Importance and Limitations of Healthcare Verification for Accelerating Implementation of Universal Health Coverage in Burundi

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ABSTRACT

Introduction: As one of the avenues for implementing universal health coverage, healthcare verification for financing health facilities is receiving increased attention. Verification is the process of ensuring that healthcare services provided to users meet the predetermined criteria for billing and payment. The objective of this article was to examine the Burundi health system practices in healthcare verification for financing health facilities in order to identify strengths, limitations, and potential solutions for more advancement in universal health coverage implementation.
Methods: A critical case study was used as the overall methodological approach and a narrative review design to draw conclusions about the case.
Results: The results show that verification helps visualise the country's level of progression in implementation of universal health coverage. While it promotes efficiency in healthcare service reimbursement by allowing payment for quality care services, verification has proven to be a resilient function to fraud, abuse, and waste in the demand for, and supply of, healthcare services. However, verification has some limitations in terms of services and population targeting, and technical effectiveness of the verification team. The most important way identified for alleviating these limitations is to separate the demand for, and supply of, healthcare services.
Conclusions: More investments in research are required to recognise verification as an essential sub-function of health financing for universal health coverage implementation.

INTRODUCTION

Since the 2005 World Health Assembly on financing health for Universal Health Coverage (UHC), developing a country-specific health financing policy has emerged as a crucial step toward UHC implementation.[1] The most important component of UHC implementation proposed by this Assembly was increasing financial access to quality care for everyone in need. Making progress in this component has become a global political journey.[2,3] Verification prior to reimbursement of health facilities for healthcare services delivered is receiving extended interest as one of the health financing avenues for this journey. That said, the interest in investing in healthcare verification to ensure that health facilities provide quality care without financial barriers to access is more likely to increase than decrease in the coming years.[4]

In developed countries, verification is introduced in pay-for-performance or Performance-Based Financing (PBF) schemes to enforce quality care improvement and enhance efficiency in healthcare payment.[5,6,7] As a piece of evidence, healthcare verification is used in the United Kingdom for a standardised cost recovery system,[8] while it helps mitigate the risk of fraud, abuse, and waste in the United States of America health insurance shemes.[9,5]

In developing countries, healthcare verification is promoted as a crucial function in PBF schemes to enforce quality improvements and increase data accuracy for healthcare payment.[10,11] In health facilities, verification refers to the process of controlling the conformity of healthcare services provided with the pre-set criteria for billing and payment.[6] While it is a prerequisite for payment by a health financing scheme, verification is changing into an essential function to authenticate healthcare services payment.[12,13]

In Africa, there is limited and fragmented evidence about the importance of healthcare verification for universal health coverage implementation.[14]

In Burundi, the Low-Income African and 10th most aid-dependent country worldwide,[15] healthcare verification has been nationally implemented since 2010 to legitimate healthcare payment by linking this payment with the quality and volume of healthcare services provided in health facilities.[16]

To analyse the practice of healthcare verification for UHC implementation, first the verification process is described, as well as the problem statement in Burundi. Next, the description of data collection and analysis method is provided. Finally, findings are discussed and ways for improvement are suggested.

BACKGROUND – Verification as a Process for Proving Data Accuracy in Burundi

Healthcare verification for financing health facilities in Burundi context is associated with the introduction of PBF in 2006. Since 2010, Burundi has employed mixed healthcare verification teams comprised of civil servants and contractual experts hired by development partners such as Cordaid, the European Union, and the World Bank. This mixed healthcare verification teams have been established in each province and integrated into each health province office in order to enable PBF appropriation by the Ministry of Public Health.

Within the Burundi PBF, healthcare verification is based on standard service-oriented contracts in health facilities. The contracts specify the healthcare services package and the guidelines for delivering services. In this context, verification is known as the process of reviewing and triangulating multiple data sources that are available in health facilities to prove that the healthcare services claimed by providers meet the payment criteria stated in the contracts.

PBF is one of the popular strategies used for health systems strengthening.[10] In Burundi, PBF has evolved from a simple health system strengthening tool to a health financing policy for three main reasons. First, PBF and its crucial function of healthcare verification have received national political priority since 2010. Second, PBF complies with the four essential health financing functions: policymakers use PBF to solicit and collect financial support from various donors; funds collected from various sources are virtually pooled before being redistributed to health facilities; findings of healthcare verification inform the amount to allocate to each health facility; and all stakeholders involved in healthcare payment agree on the package of healthcare services to be paid for on the national scale. Third, health facilities are paid in the form of a financial incentive for making progress on quality care, as well as reimbursement for free care provided to pregnant women and children under the age of five. Figure 1 depicts healthcare verification as an essential function of implementing PBF policy and making progress on UHC.

The **eligibility** test consists of determining whether or not healthcare services claimed by health facilities are eligible for the predetermined healthcare services package. Through this test, healthcare verifiers ensure that providers deliver quality care to the target population by checking the accuracy of the healthcare service user identity and clinical data.[15] Checking the identity of women giving birth in maternity services in 2021, for example, revealed that 78.8% of institutional deliveries were eligible for the national maternity service package.

The **compliance** test consists of detecting the conformity of claimed healthcare services with the pre-set healthcare services package and the provision standards.[11]

For example, in 2021, the test guided in rejecting healthcare services for 10.3% of pregnant women who visited the consultation service because the healthcare services they received did not comply with the pre-set package. Forging diagnostics, using unskilled personnel, ignoring treatment protocols, etc. contributed to the rejection of these services for reimbursement.

The satisfaction test aids to collect critical feedback from healthcare service users on services they received.[17] In 2021, for example, 22.7% of users were dissatisfied with the services they received. According to previous experience, a lack of sufficient medicines in health facilities is the most critical feedback and key source of dissatisfaction frequently reported by users. This is true because the national health policy document 2016-2025 indicates that essential medicines coverage in Burundi, remains below 50%, as it is in the rest of Africa's poorest countries.[18]

These classical tests of health coverage, which constitute the verification process, determine the healthcare services that comply with the pre-set national healthcare services package for billing and payment. Healthcare verification plays an important role in the mitigation of fraud, abuse, and waste in healthcare delivery system.[19,20] To clarify these terms further, fraud is an intentionally false statement of facts or identity to obtain payment[21] such as reporting wrong benefits, giving incorrect information to get free healthcare services, etc. Abuse refers to inappropriate practice that results in an unnecessary reimbursement.[22] This is exemplified by clinical data forgery when claiming benefits payment. Waste includes spending on services that cannot be formally justified[23] such as non-quality care payment, overtreatment, etc.

PROBLEM STATEMENT

Two important issues. One is the absence of inter-sectoral collaboration when defining the package of healthcare services as proposed by the 2005 World Health Assembly for UHC.[1] Additionally, there are restricted relationships between policymakers and local population when elaborating contracts. As a result, contracts are more "people-using" than "people-building" for financial access to quality care. Contracts focus more on the stimulation of the target population to use healthcare services than on building the population's capacity to organise their own financial protection systems (community-based health insurances, for example). The other contract-related challenge is the break in continuity of coverage throughout an individual's life time. As they are not included in the process of contract elaboration to defend their rights, women (especially those affected by inequities such as indigenous women) are only covered during the period of pregnancy and children before the age of five. This implies that contracts do not offer the possibilities to keep financial coverage in case of changes in the social status of the target population.

The other important issue is that quality scores from healthcare verification do not reflect reality on the field. For example, the 2021 PBF report showed that the quality assessment score used to calculate the amount of payment for quality care improvement in Burundi hospitals ranged between 80% and 90% in 2020. However, experience has shown that when performing extemporized quality

assessment, the score rarely exceeds 50%.

In this situation, the relevance of healthcare verification for financing health facilities remains debatable in terms of implementing UHC in Burundi.

The objective of this paper was to examine the Burundi health system practices in healthcare verification for financing health facilities in order to identify strengths, limitations, and potential solutions for more advancement in UHC implementation.

FIGURE: Description of the Function of Healthcare Verification in Burundi
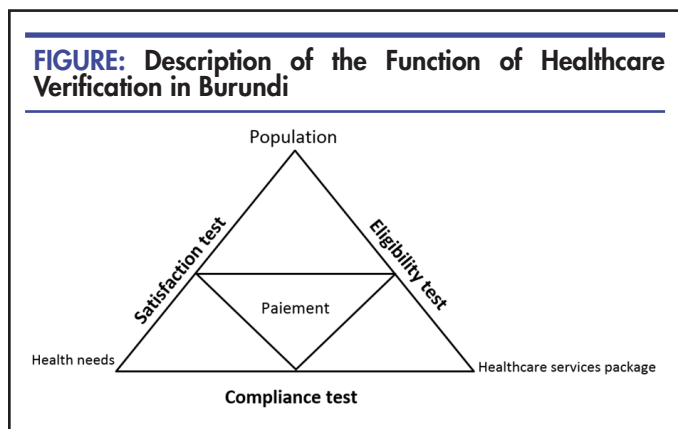
METHODS

The World Health Organization (WHO) published a framework in the 2010 World Health Report that can be used to assess countries' progress toward UHC implementation. The framework, known as the UHC cube, consists of two main axes of progress on UHC implementation: the axis for quality healthcare services and the axis for financial risk coverage or health insurance.[23,24]   The two axes were used to collect, synthesise and analyse data. Burundi was selected as a study setting because of it's uniqueness: the country has implemented PBF as a health financing policy. A critical case study approach was selected because is more effective compared to other methodological approaches,[25] such as statistical and structured surveys, for achieving the research objective.

Under the case study approach, we used a narrative review design to draw conclusions about the case. This design was helpful in identifying strengths, limitations, and potential solutions[26] to healthcare verification improvement. We used a qualitative method to collect and summarise data for this narrative review design. To do so, we collected a sample of information available on the online database, which can be found at: www.fbpsanteburundi.bi. This database is the most appropriate and significant for finding information about the present case because it contains documents, reports, and opinions from different actors (with different perspectives such as the Ministry of Public Health authorities, local researchers, development partners, etc.) concerned with the healthcare verification for financing health facilities in Burundi. So, there is no concern about the representativeness and validity of the information contained in this database. We used a purposive sample of information to build the case. This means that, for each of the two axes of progress in the

UHC, we progressively checked additional information in the database until the ability to obtain new ideas is reached (saturation).[27] Considering the nature of the current study design, we used an unsystematic strategy to search for information in the database. We used the qualitative content analysis technique to extract and present information published between 01/01/2010 and 31/12/2022 in the database. To reduce the risk of information bias from a single source of data, we triangulated the information extracted from the database with what we know from our own professional experience in healthcare verification. We excluded information that we were aware had already been published somewhere. We narrated the case using both comparative and theory building structures. The comparative structure consisted of presenting results from the database in comparison to the two major axes of progress on UHC implementation. The theory building structure included an explanation of how the case contributed or not contributed to UHC implementation.

RESULTS AND DISCUSSION

Findings from healthcare verification determine which services, population, and costs are covered in each health facility. Those findings help in visualising the country's level of progress on the two axes of UHC implementation.

The Importance of Healthcare Verification

Healthcare verification is contract-oriented. In other words, contracts specify quality and quantity targets for each contracted health facility. According to the 2021 PBF report and 2021 yearbook of health statistics, 963 or 69.7% of the 1381 operational health facilities (public and private combined) in the country were contracted. The more the health facilities progress towards the targets, the more they get paid. As an outcome, health facilities progressively create new services where none previously existed in order to meet contract agreements, reduce disparities in the healthcare delivery system, and make the nationally defined healthcare services package effective.

Grids used for healthcare verification are permanently available in the 963 contracted health facilities for eventual self-assessment. The results of healthcare verification are synthesised in a standardised bill format that includes the package of healthcare services nationally covered. When analysing the billed services for each health facility (unavailable services are billed for zero dollars or claimed void or not applicable), it becomes simple to identify the available services in each locality of the country compared to the nationally pre-set package of healthcare services. In 2021, for example, the service of screening and treatment of malnutrition for children under the age of five was unavailable to the 66,313 population of Kanyosha Health Centre's catchment area (Bujumbura province).

Policymakers use findings from healthcare verification to periodically define and redefine evidence-based benefits package. This means that, based on the level of progress of health facilities toward national targets, quantity and quality indicators used for healthcare verification are regularly revised to stimulate further progress in various aspects of the healthcare delivery system. The 2014 amendment to the healthcare services package clearly

illustrates this point. While preventive services in hospitals were reimbursed before 2014, they were removed from the reimbursable healthcare services package in 2014.

Quantity indicators enable monitoring the evolution of service utilisation, determining the volume of services consumed by each category of the target population, and highlighting services that are under or over utilised in comparison to the targets per locality. For example, according to the 2021 PBF report, the target is 2 new visits per inhabitant per year for curative services in children under the age of five. Cankuzo province (7.0 new visits) outperformed the target, while Bujumbura city underperformed (1.2 new visits) in 2021.

Quality indicators provide practical guidelines for meeting quality standards in the healthcare delivery system. The guidelines are used to attribute quality scores to contracted healthcare providers. These providers must receive at least a 70% quality score in order to receive financial incentives for meeting quality standards in healthcare service delivery. Following quality standards contributes to meeting the health needs of the population, resulting in increased credibility and trust on the side of users. For example, the 2021 PBF report indicates that trust in healthcare facilities increased the use of immunization services, resulting in 82% of target children being fully vaccinated nationwide by 2021.

There are also indicators used for assessing perceived quality or the level of satisfaction by healthcare service users. Those indicators serve as a reference to measure the level of acceptability of the national package of healthcare services in each health facility. According to our professional experience, users frequently suggest lowering the costs of laboratory tests. It means that those tests are financially unaffordable. This informs the need for price reductions in health facilities, expanding financial coverage to a larger group of the population, or revising the amount of user fees for the health insurance schemes.

Based on the arguments presented above, we endorse the idea that healthcare verification serves as a fraud and abuse mitigation intervention in the quality healthcare delivery system.[28] Each healthcare system is expected to have more than 10%[29] fraud and abuse, as well as 20-40% wasted resources.[23] While it promotes efficiency in healthcare service reimbursement by allowing payment for only quality care services, healthcare verification in Burundi has proven to be a resilient practice to reduce fraud, abuse, and waste[30] in both the demand for and supply of healthcare services. During monthly verification visits, healthcare verification experts provide technical advice to healthcare providers about the health data reporting system in order to enforce data accuracy improvements that inform payment of the supply of healthcare services (or health facilities). In the demand for healthcare services, the healthcare verification protects health insurance schemes from bankruptcy that may arise from the overconsumption of healthcare services. According to Sun *et al*, verification can detect and avoid approximately 70% of wrong healthcare services usually claimed for reimbursement in healthcare delivery systems.[28]

To increase healthcare providers' accountability towards health insurance schemes, healthcare verification in Burundi includes financial sanctions in case of claiming wrong data and financial incentives when obtaining at least a 70% of quality score.[31] The payment amount for each health facility is determined by the volume of quality healthcare services provided and the number of users of those services. Since prices of healthcare services vary from one province to another, findings from healthcare verification inform price adjustments among provinces for equity in resource allocation. That said, the level of annual budget consumption per health facility per province informs the next budget per capita to mobilise, and the total amount to pool annually for each province. Although healthcare verification appears promising for moving toward UHC implementation, it has limitations that must be alleviated in order to make further progress.

Limitations of Healthcare Verification

Healthcare verification focuses on targets and acts on a limited set of indicators. As a result, healthcare providers focus their efforts on paid indicators and change their behaviours based on the services that will be assessed and the amount of awards attached to targets. In terms of quantity, for example, providers prioritise high-priced indicators over unpriced or low-priced ones. In terms of quality, providers prioritise indicators with high grades and neglect those with low grades. Progress in UHC implementation is limited to contractual indicators, and our professional experience has shown that it is difficult to estimate real targets for each indicator in health facilities. The use of three different population reference estimates (520,252 or 535,491 inhabitants according to the 2021 PBF report, and 488,867 inhabitants according to the 2021 yearbook of health statistics) for calculating targets in Bururi province is a good illustration of this wrong estimation of targets in the healthcare delivery system in Burundi.

A serious concern is that policymakers frequently define healthcare service packages without considering how the target population will receive and accept them in each region of the country. To illustrate this further, community actors who could assist in informing the acceptability of healthcare services in various regions of the country face some challenges: (i) Health Committees, which are supposed to represent the population in decision-making about the primary healthcare delivery system, continue to be manipulated by healthcare providers. As a result, they are concentrating their efforts on assisting providers rather than representing the population; (ii) PBF uses community-based organisations to assess the cost-acceptability of healthcare services. However, they represent a small number of users (80 per health facility) and cannot inform change; (iii) Community Health Workers lack robust policy support to carry out their mission. Sekhon *et al* suggested that wrong targets combined with unacceptability of healthcare services widen disparities in healthcare service access.[32]

Another critical issue is the limited technical effectiveness of the healthcare verification team. The team is integrated into the supply side of the health system and is over dependent on provider's guidelines. Too often, the team faces adversarial pressure from the health system's authorities (health district or province officers for

example) to tolerate errors (incomplete recording of clinical data for example) when billing or scoring healthcare services. As verification became routine for the team, regular visits in health facilities have increased familiarity between the team and the health staff, which does not help to sanction some observed imperfections in healthcare service claiming or reporting. The 7% average discrepancy (documented by the 2022 survey on verification cost-effectiveness) observed between routine, extemporized, and counter-assessment findings exemplifies this situation.

One more criticism is the use of unrealistic indicators to verify healthcare services for some health facilities, which results in under or over scoring of quality indicators. Maternity services, for example, are not available in some health facilities and are therefore scored as inapplicable during the verification process. Furthermore, according to the PBF implementation tools (especially healthcare verification grids), quality assessment requires at least 26 reports of activities or meetings per month per health facility. Our professional experience has taught us that healthcare providers fabricate fictive reports to obtain quality score without making any improvements. Since the indicators are defined in such a way that only the availability of well-established reports is required (what we refer to as unrealistic indicators), providers are often given a high quality score that does not reflect reality.

These critics raise concerns about the payment efficiency of healthcare services. This is why some policymakers are thinking about direct health facility financing and the use of supportive supervision teams of health districts for healthcare verification to increase efficiency. Direct financing refers to funds received in health facility bank accounts from the government, donors, or other sources via output-based payment.[33] These funds are managed independently by health facilities to meet the needs of the population in their respective catchment areas. There are no national standardised indicators guiding verification in this form of financing. Independently, health facilities choose to focus on indicators that are relevant to their local context. This means that, health facilities develop healthcare service packages in their own context based on the needs of the local population.[33] It is important to keep in mind that in the context of Burundi, supportive supervision is a crucial component of the provision of healthcare services. Using the supportive supervision teams of the health districts for healthcare verification could lead to more conflicts of interest between the provision and the purchasing functions of the health system. One of the most important ways to implement UHC, in our viewpoint, is to separate the demand for and supply of healthcare services. In this way, linking capitation with PBF has shown positive effects on maintaining quality standards in practice,[34] and on reducing fraud, abuse, and waste, which may result in increased healthcare payment efficiency.

WAY FORWARD
1. Combining PBF with capitation payment (pre-payment based on the expected volume of healthcare services consumption per year, per inhabitant, and per health facility) for a risk-based verification. The following are five proposed steps to follow:

Step 1: Inviting the target population of the catchment area of each health facility to a mandatory electronic enrolment for health insurance (Territorial-based registration).

Step 2: Provide the enrolled people with an electronic health insurance card with a unique identification number. The card could be presented to the healthcare provider holding a recognised professional identity number in case of healthcare service demand. This could help the healthcare provider automate the verification of the patient's identity.

Step 3: Based on the analysis of the history of verification findings, it may be possible to estimate per capita per year, the budget to virtually allocate to each health facility for healthcare service provision while taking into account a certain proportion (capped) of patients who may come from outside the catchment area – this is to ensure that the population's right to choose the preferred healthcare provider is not violated.

Step 4: Training healthcare providers to understand that the capitated budget has been virtually allocated (but not transferred) for one-year coverage. Consuming the entire budget before the end of the year would result in a shortage of healthcare provision payments for the rest of the year (for greater provider accountability). The amount to be paid monthly for provided healthcare services could be calculated during the verification process.

Step 5: Establishing a risk-based or targeted verification system (not systematically based on all health facilities).[20] To put this into practice, there are two tenets. First, quantity verification based on financial risk for cost-control: verification visits could focus on health facilities whose historical data show a tendency to consume the capitated budget before the due date. Second, verification based on the risk of no or low quality care in order to maintain an acceptable level of quality care in health facilities. To stimulate improvements, verification visits could target health facilities with a persistently low quality score (less than 50% for example). A bonus (financial incentive) could be given to healthcare providers who maintain a quality score of more than 70% after three successive verification processes (pay-for-qualitative performance).

2. Improving healthcare verification techniques by making it an intersectional function between the existing fragmented health financing schemes
To succeed in this coalition for healthcare verification, all the existing health financing schemes need: (i) a harmonised basic healthcare services package, (ii) the same target population and eligibility criteria, and (iii) harmonised pricing and payment methods.

The advantages of pooling healthcare verification techniques include reduced operational costs and the risk of payment duplication, resulting in increased payment efficiency. (Figure 2)

3. Removing the healthcare verification function from the supply side of the health system in order to make it independent and to mitigate the adversarial relationship between the provision and purchasing functions in the health system (Figure 3)
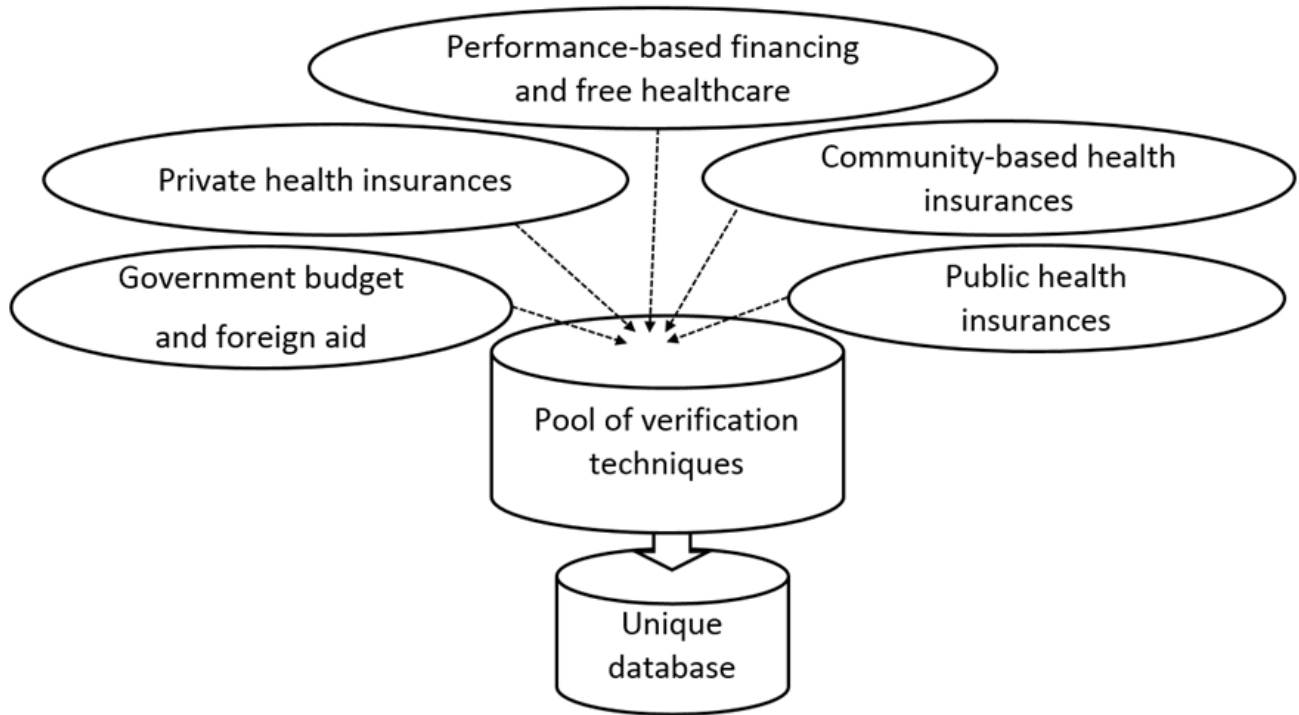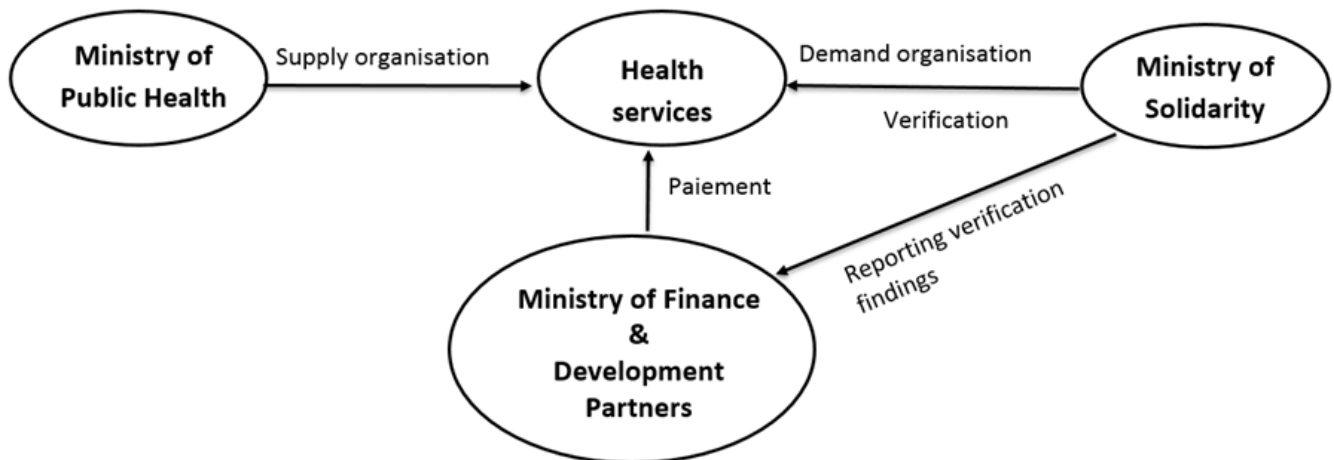
FIGURE 2: Pooling Verification Techniques

FIGURE 3: Proposed Institutional Design of Healthcare Verification in Burundi

As the authorised organiser of the demand for healthcare services in Burundi, the Ministry of Solidarity should secure the verification function.[35]

The Ghanaian model, the most advanced African country in strategic purchasing of healthcare services for UHC, is worth considering in Burundi. The package of healthcare services to pay is nationally defined by act, healthcare provision standards are defined by the Ministry of Public Health as the organiser of the supply of healthcare services, and the accredited national authority for health insurance enforces those standards through a contract-oriented verification system.[36]

The advantages of this power balance between supply and demand for healthcare services include the separation of institutional functions in purchasing healthcare services, which results in an impartial verification system and, thus, resilience to fraud, abuse, and waste.

CONCLUSION

This study has argued that when properly implemented, healthcare verification facilitates visualising a country's coverage situation and informing timely interventions that are required to advance UHC implementation. More investments in research are required to recognise healthcare verification as an essential sub-function of health financing for UHC implementation. Before getting there, setting a global agenda for healthcare verification would be an expert solution for mutual understanding and the development of this function, which is currently under-exploited.

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