



# An evaluation of funding challenges in the Malawian public healthcare delivery sector

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**Dates:**

Received: 07 May 2022  
Accepted: 01 Feb. 2023  
Published: 31 Mar. 2023

**How to cite this article:**

Hanif, R. & Musvoto W.S., 2023, 'An evaluation of funding challenges in the Malawian public healthcare delivery sector', *Africa's Public Service Delivery and Performance Review* 11(1), a654. <https://doi.org/10.4102/apsdpr.v11i1.654>

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**Background:** Reliable and adequate healthcare funding is crucial in public healthcare service delivery. However, district hospitals in Malawi, face funding challenges as evidenced by poor service delivery.

**Aim:** This study aimed at investigating funding challenges experienced by public district hospitals of Malawi in the provision of healthcare services and proposing strategies for improved funding.

**Setting:** The research presented in this article evaluates funding challenges in the public healthcare sector in Malawi, a developing country.

**Method:** An exploratory sequential mixed method design was used. Qualitative data were collected through semi-structured interviews with 10 purposively selected individuals and were analysed thematically. Quantitative data were collected using questionnaires from 328 respondents. Quantitative data underwent factor and univariate analysis.

**Results:** The study revealed that government funding is received late and is inadequate; donor funding was declining and earmarked for specific health activities; while income generation capacity of hospitals and Councils is weak. The study suggests that hospitals should introduce fees for service, government should be lobbied for increased funding allocations, and revenue-generating capacity of hospitals and Councils should be enhanced.

**Conclusion:** The study concludes that there is an urgent need for government to prioritise the healthcare delivery sector and increase its funding. Hospitals and Councils should be innovative in order to generate additional funding for operations and the revenue generation capacity of hospitals and Councils should thus, be enhanced.

**Contribution:** The study adds to the healthcare funding debate in developing countries by providing a context-specific analysis of healthcare funding challenges and suggesting improvement strategies.

**Keywords:** healthcare services; health funding; funding challenges; Councils; district hospitals; donor funding.

## Introduction

Public service delivery, including healthcare, is hampered by funding challenges. Scholarly arguments allude to the fact that costs of providing healthcare are substantial (Kairu et al. 2021). This study aimed at identifying and evaluating funding challenges that the public healthcare service delivery sector, specifically the district hospitals in Malawi, are experiencing. Furthermore, the study explores strategies for public healthcare funding improvement.

For developing Sub-Saharan countries, governments' allocations towards healthcare delivery are insufficient (Kiross et al. 2020; Top, Murat & Sapaz 2020). For instance, Boachie, Ramu and Pölajeva (2018) observe that health budget allocations in Ghana are low and declining, and in 2014 the allocation to the health sector was only 6.82% of the national budget. This confirms the extent of underfunding that the public healthcare sector in sub-Saharan Africa is experiencing. The Abuja benchmark was a guide for health funding commitments for African countries, to enhance health funding (Alhassan et al. 2020), but the discussion herein suggests that African countries fail to achieve the enhanced health funding.

Adequate finances are crucial for public service delivery, (Oleribe et al. 2019) and are specifically important in healthcare service provision for the poor, as they are the ones to patronise public health facilities (Seddiky 2019). Scholarly works emphasise the need for increased health spending

for Africa, as healthcare expenditure is important in achieving improved health outcomes (Kiross et al. 2020).

## Background

In Malawi, public healthcare is provided at community, primary, secondary and tertiary levels, and each level links with the upper level through a referral system (Makwero 2018; Mchenga et al. 2022). The tertiary level comprises of central hospitals, while the community, primary and secondary levels are managed by district hospitals (Makwero 2018).

District hospitals receive funding from the Treasury, through the Local Government Finance Committee, to the Councils. Some healthcare funding is received directly from donors to the district Councils and then channelled to the district hospitals. As secondary-level healthcare provision is decentralised, management of funding and health provision is performed by the District Council, headed by the District Commissioner, and the Director of Health and Social Services, in conjunction with the District Health Management Team, which manages the district hospitals (Borghi et al. 2018).

The economic development of a country is dependent on the health status of its people, among other determinants (Bloom, Kuhn & Prettnner 2018). Hence, the Malawi Government upholds that a healthy population is a prerequisite for increased national productivity and accelerated economic transformation (Malawi Government 2020). Consequently, Malawi Government commits to achieving Universal Health Coverage (UHC) by 2030, in line with Sustainable Development Goals (SDGs) (Masefield, Msosa & Grugel 2020). Despite the realisation of the importance of public healthcare, the sector does not meet the expectations of the public as evidenced by poor quality healthcare service delivery as a result of poor funding (Chansa et al. 2018). To stress inadequate funding, Piatti-Fünfkirchen, Chansa and Nkhoma (2020) explain that although healthcare budgetary allocations have been steady in nominal terms, the real per capita has been declining. Hence, there are calls on the Malawi government to provide more funding to the sector to support public healthcare service provision for the growing population of Malawi (Khuluza & Haefele-Abah 2019). To a large extent, the public healthcare sector in Malawi is donor-funded (Masefield et al. 2020). Approximately 70% of public healthcare funding is from donors (Borghi et al. 2018). Donor reliance for funding public healthcare delivery has proven to be risky, as the sector is then vulnerable to funding shocks in cases of donor flight (World Bank 2021). This was the experience in the healthcare sector when revelations of gross financial mismanagement in the public sector dubbed 'the cash-gate scandal' arose (Adhikari et al. 2019). In addition, donor funding is earmarked for activities preferred by the donors (World Bank 2021). This may mean that non-preferred healthcare delivery activities would not be supported adequately (Kirabo-Nagemi & Mwesigwa 2020).

Healthcare funding challenges in Malawi have led to shortages of drugs, equipment and staff; resulting in poor quality services (International Monetary Fund 2018). Consequently, the sector has suffered from absenteeism, corrupt practises, and poor performance because of low staff morale (International Monetary Fund 2018). The poor and vulnerable are, as a result, affected by the poor service delivery in the hospitals as they are the ones who mostly seek public healthcare services (Mchenga et al. 2022; Myint, Pavlova & Groot 2019).

Less research has been undertaken in the public healthcare service delivery sector specifically addressing funding challenges and exploring strategies aimed at enhancing and improving funding. In addition, in Malawi major related studies have focused on financial management (Piatti-Fünfkirchen et al. 2020), resource allocation (Twea, Manthalu & Mohan 2020), and sub-national allocations of funds (Borghi et al. 2018).

## Problem statement

To satisfactorily meet healthcare service delivery obligations, healthcare facilities require adequate funding. Thus, the need for effective and efficient funding to support service delivery cannot be overemphasised. However, public healthcare delivery facilities in Malawi including district hospitals are subjected to problems related to the flow of funding for service delivery. For instance, funding to healthcare facilities is said to be inadequate, thus, affecting the quality and quantity of healthcare delivery as facilities are compelled to scale down hospital activities. Such compromised service delivery negatively affects patients, of whom the majority in Malawi, depend on public healthcare service delivery for their medical requirements.

In the next sections, this article presents the research methodology, data analysis and the interpretation of the empirical results emerging from the data, the conclusion and research recommendations.

## Literature review

This section defines the theoretical framework for the study and presents an overview of the empirical literature.

### The theoretical framework for the study

The study is founded on the Theory of Constraints (TOC) developed by Goldratt in the 1980s in which he focused on limitations that businesses encounter and have an effect on performance. TOC is a multifaceted management philosophy, which focuses on resource constraints. Accordingly, TOC aims at ensuring that resource constraints are reduced and improvements continue so that the system can improve its performance, thereby, attaining its goals (Kumar, Siddiqui & Suhail 2020). This study looks at funding challenges in the healthcare and proceeds to investigate on possible ways of improving funding so as to enhance healthcare service

delivery. The basic problem in the study is inadequate funding, which is identified as a constraint in the public healthcare services in Malawi, and needs to be improved. The importance of adequate funding to support healthcare service provision and the consequences of underfunding in the sector have been well debated. Having identified the funding challenges, the study further identifies strategies that will improve funding, which is the resource that affects performance in terms of healthcare service delivery.

### **Funding in the public healthcare delivery sector**

It has been observed that in Africa and beyond, there are funding challenges faced by the public healthcare sector that negatively affect public health service delivery. For instance, poor quality healthcare service delivery is attributed to financing challenges (Chireshe & Ocran 2020; Grigoli & Kapsoli 2018; Novak & Bridwell 2019). Despite an observed trend of increased healthcare expenditure over the years (Chu, Kwon & Cowley 2019), healthcare funding is still limited and inadequate (Boachie et al. 2018; Islam, Akhter & Islam 2018; Kiross et al. 2020). In addition, funding for healthcare delivery has been reportedly late (Furukawa & Takahata 2018). The limited and late funding tends to force health facilities to compromise the quality of healthcare.

Governments provide approximately only a third of healthcare funding, hence the reliance on supplementary funding outside government (Micah et al. 2019). This shows that governments do not fulfil their responsibility of basic healthcare service delivery. For this reason, Barwise and Liebow (2019) stress the importance of donor funding in the public healthcare delivery sector as this has enabled the construction of hospitals, health research centres, and enhanced access to quality care. Although donor funding makes tremendous contributions to healthcare delivery, countries dependent on donor funding have presented challenges. For example, donor funding is declining and there is a limited political will to take over the role of donors (Gotsadze et al. 2019; McDonough & Rodríguez 2020). This state of affairs consequently affects health programmes supported by external funding. Furthermore, Furukawa and Takahata (2018) point out that donor funding has been associated with uncertainty in the availability of funding, which is detrimental to service delivery. In addition to the aforesaid, Kirabo-Nagemi and Mwesigwa (2020) suggest that donors influence decisions on the determination of preferred healthcare activities, despite government's involvement in policy making. Overall, challenges in funding have resulted in constrained enrichment of the poor and have escalated inequalities in society (Rao 2018). This is because of the fact that funding challenges lead to poor healthcare service delivery and limit access to healthcare, both of which deter the achievement of health outcomes.

In the quest to reduce the effects of healthcare funding challenges, which result in inadequate funding for healthcare service delivery, scholarly works have made a number of recommendations in mitigation of such challenges. Hung

and Hager (2019) explain that diversifying revenue sources would attain availability of funding and they argue that with diversified funding sources, health facilities would continue to provide quality service delivery. This means that, with increasing demand for health services and lean government pockets, diversified funding sources would be ideal for sustainable funding in the sector. In addition, some countries such as Vietnam, Ghana, Peru, Mexico, and Indonesia introduced health insurance systems to boost healthcare funding (Chu et al. 2019; Myint et al. 2019) and identified taxation on sugar-sweetened beverages and on alcohol and tobacco as possible avenues for increase health funding.

## **Methodology**

### **Research design and method**

This study adopted a sequential exploratory mixed-method design. Semi-structured interviews, using an interview guide, allowed for an in-depth exploration of funding constraints in the district hospitals, and how they could be mitigated. The qualitative findings were used to develop a questionnaire for the quantitative study phase. Qualitative data were collected from purposively selected key-informants. Quantitative data were collected through self-administered questionnaires, from a pool of hospital and Council personnel.

### **Research setting**

This study focused on the public healthcare delivery sector in Malawi, specifically the district hospitals. Quantitative data collection involved 14 of the 26 district hospitals, which were randomly selected to participate in the study. Requests for consent were sent to all 26 district hospitals. Sixteen districts consented; however, during questionnaire administration, only 14 districts participated. Qualitative study participants were purposively selected to attend interviews. The ten purposively selected participants were drawn from diverse backgrounds but were deemed knowledgeable and experienced to provide insights into public healthcare service delivery funding. Contacts were made directly with individuals and arrangements in terms of timing and venue were made.

### **Population and sample**

For the qualitative phase of the study, the participants were diverse role players in hospital financial management, at differing managerial levels and affiliations. The participants comprised 10 purposively selected key-informants with in-depth knowledge of the district hospital finances. These were drawn from the district hospitals, District Councils, National Local Government Finance Committee, National Audit Office, and the Civil Society Organisation.

The population for the quantitative study was the Council and hospital management and Programme Coordinators. Their roles affect the funding decisions of the district hospitals. The study population was 1040 officials from hospitals and Councils. Krejcie and Morgan (1970) provide a

sample size of 285 for a population of 1040. However, this study targeted 400 participants out of which 328 responded giving a response rate of 82%. The officials from whom data were collected were: District Health Management Teams (Directors of Health and Social Services, Human Resource Management Officers, District Medical Officers, District Nursing Officers, Health Promotion Officers, District Environmental Health Officers, Hospital Accountants, Hospital Administrators); Council Officials (District Commissioners, Directors of Finance, Directors of Administration, Procurement Officers, Directors of Planning and Development, Directors of Public Works and Internal Auditors); and Programme Coordinators.

### Data collection

Qualitative data were collected through tape-recorded individual interviews. The interview guide aimed to explore the funding situation in the district hospitals in Malawi and specifically, probed funding trends, major funding sources, supplementary funding sources, and innovations that could be introduced to improve funding. Before the actual interviews were conducted, three mock interviews were made to gauge the clarity and length of the interviews. Quantitative data were collected through self-administered questionnaires. The results of the qualitative study were used by the researchers to develop the questionnaire. The questionnaires were designed on a five-points Likert scale, ranging from strongly disagree to neutral to strongly agree, depending on the opinion or attitude of a respondent. All questions in the questionnaire were close-ended questions. Before the questionnaires were distributed to participants, they were piloted on 43 participants from three district hospitals, and were of the designations of the target group.

### Data analysis

The qualitative data that were collected from semi structured interviews at the exploratory stage of the research were analysed using thematic analysis. The qualitative data were thematically analysed because textual data collected from verbal interviews is appropriate for thematic analysis (Lester et al. 2020). Thematic data analysis processes, as prescribed by Lester et al. (2020), were undertaken. Thus, the audio data were tape recorded during the interviews and kept in a digital form. Thereafter, the data were transcribed verbatim. This was followed by intense familiarisation of the data by going through it a number of times to get initial reflections of the data. The data were then coded and themes were drawn from it and then the analysis was presented. Themes that emerged from the analysis were used to guide questionnaire development.

For the quantitative data, the study used principal component analysis (PCA) to analyse strategies that were identified to improve funding for the public district hospitals. A mean of 4.3709 and a low standard deviation (SD) of 0.71649 were

confirmed through the factor, strategies for improved funding. Furthermore, univariate descriptive statistics were used to present both the funding challenges and funding improvement strategies for the district hospitals.

## Results and discussion

### Healthcare funding challenges

The study identified a number of funding challenges that affect public healthcare service delivery in Malawi.

#### Declining donor funding

To a great extent, healthcare delivery sectors rely on donor funding, however, they do experience some challenges. For instance, Gotsadze et al. (2019) explained that the healthcare service delivery sector in Eastern Europe and Central Asian regions experiences declining donor funding. The authors further observe that the situation is worsened by a lack of political will by governments to fill in gaps not filled by donors (Gotsadze et al. 2019).

Participants reported that a large proportion of health funding is from donors, however, this has been declining over the years. A participant said that:

*'Over the years, donors have also reduced their funding significantly. But in recent times, 4 years down the line, donor support has been declining, I think now we around 55%.'*  
(Participant 9, Internal Auditor, 09/03/2021)

Furthermore, the findings confirm that donor funding is declining in the district hospitals. A majority of the respondents (70.7%) agreed that donor funding to the hospitals is declining.

Declining donor funding results in less funding available for public healthcare delivery. Consequently, service delivery quality would deteriorate because donor funding forms the bulk of public health funding.

#### Inadequate government funding

Kairu et al. (2021) hint that sufficient funding is a critical element in the success of healthcare delivery. In addition, scholarly work endorses the fact that insufficient funding is a challenge in public healthcare delivery institutions resulting in operations in the healthcare facilities becoming crippled (Boachie et al. 2018; Grigoli & Kapsoli 2018; Piatti-Fünfkirchen et al. 2020).

Participants explain that health funding is far below the needs of the district hospitals, thereby, crippling service delivery. In addition, participants state that government funding is only a third of the funding available to hospitals.

One participant stated:

*'The government, to be frank does not meet the ideal situation of the hospitals, the services are being compromised because of resources. The gap is huge. Normally an ideal situation in our economy is to keep the hospitals running, there is no fuel, but the ambulances should keep running, we are unable to pick up*



patients from referral hospitals from here to Blantyre.’ (Participant 7, Senior Assistant Accountant, District hospital)

The results further confirm that district hospitals are challenged with inadequate funding as agreed to by 88.4% of respondents. Thus, the one-third funding that the government provides to the hospitals barely covers health operations. Underfunding leads to cuts in the quality and quantity of healthcare delivery. This explains the need for multiple sources of funding for district hospitals.

### Reserved and declining donor funding

Research confirms that donor funding is earmarked for donors’ specific activities thereby, making their use restricted (Kirabo-Nagemi & Mwesigwa 2020). Critiquing reserving healthcare funding, Kirabo-Nagemi and Mwesigwa (2020) explain that such funds do not often address a country’s priority health requirements. However, Abor and Abor (2020) opine that donor funding can be targeted, but emphasise the need for coordination between players so that duplications in resource allocation in target areas could be avoided.

Some participants identify the earmarking of donor funding for own preferred activities as a challenge in health funding. As district hospitals in Malawi are dependent on donor funding, the findings reveal that such funding is restrictive, as its use is already tagged by the donors for their preferred activities.

A participant was quoted saying:

‘Their funding goes to specific projects like cholera and HIV/AIDS. But we cannot ask them to pay for electricity or to buy foodstuffs ... the activities that are supported are to a large extent determined by the donor, we can discuss with them how that can be done, but actually, the targets are determined by them.’ (Participant 6, Director of Health and Social Services, District hospital)

The quantitative results show that most of the respondents (82.9%) agreed that donor funding was attached with conditions for use.

Such conditional funding may not wholly address the needs of the hospitals, especially, if the donors’ prioritised areas are not the same as those of the hospitals. This may result in under-delivery in areas not covered by the donors’ preferences and other funding sources cannot cover the hospital’s needs.

### Late government funding

Earlier studies in Malawi portray that late funding to government hospitals has been ongoing (Borghi et al. 2018). In Tanzania, both donor and government funding for healthcare delivery is usually late (Furukawa & Tahakata 2018). Late funding is said to affect service delivery and cripple operations (Piatti-Fünfkirchen et al. 2020).

Participants reported that district hospitals receive health funding late, thereby, affecting service delivery.

Participants explained that:

‘What I can say is there are always delays in the funding. I have to be frank, there is a problem with timeliness because you look at when you are given the funds.’ (Participant 3, Accounts assistant, District hospital)

‘The challenge is that the hospital needs to run each and every time, we have a lot of activities, and the timelines of the funds leave a lot to be desired. We receive funds mostly very late, and we have dire need of essential items.’ (Participant 7, Senior Assistant Accountant, District Hospital)

A majority of the respondents (86.65%) agree that district hospitals receive government funding late.

Providing funding to healthcare facilities late would deter effective and efficient delivery of service. This is the case as healthcare requirements would not wait for funding. Hence, if there is a need and cannot be fulfilled, then service delivery is said to have been compromised.

### Weak revenue generation capacity of Councils and hospitals

Following the decentralisation process, local governments in Brazil were mandated to co-finance health programmes in addition to the delivery and management of healthcare services (Castro et al. 2019). This was meant to supplement government funding, which was deemed to be on the lower side. The expectation for Malawi is the same. However, some participants pointed out that the funding challenges faced by the district hospitals are because the Councils and hospitals have low revenue generation capacity.

Participants commented as follows:

‘We have devolved yes but Councils do not have the capacity to help because at the moment they have salary arrears, just because they are under-collecting.’ (Participant, Director of Health and Social Services, District hospital)

Respondents (76.5%) agree that Councils and hospitals have poor revenue generation capacity. Decentralisation has given more powers and responsibilities to Councils including income generation. The supposition that Councils will to some extent fund their activities is therefore apparent. What remains is that government should empower such institutions to be effective in their revenue generation drives.

### Health funding improvement strategies

Having discussed the funding challenges that the public healthcare delivery sector in Malawi faces, this section attempts to argue for proposals for improved healthcare funding.

#### Introduce fee for service

Abor and Abor (2020) found that a portion of Ghana’s healthcare delivery sector is funded by patients. Chile operates both public and donor. However, Myint et al. (2019)

observe that the more the poor spend on health, the more the levels of poverty tend to worsen and the more limited is their access to health services.

Most participants reported that hospitals should introduce fees for service in their facilities to generate additional funding to support healthcare service delivery.

Participants commented as follows:

'The first one that I see is to introduce paying services, because hospitals much as we are saying are patronised by the poor community, but there are people who have money, who can afford to be paying.'

'We are looking at how maybe we can have private sections which has proved to get results, for example, Queens has done it, Zomba they are doing it. They are realising quite a lot of funds, which can be pumped into the system either procuring of medicines or making renovations.' (Participant 2, Director of Health and Social Services, District hospital)

A majority of respondents (78.3%) agreed with introducing a fee for service as a funding improvement strategy for the district hospitals.

Observations have indicated that there is willingness and ability by some sections of patients to pay for healthcare. In that regard, if this proposal was adopted, public hospitals would be in a position to generate income, which would contribute to the funding of hospital activities.

### Enhance revenue generation capacity of Councils

Management has a responsibility to identify additional sources of revenue for the hospitals (Abor & Abor 2020). In agreement, management of district hospitals in Malawi lies with the Councils following decentralisation, hence the call for enhanced revenue generation capacity is within Councils.

Some participants reported that Councils should be capacitated to enhance revenue generation capabilities, because they fail to financially support sectors under them, following decentralisation, as their collections are low.

A participant stated that:

'The current situation on the ground is that Councils' collections are very low, to the extent that they fail to pay even their direct staff they are failing to pay their staff so they cannot extend a hand to the health sector will be a problem.' (Participant 1, Financial Analyst, National Local Government Finance Committee)

In agreement, respondents (86.9%), confirm that the revenue generation capacity of Councils and hospitals should be enhanced to boost revenue available to the healthcare sector. Hospitals may not be adequately funded by the government as has been appreciated already. In addition, the facilities depend on donor funding to a large extent presents its own challenges. This argument presents the call for Councils to be capacitated in revenue generation avenues to support the delivery of the mandates that they have.

### Lobbying government for increased funding

Oleribe et al. (2019) contend that funding should be adequate to support the delivery of a whole range of public services. All participants were of the opinion that the government should be lobbied to increase health funding.

A participant explained that:

'There is what is called the Abuja declaration, governments committed that they will be increasing funding towards health to 15%. I know increasing funding for health [care] would mean getting funding from elsewhere, so maybe affecting other sectors, but having a healthy population is a priority because only healthy people can contribute to the development of the country. So that's an area I would want to see change, increase funding for health.' (Participant 6, District Medical Officer, District hospital)

The majority of the respondents (93.6%) agreed that lobbying the government for increased funding would improve the funding situation in the district hospitals.

It is an undisputed fact that resources are never enough, especially in the public sector where the demand for goods and services is enormous. However, the dire underfunding of public hospitals in Malawi is crippling service delivery.

### Introduce national health insurance schemes

Some participants explained that the government should introduce national health insurance schemes to boost health funding.

A participant said:

'Maybe we should diversify our funding for the health system in Malawi. Maybe we are so limited in the funding that we get because we are relying on donors and the government, but maybe we would have a contributory health system where the citizen also contributes something. So maybe in one way or the other, we may need a national health insurance system.' (Participant 6, District Medical Officer, District hospital)

Furthermore, 71.1% of the respondents agreed that the introduction of national health insurance schemes would enhance funding for the district hospitals. These findings are confirmed by Abor and Abor (2020), who state that national health insurance schemes are a source of income.

### Conclusion

Based on the data analysis of the study, the public healthcare service delivery sector in Malawi specifically the district hospitals, faces challenges with regard to funding. Data analysis has revealed that the government funds the healthcare service delivery, but the funding is not adequate to effectively support service delivery. Furthermore, the study reveals that apart from the funding being adequate it is received rather late, thereby, disrupting service delivery.

The study also shows that the bulk of healthcare funding is from donors, which is often reserved for activities preferred by the donors, hence restricting flexibility on its use, donors funding has also been declining over the years. Lastly, the study results reveal that the hospitals and Councils lack revenue generation capacity, as a result, they fail to contribute much-needed funding to the hospitals. Needless to say, these findings reveal that funding sources are deficient, hence the need for strategies aimed at improving funding for the sector. Based on the challenges, the conclusion drawn is that the government of Malawi should be lobbied to take deliberate actions to increase district hospital funding because reliance on donors is risky. The hospitals should generate their revenue by introducing fees for service-paying sections in their facilities. Councils and hospitals should enhance their revenue generation capacity so that they can contribute to healthcare service delivery funding. In addition, the government should introduce national health insurance schemes as a way of improving health funding. The authors recommend that further research should be conducted on enhancing avenues of enhancing the revenue generation capacity of hospitals and Councils so that hospitals can generate their contribution for funding and be able to finance some of their own activities.

## Acknowledgements

The authors would like to acknowledge Directors of Health and Social Sciences and their research teams and all participants to the study for cooperating and permitting data to be collected from them.

## Competing interests

The authors declare that they have no financial or personal relationships that may have influenced them inappropriately in writing this article.

## Authors' contributions

R.H. originated and conceptualised the study, collected and analysed data, and drafted the manuscript under the supervision of W.S.M. As a supervisor, W.S.M. was actively involved in all the stages of the research process including review of the draft manuscript.

## Ethical considerations

Ethical clearance for the study was obtained from the North-West University's Economic and Management Sciences Research Ethics Committee and the Ethics number is NWU-00934-20-A4. At local level, ethical clearance was also sought and obtained from the National Committee on Research in the Social Sciences and Humanities. Permission from gatekeepers was obtained from the 14 district hospitals research committees that participated in the study. All study participants provided informed consent.

## Funding information

The author(s) received no financial support for the research, authorship, and/or publication of this article.

## Data availability

The data that support the findings of this study are available from the corresponding author, R.H. on request.

## Disclaimer

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of any affiliated agency of the author and the publisher.

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