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Review

Road to Eliminating Out-of-Pocket Payment in Sub-Saharan Africa, Elucidating the Role of Primary Care Health Workforce: A Scoping Review Protocol

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Abstract

Introduction: Despite multi-decade reforms aimed at Universal Health Coverage (UHC), out-of-pocket (OOP) expenditure remains a primary barrier to healthcare access in Sub-Saharan Africa (SSA). While macro-level financing policies are well-documented, the agency of the "street-level" health workforce in navigating these policies at the point of care is under-researched. This scoping review aims to map the perceptions, experiences, and discretionary practices of primary care workers that mitigate or exacerbate OOP payments in Sub-Saharan Africa. **Methods:** Following the Arksey and O'Malley (2005) framework, a comprehensive search of PubMed, Scopus, and Google Scholar will be conducted for studies published between 2012 and 2025. Data extraction will focus on the frontline practices of primary care staff. Analysis will be guided by Street-Level Bureaucrat Theory, examining how worker discretion, resource scarcity, and client interactions shape the implementation of financial risk protection. **Discussion:** The findings will provide a critical lens on the "implementation gap" in health financing, shifting the focus from top-down policy design to the frontline actors who ultimately determine the financial burden faced by patients.

Keywords: primary care; health workers; out-of-pocket; expenditure; experiences; perceptions; sub-Saharan Africa

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Introduction

The global trajectory toward Universal Health Coverage (UHC) is currently stalled by the rising prevalence of catastrophic health expenditure. Approximately 800 million people worldwide allocate at least 10% of their household budget to health costs, with 100 million pushed into extreme poverty annually (Akweongo, Aikins, Wyss, & Salari, 2021). In Sub-Saharan Africa (SSA), where poverty indices remain high, Out-of-Pocket (OOP) payments account for nearly 40% of total health expenditure in low-income settings (Miljeteig, et al., 2019).

OOP payments, comprising formal user fees, co-payments, and informal "under-the-table" transactions, disproportionately penalize the vulnerable (Kalantari et al., 2012; Miljeteig et al., 2019; Wagstaff et al., 2018). While some SSA governments have introduced diverse reforms, including tax-funded exemptions and National Health Insurance Schemes (NHIS), the proportion of OOP remains stubbornly high (Jalali et al., 2021; Kalantari et al., 2012; Reich et al., 2020). Current literature frequently critiques these failures from a macro-policy perspective, yet health financing is not an isolated pillar; it is fundamentally mediated by the health workforce (Miljeteig et al., 2019; Peters et

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al., 2013). In the three-tier systems common to SSA, primary care workers (nurses, physicians, and midwives) serve as the "gatekeepers" (Kapiriri, Norheim, & Martin, 2007). These actors operate at the micro-level, where the tension between institutional profit maximization and patient financial protection is most acute (Defaye et al., 2015; Hurst et al., 2005; Strech et al., 2009) However, little is known about how these frontline workers perceive their role in financial risk protection or the strategies they employ to navigate resource scarcity.

This therefore begs the enquiry into the research question; *What is the role of healthcare workers in mitigating out-of-pocket payments during service delivery at the primary level of care in sub-Saharan Africa?* In answering this question, we seek to conduct a scoping review in mapping-out evidence from the scope and volume of available literature on out-of-pocket expenditure in various health financing reforms and schemes in countries in SSA, on the perceptions, roles, strategies and practices of primary care workers in mitigating against out-of-pocket spending by health seekers at the point of care.

Methodology

Eligibility Criteria

In line with the research question, the eligibility criteria involved a structured process aimed at ensuring the inclusion of all relevant studies and the exclusion of irrelevant studies while maintaining methodological integrity. To determine the eligibility of the research question as well as to draw up the inclusion and exclusion criteria for this review, the 'PCC' elements of review highlighted by Joanna Briggs Institute was employed (Aromataris et al. 2024). The PCC stands for the Participants or Population, Concept and Context.

Participants

In the review, the population will focus on healthcare workers, directly involved in healthcare delivery in primary care and in healthcare financing activities at the level of primary care in SSA. This criterion ensures that the review captures documented roles specific to this demographic group in accounting for access, coverage, quality and safety in healthcare by mitigating or promoting financial risks through OOP payments. This review will exclude studies involving the viewpoints and roles of cadres of healthcare workers other than involving primary care services, and also staff at the meso- and macro levels of healthcare and healthcare decision making process.

Concept

The research will focus on OOP spending by populations accessing healthcare. The study will examine perceptions, perceptions of roles as well as the roles and practices that are of healthcare workers that relates to the concept of OOP payments. Studies focusing solely on outcomes of OOP expenditures and on other forms of payments of healthcare provision will not be included.

Context

The review will consider studies carried out in SSA countries. Most countries in SSA are within the low- and middle-income brackets with high poverty index and OOP payments tend to tip majority of population into catastrophic health expenditure (Miljeteig, et al., 2019). Ironically, though it is in these regions that robust- tax funded mechanisms for health financing would be that beneficial, there is relatively high proportions of OOP as against lower expenditure on health (104 $PPP per capita-7% GDP against 40% OOP for low-income countries, 313$PPP/capita, 6% GDP as against 40% OOP for low-middle income countries) (WorldBank, 2018). Research conducted in different healthcare areas like secondary, tertiary and quaternary levels and in other regions or countries will not be included.

Types of Sources

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The scoping review will include a range of study designs, including qualitative, quantitative, and mixed-methods studies. Only studies published in peer-reviewed scientific journals will be considered. In addition, data will be drawn from verifiable sources such as national institutional websites and selected databases. These additional sources will be included because they are reliable and easily verifiable. They also provide important information on the roles of primary healthcare workers in reducing OOP payments. The concepts presented in these databases are often based on evidence-informed decisions and established practices. As a result, they can serve as useful benchmarks for comparing real-life experiences, practices, and perceptions (GWU, 2025).

All other publications, including, comments from editors, study notes conference proceedings, book reviews, unpublished data, and readers' comments will be excluded from the study due to timeframe and complex verification processes.

Additionally

All countries in SSA would be eligible for inclusion hence studies in anglophone, lusophone or francophone countries would be considered. Studies to be included would therefore not be limited to the English language. However, studies identified in any other language aside English would be subject to full text translation into English using Google translate and reviewed by an independent multilingual assessor to ensure robustness in translation and maintenance of key concepts from original study.

Also, studies to be included would span from 2012 to 2025. This timeline was selected using the revision of the NHIS law in Ghana in 2012 which serves as a model health financing scheme for most African countries in responding to its committed role in ensuring UHC since the introduction of NHIS in 2002 (NHIA, 2012). Ghana is a low-middle income country in SSA, with high OOP and a high poverty index and has adopted a mainly tax-funded health financing scheme, in responding to healthcare needs and protect against catastrophic expenditure for its indigenes.

Designs

The review will be guided by the methodology framework developed by Arksey and O'Malley (2005) (Arksey & O'Malley, 2005), which comprises: (1) identifying the research question, (2) identifying relevant studies, (3) selecting studies, (4) charting the data, and (5) collating, summarizing, and reporting the results.

1. Identifying the Research Question

Primary healthcare workers occupy a critical position within health systems, serving as the interface between health policies and people who receive healthcare services. In SSA, OOP health payments remain a major barrier to accessing healthcare and achieving financial protection (Miljeteig, et al., 2019). Healthcare workers therefore influence how health financing policies are understood, implemented, and experienced by patients at the point of care.

Despite ongoing efforts to achieve universal health coverage in SSA, there is limited evidence on the role of healthcare workers in reducing OOP payments at the primary healthcare level. Understanding their contribution to financial protection and equitable healthcare delivery is important for strengthening health system accountability and access to care.

Accordingly, this scoping review seeks to map and synthesize the currently existing evidence on the involvement of healthcare workers in mitigating OOP payments during service delivery at the primary healthcare level in SSA. The review will be guided by the above identified research question.

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2. Identifying Relevant Studies

A comprehensive search for articles for this review will be conducted through the following electronic databases; PubMed, Scopus, and Google Scholar to identify relevant studies. These databases were selected on recommendation as a result of its reliable vast repository on a variety of frequently updated health-related topics including topics in health financing and health economics relevant to public health decision making in policy and practice, as well as its ease of accessibility and use with various search tools available in their interface (Bramer, et al., 2017). They also house topics which overlap with other reliable databases and would likely produce search results similar to what we would get if other databases were searched or included. This partly eliminates the need to search more databases than the 3 selected (Bramer, et al., 2017).

Additional search would be conducted on relevant national and international institutions to include studies on out-of-pocket spending in SSA as outlined above.

Key terms to be used for the review search would initially be centered on terms defined by the key aspects of the PCC framework for the research question i.e.,

Table 1. PCC framework for the research question.

Population	Primary care health workers
Concept	Out-of-pocket Expenditure
Context	Primary care in Sub-Saharan Africa

Following identification of the key terms, initial database search was done to identify search terms for the review based on each key terms derived from the PCC framework outlined above. This search employed the use of MeSH-browser for PubMed database to map out search terms that will be used for actual search of articles for the review. These search terms comprise of controlled vocabulary, keywords, synonyms, variants, alternative terms, acronyms and phrases to be utilized in place of the key terms.

The final search strategy for the review will utilize a combination of these keywords and search terms by Boolean operators such as 'AND', and 'OR'. Also, Limits to be applied during search would include publication dates i.e., 2012-2025, peer-reviewed, Title/Abstract etc.

3. Study Selection

This stage of the scoping review will involve the systematic selection of studies based on predefined inclusion and exclusion criteria. The inclusion criteria will ensure that all potentially relevant studies related to the review objective are captured, while the exclusion criteria will help eliminate studies that do not align with the scope of the review.

To ensure consistency and transparency throughout the selection process, all retrieved records will be exported into the Mendeley reference management system for organization and management. The library will subsequently be exported in BibTeX format to Microsoft Excel for data management, deduplication, and screening. Duplicate records will be identified and removed prior to the screening process.

To facilitate timely completion of the review, only studies with accessible full-text versions available online will be considered. Studies that do not address the core search concepts or fail to meet the eligibility criteria will be excluded (*see* Table 2*)*.

The study selection process will consist of two sequential stages:

Stage 1: Title and Abstract Screening

Titles and abstracts of all identified records will be screened independently by two reviewers (J.C and W.K.A) to assess their relevance to the review topic. Where relevance is evident or uncertain, the full text of the article will be retrieved for further assessment. In cases where abstracts are unavailable or insufficient to determine eligibility, the full-text article will be obtained and reviewed before a decision is made.

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Stage 2: Full-Text Screening

All potentially eligible full-text articles will undergo detailed assessment against the predefined inclusion criteria. Articles that fail to meet the eligibility requirements will be excluded, with reasons for exclusion documented where appropriate. Any disagreements arising during the screening process will be resolved through discussion between the reviewers. Where consensus cannot be reached, a third independent reviewer (B.K.A) will adjudicate to ensure consistency and minimize selection bias.

Table 2. Eligibility Criteria.

PCC	*Inclusion Criteria*	*Exclusion*
POPULATION	1. Primary care workers 2. Administrative and clinical staff	1.Other non-clinical and non-administrative staff care e.g. maintenance staff, housekeeping 2. Secondary and tertiary care health workers 3. macro- and meso- level health workforce in decision making capacities
CONCEPT	1. Out-of-pocket payment 2. Informal and formal OOP 3. All forms of OOP including Direct payments/cost sharing/deductibles/co-payments/co-insurance	Other forms of health financing schemes/methods that patients subscribe to willingly or obligatory i.e., social and tax funded insurance, external donations, voluntary/private health insurance payments
CONTEXT	1. All countries in sub-Saharan African 2. Primary care 3. Hospitals, clinics, maternity homes, CHPS compounds, health centers 4. Private and Public owned health facilities	1. Home visits, pharmacies, unlicensed healthcare providers, traditional healers/herbal practitioners 2. Secondary, Tertiary and Quaternary care

Table 3. MeSH SEARCH FOR MeSH TERMS AND ENTRY WORDS ON PUBMED ON 20/07/2025.

PCC FRAMEWORK	**KEYWORD**	**MeSH TERMS**	**ENTRY TERMS/KEYWORDS**
POPULATION	***healthcare workers*** ***Primary care***	"health personnel" [MeSH Terms] OR Healthcare workers [Text Word] "primary health care" [MeSH Terms] OR Primary care [Text Word]- 1. "Primary Health Care" 2. "Primary Care Nursing" 3. "Physicians, Primary Care" 4."Access to Primary Care" 5. "Primary Nursing" 6. "Patient Health Questionnaire"-	/Health Personnel*/ "Personnel, Health" / "Healthcare Workers" / "Healthcare Worker" / "Health Care Providers"/ "Health Care Provider/ "Provider, Health Care"/ "Health Care Professionals"/ "Health Care Professional"/ "Professional Health Care'/ "Care, Primary Health"/ "Health Care, Primary/ "Primary Care"/ "Care, Primary"/ "Primary Healthcare"/ "Healthcare, Primary"/ "Care Nursing, Primary" / "Nursing, Primary Care"/ "Physician, Primary Care" / "Primary Care Physician" / Primary Care Physicians"/ "Accessibility of Primary Care"/ "Primary Care Accessibilities"/ "Primary Care Accessibility"/ "Accessible Primary Care"/ "Accessible Primary Cares"/ "Primary Care, Accessible"/ 5. "Nursing, Primary"/ "Care, Primary Nursing"/ "Nursing Care, Primary"/ "Primary, Nursing Care"/ to be discounted
CONCEPT	Out-of-Pocket Expenditure	"health expenditures" [MeSH Terms] OR Out of pocket expenditure [Text Word]	"Expenditure, Health"/ "Expenditures, Health"/ "Health Expenditure"/Expenditures/Expenditure/ "Expenditure, Direct"/ "Direct Expenditure"/ "Direct Expenditures"/

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			"Expenditure, Direct"/ "Expenditures, Indirect"/ "Expenditure, Indirect"/ "Indirect Expenditure"/ "Indirect Expenditures"/ "Expenditures, Out-of-Pocket"/ "Expenditure, Out-of-Pocket"/ "Expenditures, Out of Pocket"/ "Out-of-Pocket Expenditure"/ "Out-of-Pocket Expenditures"/ "Out Of Pocket Expenditure"/ "Out-of Pocket Expenditures"/ "Expenditure, Out-of Pocket"/ "Expenditures, Out-of-Pocket"/ "Out-of Pocket Expenditure"/ "Out of Pocket Expenditures"/ "Out-of-Pocket Cost"/ "Out of Pocket Cost"/ "Out-of-Pocket Costs"/ "Cost, Out-of-Pocket"/ "Costs, Out-of-Pocket"/ "Out of Pocket Costs"/ "Out-of-Pocket Expense"/ "Out of Pocket Expense"/ "Out-of-Pocket Expenses"/ "Expense, Out-of-Pocket"/ "Expenses, Out-of-Pocket"/ "Out of Pocket Expenses"/ "Out-of-Pocket Payment"/ "Out of Pocket Payment"/ "Out-of-Pocket Payments"/ "Out of Pocket Payments"/ "Out-of-Pocket Spending"/ "Out of Pocket Spending"/ "Spending, Out-of-Pocket"/
CONTEXT	Sub-Saharan Africa	"Africa south of the sahara"[MeSH Terms] OR Sub Saharan Africa [Text Word]	/"Africa, Sub-Saharan" / "Sub-Saharan Africa"/ "Subsaharan Africa"/ "Africa, Central"/ "Africa, Eastern"/ "Africa, Southern"/ "Africa, Western"/ Nigeria / "South Africa" / Ghana / Tanzania / Kenya / Rwanda / Botswana / Cameroun / Senegal / Angola / Uganda / Mali / "Sierra Leone" / "Ivory Coast" / Ethiopia / Lesotho / Zambia / Zimbabwe / Namibia / Guinea / Mauritius / Mozambique / Niger / Seychelles / "Burkina Faso" / Burundi / "Cape Verde" / Cameroon / "Central African Republic" / chad / Comoros / "Democratic Republic of Congo" / "DR Congo" / Djibouti / "Cote D'ivoire" / Congo / "equatorial guinea" / Eritrea / Gabon / Guinea-bissau / Madagascar / "Congo Republic" / "Sao Tome and Principe" / Swaziland / Togo / Benin / Liberia / Namibia / Gambia / "Ce t Afr Republ" / "Equat Guine" / "Papua N Guinea" / "Sao Tome E Prin" / principe / "Sao Tome E Principe" / "Sub Saharan Africa".

4. Charting the Data

Data extraction will be carried out using a standardized data-charting form developed for this review. The form will be used to systematically capture relevant information from all included studies. Extracted data will include study details such as author(s), year of publication, country of study, study design, participant characteristics (e.g., cadre of staff, educational level), and major findings related to healthcare workers' perceptions, experiences, and practices in mitigating out-of-pocket payments. Data extraction will also be guided by the conceptual framework adopted for this review, which will be discussed later in this protocol.

5. Collating, Summarizing, and Reporting the Results

Data will be collated and summarized using thematic analysis based on the framework employed to identify common experiences and perceptions of roles of the population in mitigating OOP payments as well as existing strategies and practices that promote or mitigate OOP payments during service delivery at primary care level. Results will be reported narratively and organized around key themes identified during data analysis. Additionally, descriptive statistics will be used to summarize the characteristics of included studies. Key findings will focus on identifying experiences, perceptions, existing strategies and practices that promote and those that mitigate OOP payments during service delivery at primary care level. Factors that promote OOP would be collated in a column whilst those that mitigate would be collated in a different column.

Street-Level Bureaucrat (SLB) Theory

These findings will be organized around the three themes of the Street-Level Bureaucrat (SLB) Theory (Lipsky, 1969).

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1. *Discretionary Agency in resource-constrained settings;*

Frontline health workers in SSA often function as "policy makers" exercising discretion in the face of resource constraints. This review will analyze how this discretion is used to either shield patients from costs (e.g., prescribing cheaper alternatives) or shift costs to patients (e.g., directing them to private pharmacies) (Cooper, Sornalingam, & O'Donnell, 2015).

2. *Coping Mechanisms and client processing*

Primary level healthcare workers develop "strategies" to manage heavy workloads and inadequate resources. Example, in the context of OOP, does "bedside rationing" lead to equitable care, or do workers favor patients who can pay? (Virtanen, Laitinen, & Stenvall, 2016)

3. *The Gap Between Formal Policy and Informal Practice*

Top-level reforms often fail because they do not account for the "informal" roles workers play. This review would identify areas where formal policy guidelines conflict with practical realities of healthcare and how healthcare workers navigate between these two to arrive at a final discretionary decision for their advantage and that of perceived advantage of their clients. e.g., pressure to generate Internal Generated Funds to keep facilities operational. (Maynard-Moody & Portillo, 2011)

These themes would summarize the factors that influence healthcare workers roles in promoting or mitigating OOP payment in answering the research question and meeting the study objective.

Discussion

The scoping review would be aimed at systematically reporting evidence regarding the strategic roles and practices of primary care workers in helping mitigate OOP expenditure in SSA at the micro level of service delivery in health systems. The review would Top of Formemphasize the urgent need for engagement with grassroot cadres of staff in primary care to help effectively implement strategies aimed at eliminating OOP to achieve the goals of UHC.

Following the organization of the findings around key themes, promoting and mitigating factors for OOP payments as well as strategic grassroot level implementation policies would inform strategic fundamental level policies impact on health systems in attaining UHC for “Health for All” (Kipo-Sunyehzi, 2023).

Methodologically, the review would adopt a detailed and systematic approach to address existing gaps in the literature. For instance, most research on OOP has been widely investigated but mainly as effects and outcome indicators such as on Catastrophic Health expenditure for vulnerable populations and measuring strides that countries have reached in mitigating OOP (Jalali et al., 2021; Reich et al., 2020; Strech et al., 2009; WHO, 2017). Studies have focused mainly on the macro and meso- level of implementing strategies against OOP with only limited studies on role of healthcare workers during implementation processes of national-level strategies (Miljeteig, et al., 2019). Also notably, previous reviews often lacked in-depth classification and descriptions of data from variations across diverse cadres of health staff playing different roles in influencing affordability and access to healthcare services, prompting us to utilize a theoretical framework that could minimize such inconsistencies, allowing an in-depth evaluation of data while also providing a more structural approach to addressing such inconsistencies (Miljeteig, et al., 2019).

Despite this proposed protocol and the rigor in its detail to meet public health standards and the plan to follow this protocol to conduct the review, we understand that various limitations and setbacks could still account for a damper in the standardization, therefore as and when the review is ongoing, there would be a continuous appraisal of the methodology by the research team to meet the purpose and aim of the study.

This review of the perceptions, experiences and practices of primary care providers in mitigating OOP will show how important it is to understand how various functions of the health system could interact at multilevel to achieve the common goal of UHC and by investigating these experiences, we aim not to only strengthen the roles of these cadres of health workforce in the health system but also educate and create awareness both among policy decision-makers and grassroot implementers of the

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need for inclusion and representation as well as explicitly expounding the roles and contributions of grassroot level workers if we aim at drawing comprehensive interventions towards eliminating OOP on our road to UHC.

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