Asian Research Journal of Arts & Social Sciences

Volume 22, Issue 9, Page 1-8, 2024; Article no.ARJASS.121336
ISSN: 2456-4761

Impact of Direct Health Facility Financing on Health Insurance Enrollment and Service Quality in Dodoma Region, Tanzania

Angelina Privatus Kihanga [a*], Grace Mhalu [b], Adeniyi F. Fagbamigbe [c] and Angel Dillip [b]

[a] School of Life Sciences and Bio-engineering, Nelson Mandela African Institute of Science and Technology, P.O. Box 447, Arusha, Tanzania.
[b] Ifakara Health Institute, Tanzania.
[c] University of Ibadan, Nigeria.

Authors' contributions

This work was carried out in collaboration among all authors. Author APK designed the study, collected and analyzed the data. Authors AD, GM and AFF carried out a critical review of the study, thus making substantial contributions to the study throughout its development phase and drafting of the manuscript. All the authors read, revised and reviewed the manuscript. All authors read and approved the final manuscript.

Article Information

DOI: https://doi.org/10.9734/arjass/2024/v22i9568

Open Peer Review History:
This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: https://www.sdiarticle5.com/review-history/121336

Original Research Article

Received: 06/06/2024
Accepted: 10/08/2024
Published: 13/08/2024

ABSTRACT

The National Health Insurance Fund (NHIF) and the Improved Community Health Fund (iCHF) are pre-payment schemes in Tanzania designed to achieve universal health coverage (UHC). Despite these efforts, public health facilities have historically struggled with poor-quality care. In response,

**Corresponding author: Email: kihangaa@nm-aist.ac.tz;*

Cite as: *Kihanga, Angelina Privatus, Grace Mhalu, Adeniyi F. Fagbamigbe, and Angel Dillip. 2024. "Impact of Direct Health Facility Financing on Health Insurance Enrollment and Service Quality in Dodoma Region, Tanzania". Asian Research Journal of Arts & Social Sciences 22 (9):1-8. https://doi.org/10.9734/arjass/2024/v22i9568.*

the Direct Health Facility Financing (DHFF) mechanism was introduced in 2017, enabling health facilities to procure medicines and equipment directly from approved vendors when out-of-stock notifications are received from the Medical Store Department (MSD). This study evaluates the impact of DHFF on health insurance enrollment and service quality in the Dodoma Region. Utilizing a mixed-methods approach with an explanatory sequential design, a total of 35 respondents were involved in the proposed study, of which 30 were obtained from health insurance beneficiaries and 5 were from key informants. Results revealed increased health insurance enrollment for both NHIF and iCHF from 2018–2019 to 2019–2020, attributed to enhanced medicine availability, community education, and sensitization efforts. Beneficiaries reported significant improvements in health facilities, including better medicine availability, upgraded infrastructure, and improved attitudes from healthcare providers. Healthcare providers and authorities also noted improved service quality since DHFF's introduction. However, challenges remain, particularly with MSD's rigidity in notifying health facilities about out-of-stock items. Recommendations include enhancing the MSD's supply chain management to ensure timely notifications and deliveries. Future research should expand to multiple regions to account for cultural variations and additional factors influencing health insurance participation, enrollment, and service quality.

Keywords: Direct Health Facility Financing (DHFF); Health Insurance Enrollment; National Health Insurance Fund (NHIF); Improved Community Health Fund (iCHF); Tanzania.

1. INTRODUCTION

Pre-payment schemes in health have been the commonest resort for third-world countries in their bid to attain universal health coverage. Universal health coverage is envisaged in Sustainable Goal Number 3 [1,2]. Characterized by the inability of the general population to afford user fees in healthcare, third-world countries have been focusing on ensuring that a larger part of their population is enrolled in health insurance [3]. Maluka et al. [4] contend that countries in sub-Saharan Africa have been reforming their health sector, as evidenced by Kenya, which introduced the national health insurance scheme and direct health facility financing. Tanzania has not been left behind in these reforms and restructurings of the health sector in its bid to attain universal health coverage. To make sure that health services are affordable and accessible to the general population, the country has been reforming the payment schemes, beginning with the inception of the National Health Insurance Fund (NHIF) and, lately, the Improved Community Health Fund (iCHF). Besides, the country has put in place waivers and exemptions for children under five years, pregnant women, and the elderly [5].

In 2017/2018, Tanzania adopted Direct Health Facility Financing to empower health facilities to purchase medicines and related equipment from the prime vendor in case they receive out-of-stock notification from the Medical Store Department (MSD). DHFF is being implemented at the primary level, nationwide, and it is expected that it will resolve the challenge of poor services, shortages of medicines and medical equipment, and low morale among health care providers by ensuring the availability of essential medical. Kapologwe et al. [6] are of the view that DHFF is the provision of government or external funds directly to the health facility to meet the operational requirements. Guidelines for its implementation require the health facilities, each at the primary level, to have an account in which funds are deposited, and the funds are provided with the approved budget. Studies by Ajuaye et al. [3] and Ndomba and Maluka [4] show that the Government of Tanzania introduced health insurance schemes to increase accessibility to health services by enhancing the affordability of health services in both government and private healthcare facilities. However, the increase in health insurance has led to a birth of new problems, including an increased workload on the already few healthcare workers, thus diminishing their morale as well as decreasing their enrolment in health insurance schemes. One solution was to introduce DHFF to provide the health facilities with the ability to purchase medicines and other pharmaceutical goods at MSD and from other vendors. The goal is to improve the quality of health services being provided in the facilities, which has a direct influence on the willingness of people to enroll in health insurance schemes. The study, therefore, looks into the extent to which DHFF contributes to enrolment in health insurance schemes in Dodoma Region.

2. MATERIALS AND METHODS

2.1 Scope and Area of the Study

The study investigates the impact of Direct Health Facility Financing (DHFF) on health insurance enrollment in Dodoma Region, Tanzania. It examines the effects of DHFF on enrollment trends in health insurance schemes, specifically the National Health Insurance Fund (NHIF) and Improved Community Health Fund (iCHF), by analyzing data from healthcare providers and community members within the region. The scope includes an evaluation of service quality improvements, changes in enrollment rates, and the broader implications of DHFF on health insurance uptake, focusing on the period from 2018/2019 to 2019/2020.

2.2 Research Approach

The study employed a mixed-methods approach to combine both quantitative and qualitative data, which offers a comprehensive understanding of the research problem. According to Sharma et al. [7], using a mixed-methods approach allows researchers to leverage the strengths of both data types to provide a more complete analysis. This combination enhances the overall validity of the study by addressing both the statistical and contextual aspects of the research problem.

2.3 Research Design

An explanatory sequential design was employed in the research. This design involved first collecting and analyzing quantitative data on enrollment trends, followed by the collection and analysis of qualitative data to further explain and contextualize the quantitative results. The initial quantitative analysis provided a broad understanding of enrollment patterns, while the subsequent qualitative phase offered deeper insights into the factors influencing these trends. This approach allowed for a more detailed interpretation of the data, integrating both statistical and contextual perspectives to enhance the study's overall validity and depth of understanding.

2.4 Study Population and Sample Size

The study focused on a target population that included key stakeholders involved in the health insurance system, such as healthcare providers, district medical officers, iCHF enrollment officers, district NHIF coordinators, district iCHF coordinators, facility committee members, and health insurance beneficiaries. Babbie [8] points out that a sample of at least thirty respondents is satisfactory and can allow statistical analyses to be carried out. Therefore, in the case of this study, a total of 35 respondents were involved in the proposed study, of which 30 were obtained from health insurance beneficiaries and 5 were from key informants, including district medical officers, NHIF and iCHF coordinators, and other stakeholders directly involved in health insurance schemes.

2.5 Sampling Technique

The study employed a combination of purposive and stratified random sampling techniques to select participants. Purposive sampling was utilized to identify key informants, such as district medical officers, iCHF enrollment officers, insurance coordinators, healthcare providers, and other relevant healthcare workers who have specific knowledge and experience pertinent to the study's focus. Stratified random sampling was applied to select health insurance beneficiaries for focus group discussions (FGDs) and surveys, ensuring a representative sample across different demographic groups, including age, gender, and socioeconomic status. This approach allowed for a comprehensive understanding of the various perspectives on health insurance enrollment and related healthcare issues within the community.

2.6 Data Collection

Both primary and secondary data were utilized in this study. Primary data was collected from healthcare workers and community members through various methods, including questionnaires, in-depth interviews, and focus group discussions (FGDs). The interviews involved healthcare workers such as district medical officers, iCHF enrollment officers, and others, while FGDs were conducted with community members to gather qualitative insights. Observations and stakeholders' meetings were also held in each region to supplement the data. Secondary data was sourced from documentary reviews, specifically health insurance enrollment records, to provide statistical context and support the primary findings. The integration of both primary and secondary data ensured the accuracy and reliability of the information gathered, enhancing the overall validity of the study.

2.7 Data Analysis

Data collected was coded and screened to remove errors before analysis. The data was

analyzed using both quantitative and qualitative techniques. Descriptive statistics, such as percentages and frequencies, were computed using MS Excel and SPSS Version 25 for the quantitative data to present the enrollment trend, while thematic analysis was applied to the qualitative data. The results were presented in the narrative text.

2.8 Validity and Reliability of Research Instruments

To ensure the validity of the proposed research, the researchers used different data collection tools that were questionnaires, key-informant interviews, FGDs, observations and documentary reviews. To control the reliability of study the pre-testing of questionnaires, key-informant interviews guide and FGDs questions was done to check their comprehensiveness and consistency on collecting data required for this study.

2.9 Ethical Considerations

This proposed research bounded to research ethics. The researcher team ensured participants' rights and consent to participate in the study are considered. The researchers seek for permission from institutions involved in the study and communicated to the respondents on the purpose of the study and a method to be used to create awareness among participants on what was exactly needed from them. All collected information from respondents was done with high degree of confidentiality and was only used for the purpose of this study.

3. RESULTS

The findings from the Fig. 1 showed that there was an increase in the enrolment of community members to the iCHF with an increase of 172 people in Kondoa District Council and 1,395 in Dodoma City Council in 2019/2020. Furthermore, Dodoma City Council recorded the highest increase of 431,567 new NHIF members in 2019/2020

Findings from the interviews show that improvements in the quality of services influenced the increase in enrollment. Respondents had this to say: "*People tend to accept enrolment due to the availability of good services, which is why one is more willing to incur costs in a private hospital than to visit public health facilities for services." [NHIF Enrollment Officer]*

Another respondent added: *At the facility, we are currently able to prepare our budgetary plans and execute them; ensuring facility workers are provided with incentives to increase morale.*

A similar perspective is expressed by respondents from the health department in the district, who maintained that the quality of services improved as a result of DHFF, and this has influenced enrolment in health insurance schemes. The community members also viewed DHFF positively since it increased their role in health services through the health governing committee. This is evidenced in the statement below:

> *"The establishment of DHFF has been of great value to us citizens, as we are now involved in the planning and budgeting of our health facilities. In addition, the drug disposal system has been improved. The infrastructure of our health facilities and hospitals has improved compared to the period before 2018." [Health Facility Governing Committee member]*

The NHIF and iCHF enrolment officers also responded that they encouraged people to enroll in insurance schemes, and one of the key selling points was the quality of services, especially in government health facilities, as a result of the introduction and implementation of DHFF. The findings are in line with the study by Kapologwe et al*.* [5], who found that DHFF helped improve enrolment in insurance schemes in Tanzania through improvements in service delivery owing to the autonomous nature of health facilities in budgetary decision-making.

Further, the study established that most health insurance beneficiaries were not aware of DHFF.

> *"Back in the day, we community members were even demotivated to visit public health facilities for treatment or diagnosis because, in most cases, one could get tested, and yet the prescribed medicines were not available or the tests that you were supposed to undergo were not covered in the health insurance, especially for CHF users. At least our fellows using NHIF do not have as many difficulties as we do. This was so discouraging because we had to incur costs and take the trouble to look for medication elsewhere. Recently, the situation has improved. Medicines are now available, and*

even health workers are available most of the time. This is unlike in the past. (iCHF Insurance Beneficiary)

The statement above suggests that the beneficiaries are aware of the improved quality of services but could not attribute such improvement to the introduction of DHFF. The examination of various dimensions, including quality of services, accountability, and transparency, and relating them to the inception of DHFF showed that there was an increased positive perception about the quality of health services, transparency, and accountability following the implementation of DHFF in the Dodoma Region. It was also found that healthcare providers regarded the working environment as friendlier owing to the availability of medical equipment and pharmaceutical goods compared to before DHFF. The friendly working environment assisted in improving the morale and motivation of healthcare workers, thus improving the quality of the service for the health insurance beneficiaries and other patients. The findings are in line with those by Opwora et al. [9], who identified that the period before DHFF was marked by low morale among healthcare workers due to a bad working environment, and the period after had a better working environment through DHFF.

Despite the positive influence of DHFF on the enrolment into insurance schemes, the study showed that there are challenges facing the enrolment of the community that emanate from dissatisfaction with the services received by the iCHF beneficiaries. Further challenges were noted on the part of DHFF, with delays in funds being the main one and a lack of flexibility in the use of funds. One of the healthcare providers said:

...the facility prepares a budget, then it goes to the council; later, the distribution is done, although the challenge that we faced was that the allocation was not in line with needs. Different locations have different needs based on the diseases that affect the area. [Health Care Provider]

The other challenge is the fact that the DHFF is to be used in procuring pharmaceutical goods from MSD, which in some cases lacks the requirements of the facilities. The procurement procedures that follow are cumbersome, affecting the quality of healthcare provided.

We sit as a committee and prepare budgets; we have an accountant who comes to oversee the budget. We then press an order to the prime vendor, the MSD. If the medicines are available, we clear the bill for delivery. However, when medical supplies are out of stock, we are provided with a list of those that are available for payment, and according to the laws, they are supposed to offer us out-of-stock notification to allow us to purchase them from other vendors. MSD has been too rigid to offer notification to health facilities. [Health facility in charge]

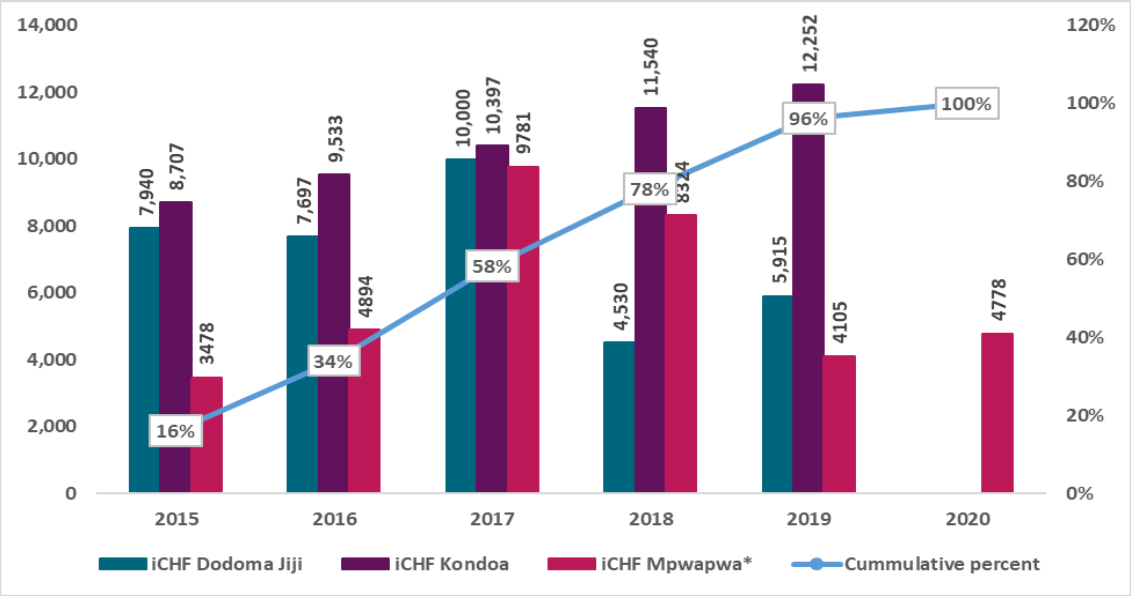

Fig. 1. Trends of iCHF health insurance enrolment from 2015/16 to 2019/20

From this statement, it was established that there are challenges that still need to be attended to if the DHFF is to bring more quality to health services as well as improve enrolment in health insurance schemes.

4. DISCUSSION

4.1 Enrollment and Participation Before the Introduction of DHFF

Before Direct Health Facility Financing (DHFF) was implemented in 2018, primary health centers in Tanzania depended on local governments for financial resources. This system resulted in inefficient service delivery, frequent stock-outs of medications, inadequate infrastructure, and low staff motivation. These issues led to low enrollment in health insurance schemes such as NHIF and iCHF. Research by Kapologwe et al. [5] and Mamdani et al. [10] found that delays and the central control of funds by local governments significantly hindered the efficiency and effectiveness of health facilities. Low enrollment in NHIF and iCHF prior to DHFF was attributed to several factors, including limited coverage, inadequate community education, and issues with the validity of membership cards across different localities (Kalolo, 2017). However, following the introduction of DHFF, there was a notable increase in insurance enrollment. For instance, iCHF enrollment rose by 1,385 in Dodoma City, and NHIF enrollment surged by 431,567 between 2018/19 and 2019/20. These increases were linked to the improved quality of services and infrastructure made possible by DHFF. Nonetheless, a decrease in enrollments in 2017/18, due to insufficient sensitization about NHIF benefits, was consistent with findings from Kalolo (2017), who noted dissatisfaction and unmet expectations among insurance beneficiaries.

4.2 Assessment of Beneficiary Perceptions and Experiences

The study evaluated beneficiaries' perceptions of health services under DHFF, focusing on quality, accountability, availability of medical equipment, and timely service provision. Post-DHFF, significant improvements were observed in these areas, including better service quality and availability of prescribed medicines and medical equipment. This aligns with findings from Kapologwe et al. [6], Tukay et al. [11], Ruhago et al. [12], and URT [13], which reported enhanced service delivery and equipment availability due to DHFF. Prior to DHFF, there was limited accountability and transparency, contributing to poor service delivery. DHFF's guidelines improved these aspects, resulting in more timely and effective services, as supported by Kapologwe et al. [6] and MoHCDGEC (2016).

4.3 Views and Experiences of Healthcare Providers

Healthcare providers and authorities reported a positive shift in service quality post-DHFF. The old system, criticized for bureaucratic delays, poor resource allocation, and lack of community involvement, led to inadequate medicine and equipment. Post-DHFF, direct and timely fund access improved service delivery and provider performance. These findings are similar to those of Mwakatumbula [14], highlighting timely disbursement of funds and autonomy at the facility. However, challenges like medicine shortages due to rigid MSD protocols persist. These findings are consistent with Kapologwe et al. [6] and URT [13], highlighting the benefits and ongoing issues with DHFF.

4.4 Accountability and Transparency

The study found that before DHFF, accountability and transparency in health facility budgeting were lacking, with no community involvement and unclear budget allocations. DHFF improved these aspects by enhancing accountability and transparency among implementers. This led to better service quality and reduced healthcare costs, aligning with Opwora et al. [9] and Mwakatumbula [14] which noted similar improvements in health services and transparency following the introduction of direct funding [15].

5. CONCLUSION AND RECOMMENDATION

5.1 Conclusions

The study has established that there is a perceived positive relationship between the establishment of DHFF and the improvement of the quality of health services, which were introduced in 2018. Therefore, DHFF has contributed to effective and efficient delivery of health services, thus increasing the enrollment of community members in health insurance schemes.

The study underscores that Direct Health Facility Financing (DHFF) advances Universal Health Coverage (UHC) by enhancing service quality, boosting health insurance enrollment, and improving accountability. These improvements in care and accessibility contribute to better financial protection.

5.2 Recommendation

The study recommends increasing health sector budget allocations to at least 15% to enhance infrastructure and service quality, similar to practices in Kenya and the U.S. Timely fund disbursement to health facilities and training in procurement and accounting are crucial. Furthermore, the Medical Stores Department (MSD) should ensure prompt delivery of orders and provide timely notifications of stockouts to enable health facilities to secure alternative supplies for continuous service delivery. Additionally, the study's limitations should be addressed in future research. The narrow focus on Dodoma Region may not represent other regions in Tanzania due to varying cultural and ethical contexts. To ensure the findings are generalizable, broader, multi-regional research is needed. Future studies should explore all relevant variables affecting health insurance participation and DHFF impact, considering additional factors that may influence the outcomes. This comprehensive approach will provide a more accurate and representative understanding of DHFF's impact on health insurance enrollment and service quality across different regions in Tanzania.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of manuscripts.

CONSENT

As per international standards or university standards, respondents' written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

As per international standards or university standards written ethical approval has been collected and preserved by the author(s). [IHI/IRB/No: 31-2020]

ACKNOWLEDGEMENTS

We extend our deep thanks to all respondents who devoted their invaluable time to participate in this study during data collection. These include the staff at the NHIF, the iCHF, and the Health Department in Dodoma Region as well as beneficiaries of the insurance schemes. Thus, the current study is in this acceptable standard because of the readiness of all the participants to cooperate.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Watkins DA, Jamison DT, Mills A, et al. Universal Health Coverage and Essential Packages of Care. In Disease Control Priorities: Improving Health and Reducing Poverty; 2017. Available:http://www.ncbi.nlm.nih.gov/pubmed/30212154
2. Renggli S, Mayumana I, Mshana C, et al. Looking at the bigger picture: How the wider health financing context affects the implementation of the Tanzanian Community Health Funds. Health Policy and Planning, 2019; 34 (January):12–23. Available:https://doi.org/10.1093/heapol/czy091
3. Ajuaye A, Verbrugge B, Van Ongevalle J, et al. Understanding the limitations of "quasi-mandatory" approaches to enrolment in community-based health insurance: Empirical evidence from Tanzania. International Journal of Health Planning and Management; 2019. Available:https://doi.org/10.1002/hpm.2795
4. Maluka S, Chitama D, Dungumaro E, et al. Contracting-out primary healthcare services in Tanzania towards UHC: How policy processes and context influence policy design and implementation. International Journal for Equity in Health. 2018;17(1).
5. Kapologwe, NA, Kalolo, A, Kibusi, SM, et al. Understanding the implementation of Direct Health Facility Financing and its effect on health system performance in Tanzania: A non-controlled before and after mixed method study protocol. Health Research Policy and Systems, 2019a; 17(1):11.

Available:https://doi.org/10.1186 /s 12961 - 018-0400-3

6. Kapologwe NA, Kagaruki GB, Kalolo A, Ally M, Shao A, Meshack M, Hoffman A. Barriers and facilitators to enrollment and re-enrollment into the community health funds / Tiba Kwa Kadi (CHF / TIKA) in Tanzania: A cross-sectional inquiry on the effects of socio-demographic factors and social marketing strategies. 2017;1–9.
Available: https://doi.org/10.1186/s12913-017-2250-z
7. Sharma LR, Bidari S, Bidari D, Neupane S, Sapkota R. Exploring the mixed methods research design: Types, purposes, strengths, challenges, and criticisms. Global Academic Journal of Linguistics and Literature; 2023
Available:https://www.gajrc.com/media/articles/GAJLL_51_3-12.pdf
8. Babbie E. Survey Research Methods. Wadsworth Publishing Company; 1970.
9. Opwora, A, Kabare, M, Molyneux, S, et al.: Direct facility funding as a response to user fee reduction: implementation and perceived impact among Kenyan health centres and dispensaries. Health Policy and Planning, 2010b;25(5):406–418.
Available:https://doi.org/10.1093/heapol/czq009
10. Mamdani M. Citizen and subject: On historicizing constitutional law. International Journal of Constitutional Law. 2018;16(2):280–286.
Available:https://academic.oup.com/icon/article/16/1/282/4995567
11. Tukay SM, et al. Evaluation of the direct health facility financing program in improving maternal health services in Pangani District, Tanzania. International Journal of Women's Health; 2021.
Available:https://www.dovepress.com/evaluation-of-the-direct-health-facility-financing-program-in-improvin-peer-reviewed-fulltext-article-IJWH
12. Ruhago Ga M, et al. Understanding the implication of direct health facility financing on health commodities availability in Tanzania; 2023.
Available:https://journals.plos.org/globalpublichealth/article?id=10.1371/journal.pgph.0001867
13. URT. Health Sector Strategic Plan; 2020 (June).
14. Mwakatumbula H. The implementation of direct health facility financing (DHFF): Prospects and challenges (PB 16/2021). REPOA; 2021.
Available:https://www.repoa.or.tz/?publication=the-implementation-of-direct-health-facility-financing-dhff-prospects-and-challenges
15. Dzinkambani A, et al. Lessons from Tanzania's direct health facility financing: A blueprint for Malawi. SPARC; 2023, October.
Available:https://sparc.africa/

Peer-review history:
The peer review history for this paper can be accessed here:
https://www.sdiarticle5.com/review-history/121336