tend to favor schemes where the incentives for specific objectives are higher, there is a need to align provider payment method to a coherent set of incentives across the system with the ultimate aim of promoting equity, efficiency and quality.

Our research further revealed that the PBF program acted as a first important catalyst to strategic health purchasing approach in Cameroon. It was almost the first time that providers were given at least part of the financial and managerial autonomy to decide how best to deliver their services, and purchasers actively relied on information to make decisions about payments. The PBF program in Cameroon is currently moving toward institutionalization with some early positive successes.\(^7\) Although the contribution of the state budget to the PBF scheme is less than 10%, Cameroon has incorporated PBF as a line item in health budgets that can be disbursed flexibly over time. The PBF scale-up was enabled by changes to public finance laws enabling results-based budgeting. The other schemes are implemented as standalone financing policies rather than part of a comprehensive mixed provider payment system.

A key backbone for strategic health purchasing and its governance is the data and information management system for payment and for making informed decisions. In turn, setting a strategic health purchasing approach can stimulate improvement in information systems. It is known that fragmented information systems are a barrier to achieving the potential gains from strategic health purchasing.\(^8\) In Cameroon, PBF program has sharpened the focus on data, with payments to providers directly dependent on its accuracy and timeliness.\(^82\) However, the big challenge relates to fragmented information management systems, coupled with little interoperability. There is a necessity to steer the system and make sure there is coherent,
dynamic and adaptive information management architecture, especially as more information technology innovations become widely available.

The findings presented in this paper might be useful to policy makers in other low- and middle-income countries. First, it underlines the need for a system-wide oversight body to help ensure compliance with purchasing and accounting rules and thus help hold the purchaser accountable for achieving the objectives set by the government. Second, feedback and grievance mechanisms should be formalized with clear processes for including beneficiaries in the design of the benefit package. Third, it is important to improve the alignment of benefit packages as well as provider payment mechanisms as their fragmentation undermines equity, efficiency and coverage gains. Overall, the paper emphasizes the need to develop and implement a strategic health purchasing framework. Such a framework would certainly be anchored in the broader health financing strategy and health sector regulatory framework.

Study Limitations

Only English and French studies were included, and therefore this study cannot claim to be exhaustive on this topic. However, we believe that the French and English literature would be sufficient to unravel patterns in relation to our research question in the context of Cameroon. Secondly, given the paucity of the research on SHP in Cameroon, we did not lay enough emphasis on the quality of the published documents. Nevertheless, this considerable limit of quality appraisal is the reason behind our methodological choice of scoping review rather than systematic review. Third, the findings demonstrate the utility of the framework as (1) a lens and guide for data collection, and (2) a means to organize and analyze the data. However, we realized that its application was highly dependent on existing literature. We found only one publication that partly featured some PBF results, and none for the other schemes. Hence, we were not able to apply the results component of the framework. Moreover, the framework does not prespecify what would be considered progress toward strategic health purchasing on each dimension. Further work should look at how to better clarify the progress objectives of each dimension of the framework.

Finally, we acknowledge the limitation of generalizing our findings to the rest of the country based on some studies carried out at sub-national units. However, health policy and health financing system have been uniformly applied nationwide due to the hyper-centralized administrative organization. Therefore, we anticipate that most of these local-level studies could reflect the dynamics of what can be observed across the country.

Conclusion

Achieving the full potential of SHP in Cameroon will require (1) defragmentation of the multiple schemes, (2) an effective oversight arrangement, and (3) an alignment of provider payment method to a coherent set of incentives across the system, with the ultimate aim of promoting equity, efficiency and quality. Nevertheless, it is important to emphasize that any attempt to move toward defragmentation of schemes, effective oversight arrangement and better alignment of provider payment method might face considerable challenges, as health financing reform is recognized as a primarily political rather than technical process. The South African experience, where political contestation and fragmented authority have been recurring blocks to achieve policy change around health financing reform, illustrates this complexity.

Drawing on the findings of this study, we developed a list of five recommendations for further research and learning opportunities to help improve the implementation of SHP in Cameroon as well as in other LMICs (Table 2).

| Table 2. Recommendations. |
|----------------------------|
| Emerging topics for further research and learning opportunities for Cameroon. |
| (1) Incentivizing provider behavior: Study the characteristics of payment methods that drive provider behavior and how provider payment systems set signals for quality. |
| (2) Fragmentation: Assess the effectiveness of single purchasing agencies versus multiple purchasers and define practical steps to defragment the multiple schemes. |
| (3) Equity: Lesson on how to structure benefit packages to improve access to services for the poor and improve equity. |
| (4) Citizen participation: Bringing in citizen voices into the design, implementation and monitoring of purchasing policies to improve accountability and transparency within the system. |
| (5) Institutionalizing PBF: Many PBF programs in LMICs are implemented outside the overall government processes because of external funding. Cameroon is currently moving toward institutionalization of its PBF program with some early positive successes (37). It would be of interest to other countries to learn from Cameroon on how to institutionalize PBF. |

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Authors’ Contributions
IS, DDMT, JMT, PAM and EVLT designed the study protocol. DDMT, JMT and PAM performed the document review under the coordination of IS and EVLT. IS, DDMT and JMT helped analyze the data. IS, DDMT and JMT wrote the first draft of the manuscript. All authors read and approved the final manuscript.

Disclosure of Potential Conflicts of Interest
IS and DDMT have been involved in the implementation of the PBF program in Cameroon. EVLT is part of the team in charge of formulating the NHI. PAM is member of the association of the MHO in the North West Region of the country. The two other authors have never been engaged in the formulation or the implementation of any health financing scheme in Cameroon.

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