

# Functionality of Primary Health Facilities Management Teams: Learning from 2017/2018's Tanzania Star Rating Assessment

Syabo M. Mwaisengela<sup>1\*</sup>, Joseph C. Hokororo<sup>2</sup>, Chrisogone J. German<sup>2</sup>, Erick S. Kinyenje<sup>2</sup>, Radenta P. Bahegwa<sup>2</sup>, Talhiya A. Yahya<sup>3</sup>, Mohamed A. Mohamed<sup>4,5</sup>, Omary A. Nassoro<sup>2</sup>, Ruth R. Ngowi<sup>2</sup>, Yohannes S. Msigwa<sup>2</sup>, Mbwana M. Degeh<sup>2</sup>, Laura E. Marandu<sup>2</sup>, Bush N. Lugoba<sup>6</sup>, Edwin C. Mkwama<sup>7</sup>, Lilian D. Lyakurwa<sup>2</sup>, Alpha E. Cholobi<sup>8</sup>, Michael Habtu<sup>9</sup>, Eliudi S. Eliakimu<sup>2</sup>

<sup>1</sup>Division of Policy and Planning, Ministry of Health, Dodoma, United Republic of Tanzania

<sup>2</sup>Health Quality Assurance Unit, Ministry of Health, Dodoma, United Republic of Tanzania

<sup>3</sup>Management Sciences for Health (MSH), Dar es Salaam, United Republic of Tanzania

<sup>4</sup>Tanzania Field Epidemiology and Laboratory Training Programme (TFELTP), Dar es Salaam, United Republic of Tanzania

<sup>5</sup>East, Central and Southern Africa Health Community (ECSA-HC), Arusha, United Republic of Tanzania

<sup>6</sup>Health Quality Assurance and Clinical Audit Unit, Benjamin Mkapa Hospital, Dodoma, United Republic of Tanzania

<sup>7</sup>Centre for Distance Education, Morogoro College of Health and Allied Sciences, Morogoro, United Republic of Tanzania

<sup>8</sup>Health Emergency Preparedness and Response Unit, Ministry of Health, Dodoma, United Republic of Tanzania

<sup>9</sup>World Health Organization, Dar es Salaam, United Republic of Tanzania

Email: \*syabo2004@gmail.com, drhokororo@gmail.com, drxgone@gmail.com, kinyenje2003@gmail.com, radentap91@gmail.com, talhiyay@gmail.com, mmohamed@ecsahc.org, omarnassoro123@gmail.com, rngowi2016@gmail.com, ymsigwa@gmail.com, mbwanamartine@gmail.com, lorahk82@gmail.com, lugobabush@gmail.com, mkwama@gmail.com, liliandidas94@gmail.com, cholobialpha@gmail.com, habtum@who.int, eliakimueliudi@yahoo.co.uk

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## Abstract

**Background:** Having a proper health system management with skilled health managers has been shown to be an important foundation for a high-quality health system. Primary Health Care (PHC) is important in ensuring the achievement of universal health coverage. To achieve this objective, it is important to strengthen the management of PHC facilities. This study aims at ascertaining the functionality of Health Facility Management Teams (HFMTs) in PHC facilities in the context of Star Rating Assessment (SRA) in Tanzania. **Methods:** This is a quantitative secondary data analysis using the SRA re-assessment data collected in the fiscal year 2017/18. HFMTs functionality was measured by the desirable performance of four indicators, namely availability of the HFMTs, formal appointment of HFMTs, regular meeting of HMT and quarterly meetings conducted. The proportions were compared by using proportion Z and chi-square tests. **Results:** This study involved 5933 PHC facilities, the majority of which were dispensaries (87.6%), rural located (78.3%) and public owned

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(77.2%). On average, 23.3% of HFMTs were functional. Among health facilities located in urban areas, 27.7% (95% C.I = 25.3% - 30.2%) had functional HFMTs which is significantly higher than rural located with 22.1% (95% C.I = 20.9% - 23.3%) ( $P < 0.001$ ). Public-owned PHC facilities had 23.4% (95% C.I = 22.2% - 24.7%) of health facilities with functional HFMTs which is insignificantly different from 22.8% (95% C.I = 20.6% - 25.0%) of privately owned ( $P = 0.63$ ). 47.5% of hospitals at the council level have functional HFMTs which is significantly higher compared to health centers (32.2%) and dispensaries (21.8%) ( $P < 0.001$ ). **Conclusions:** Non-functionality of HFMTs is a challenge in PHC facilities in Tanzania. The challenge is more pronounced in rural located health facilities and lower-level PHC facilities (dispensaries). Measures including management and leadership training and mentorships are to be taken to enhance HFMTs functionality in these facilities.

## Keywords

Primary Health Care, Star Rating Assessment, Universal Health Coverage, Health Facility Management Teams, Health System Management

## 1. Introduction

Having a proper health system management with skilled health managers has been shown to be an important foundation for a high-quality health system (Kim et al., 2021). Given, the importance of Primary Health Care (PHC) in ensuring the achievement of Universal Health Coverage (UHC) (World Health Organization, 2019), improving health service delivery is a precondition for achieving UHC in Low- and Middle-Income Countries (LMICs) (Masefield et al., 2020; Joshi et al., 2022). Also, PHC has been shown to be a foundation for resilient and sustainable health systems in addressing health emergencies (Barış et al., 2021; Ghebreyesus et al., 2022). Strengthening leadership and management practices at the PHC level is critical in ensuring resilience in PHC systems (Gilson et al., 2017, 2020; Kagwanja et al., 2020). In this regard, it is important to strengthen the management of PHC facilities. For instance, in Ghana, PHC facilities that performed well in management also performed well with regard to processes of care and patient experience of care to women (Macarayan et al., 2019). This supports the need for strengthening the management of PHC facilities as a foundation for improving the quality of care provided given that Health Facility Management Teams (HFMTs) have an obligation of developing quality improvement plans for addressing identified quality gaps in healthcare facilities (Gage et al., 2020). A study in Nigeria has shown that poor management of PHC facilities can affect patient safety making patients susceptible to harm (Uzochukwu et al., 2023). Strengthening the management of PHC facilities can be achieved by changing the practices of individual workers or facilities to comply with stipulated standards (Kruk et al., 2018). Despite prevailing gaps in terms of knowledge and capacity to manage (Bitton et al., 2017), it is suggested that facility

management is assumed to be an important contributor to PHC performance (Lega et al., 2013). Since community trust and overall perceived quality of care have been shown to be important predictors of care-seeking behavior indicating that health facilities management viability is an important improvement target (Kruk et al., 2009). Evidence also suggests that management practices at the district level are key determinants of performance that may be manifested through customers' satisfaction with health services provided in a health facility (Kwamie et al., 2014).

As part of strengthening PHC services in Tanzania, from 2007 to 2017, Tanzania Mainland implemented the Primary Health Services Development Programme (PHSDP) which aimed at the provision of accessible quality health services to all Tanzanians (MoHSW, 2007). Also, in 2014, the Government of Tanzania introduced the implementation of "Big Results Now" initiative in health sector, which resulted in the design of Star Rating Assessment (SRA) as one of its interventions aiming at improving the performance of PHC facilities. In the financial year 2015/2016, Tanzania Mainland conducted a countrywide assessment of all PHC facilities and assigned a star ranging from 0 to 5 stars based on the status of quality services that were being provided, and in 2017/2018, countrywide re-assessment was done (Gage et al., 2020; Yahya & Mohamed, 2018). It was designed to be conducted annually but due to its associated cost implications, it is conducted occasionally upon the availability of funds as it involves visiting all health facilities in the country both private and government. The 2017/2018 assessment is the recent data momentarily available.

From the review of related literature, none of the studies have conducted a countrywide assessment of the management capacities of health facilities specifically the functionality of health facilities management teams at the individual level. Therefore, the findings of this study are expected to extrapolate the prevailing state of primary health facilities management team's functionality and quantitatively ascertain factors influencing the functionality of these teams. Functional health facilities management teams are expected to oversee the implementation of Tanzania's quality improvement initiatives provided in Tanzania Quality Improvement Framework (MOHSW, 2011) and hence ensure health facilities' compliance with quality of care that meets clients' normative and perceived needs.

This paper is organized into introduction, methods, results, discussion, conclusion and recommendations aiming at revealing the prevailing circumstances in regard to the functionality of HFMTs for the second SRA (re-assessment) that was conducted in the financial year 2017/2018 and present the results in terms of HFMTs functionality, the formal appointment of the teams with terms of references, and regular meetings region-wise and in regard to health facilities characteristics embracing location (Urban or Rural), service level (Hospital, Health Center or Dispensary), ownership (Public or Private) and Local Government Authority (LGA) category from which a facility is located (City, Municipal, Town and District councils).

## 2. Methods

### 2.1. Study Design

This study employed the use of analytical cross-sectional design to ascertain the functionality of HFMTs in the context of SRA conducted during the fiscal year 2017/2018. HFMTs functionality was measured by availability of the team, formal appointment of the team with terms of references, HFMTs meeting on regular schedule and quarterly meeting of HFMTs. This study exhaustively analyzes and compares these components regionwide and in regard to facility characteristics embracing facility type (District Hospitals, Health Centers and Dispensaries), facility location (Urban and Rural), facility ownership (Public and Private), council type where a facility is located (City, Municipal, Town and District Council).

### 2.2. Data Management and Analysis

Data were extracted from SRA database for each health facility. They were transposed and manipulated in Microsoft Excel to form a single dataset. The dataset was imported to Stata IC 15 for descriptive and inferential statistical analysis. Data were geospatially visualized with the aid of Quantum Geographical Information Software (QGIS) 3.16 Hannover. HFMTs functionality was assessed by considering availability of health facility management team, formal appointment of the teams and meetings conduct at least once monthly and recorded as minutes with resolutions.

For a HFMT to be considered as functional, it had to meet all of these requirements and assigned “YES” score. Health facilities with “NO” or “PARTIAL” responses for any of these requirements were considered to have non-functional HFMTs. Proportion Z (one sample and two sample) and chi-square tests were employed for comparing proportions. Comparative analyses were made to ascertain differences in % coverage of health facilities in reference to 4 performance categories, i.e. less than 20%, between 20% to less than 40%, between 40% to less than 60% and greater than or equal to 60% assigned as poor, weak, good progress and good performance respectively (in the context of SRA).

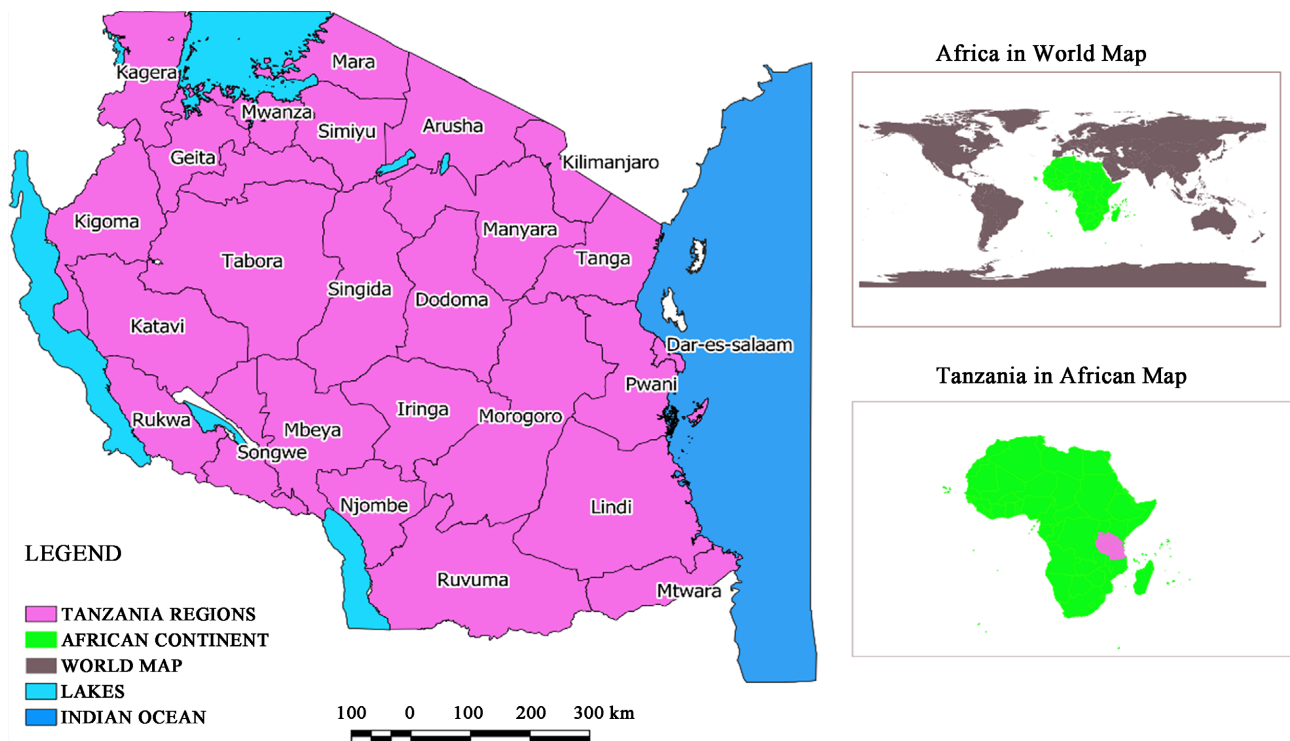
Comparison was applied to all 26 Tanzanian Mainland regions, level of a health facility (Hospitals, Health Centers and dispensaries), council type from which a health facility is located (City, Municipal, Town and District Councils), facility ownership (Public and Private) and facility location (Urban and Rural). The regional variation documentation highlights the need to understand the broader subnational systems and context which may influence management culture and effectiveness at the facility level (Macarayan et al., 2019). The same has been done in this study where region-wise performance is geospatially visualized in important indicators across all 26 regions.

Client’s satisfaction is one of variables analyzed in this study, during SRA, a structured exit interview was conducted to three clients selected from various service points within a health facility. The 10-point exit interview was used to

score client satisfaction. For a client to be considered as satisfied, supposed to have a score of 8 or more. For a health facility to be considered as having satisfied clients, it had to meet the required score of 8 or more for all three clients interviewed. Health facilities with less than 0.8 score as having unsatisfied clients.

### 2.3. Study Population

This paper aims at revealing the prevailing state of HFMTs functionality in PHC facilities in Tanzania which is located in Eastern part of Africa by considering all its 26 administrative regions (Figure 1) visited for second assessment that was conducted in the financial year 2017/2018. This analysis involved a total of 5933 PHC facilities that account for 81.4% of visited health facilities. In order to avoid bias, 18.6% of visited PHC facilities were dropped from analysis due to having missing values to most of indicators necessary for this study.



Source: Sketch on data from National Bureau of Statistics 2021.

**Figure 1.** Map of Tanzania showing distribution of visited regions.

## 3. Results

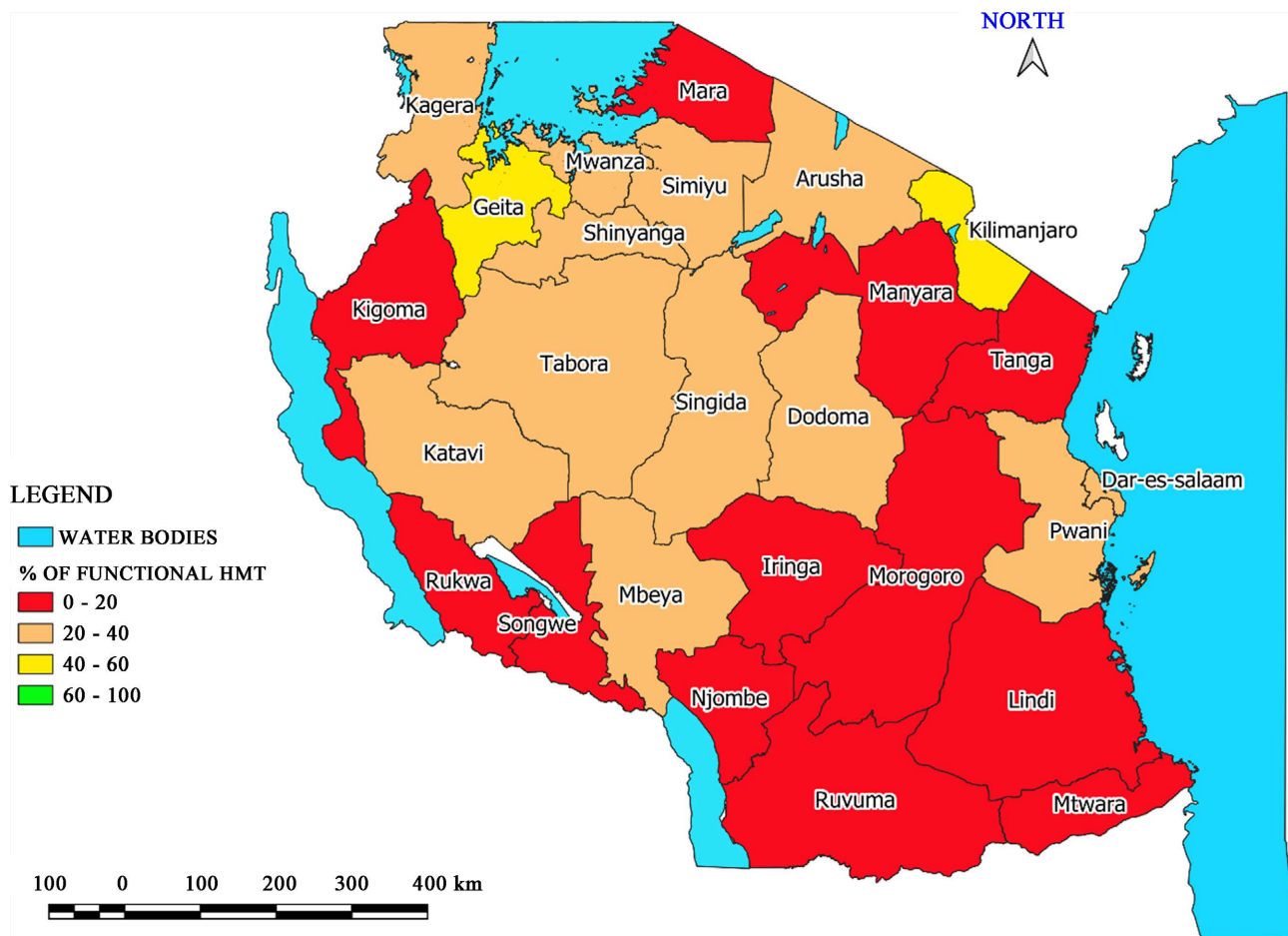
### 3.1. Functionality of Primary HFMTs

The aim was to determine the extent to which HFMTs are functional in PHC facilities. The Tanzania Quality Improvement Framework (TQIF): 2011-2016 (MoHSW, 2011), pointed out the important roles of HFMTs that include ensuring proper allocation of resources for quality improvement through investment of time, and funds; overseeing the quality improvement processes and QIT function;

ensure effective top-down and bottom-up communication at all levels within the facility; and developing and fostering in a participatory manner the organization's vision and mission statements. The HFMTs are to be formally appointed, and are supposed to meet on regular schedules and have meeting minutes with tangible agenda for discussions and meetings resolutions for issues to be acted upon.

From the findings, it was found that 23.2% (95% C.I = 22.2% - 24.4%) of health facilities had functional HFMTs which is significantly smaller compared to ones with no functional HFMTs ( $P < 0.001$ ). Among health facilities located in urban areas, 27.7% (95% C.I = 25.3% - 30.2%) were observed to have functional HFMTs which is significantly higher than rural located health facilities that had 22.1% (95% C.I = 20.9% - 23.3%) of health facilities with functional HFMTs ( $P < 0.001$ ). Public owned health facilities were observed to have 23.4% (95% C.I = 22.2% - 24.7%) of health facilities with functional HFMTs which is insignificantly different to 22.8% (95% C.I = 20.6% - 25.0%) of privately owned health facilities ( $P = 0.63$ ).

Moreover, it was revealed that city councils had 44.9% of health facilities with functional HFMTs that are significantly higher compared to municipal councils,



Source: SRA data 2017/2018.

**Figure 2.** Performance coverage (in percentage) of health facilities with functional HMTs regionwide.



district councils and town councils with 27.3%, 22.1% and 21.8% of health facilities with functional HFMTs respectively ( $P < 0.001$ ). It was also revealed that 47.5% of hospitals have functional HFMTs, this is significantly higher compared to health centers and dispensaries with 32.2% and 21.8% functional HFMTs respectively ( $P < 0.001$ ). Furthermore, the influence of functional HFMTs to client satisfaction is incontestable as the findings revealed that health facilities with functional HFMTs had all clients (three clients for dispensaries, five clients for health centers and hospitals) interviewed during assessments satisfied with provided services at the day of assessment with 26.2% (95% C.I = 25.0% - 27.6%) and 14.7% (95% C.I = 12.9% - 16.4%) of health facilities with functional and non-functional HFMTs respectively. This observed difference is statistically significant ( $P < 0.001$ ).

Regional performance coverage was compared among all 26 Tanzania Mainland regions as shown in **Figure 2**. The findings revealed that % of health facilities with functional HFMTs differs significantly among regions ( $P < 0.001$ ). None of the regions had satisfactory coverage ( $\geq 60\%$  of health facilities with functional HFMTs). The highest performance was observed in Geita region with 50.4% of health facilities with functional HFMTs. The poor performers ( $< 20\%$  of health facilities with functional HFMTs) include Tanga (16.6%), Mtwara (13.3%), Iringa (12.7%), Rukwa (12.6%), Kigoma (8.7%), Ruvuma (7.3%) and Songwe (6.7%). The remaining sixteen regions had its performance ranging between 20% and less than 50%.

### 3.2. Formal Appointment of Primary HFMTs

HFMTs members are supposed to be appointed officially with letters describing their roles and responsibilities as stipulated in TQIF: 2011-2016 (MoHSW, 2011). Health facilities with formally appointed teams are expected to be more efficient and hence accelerating to improved health services delivery, governance and quality of health services that a health facility is licensed/registered to provide.

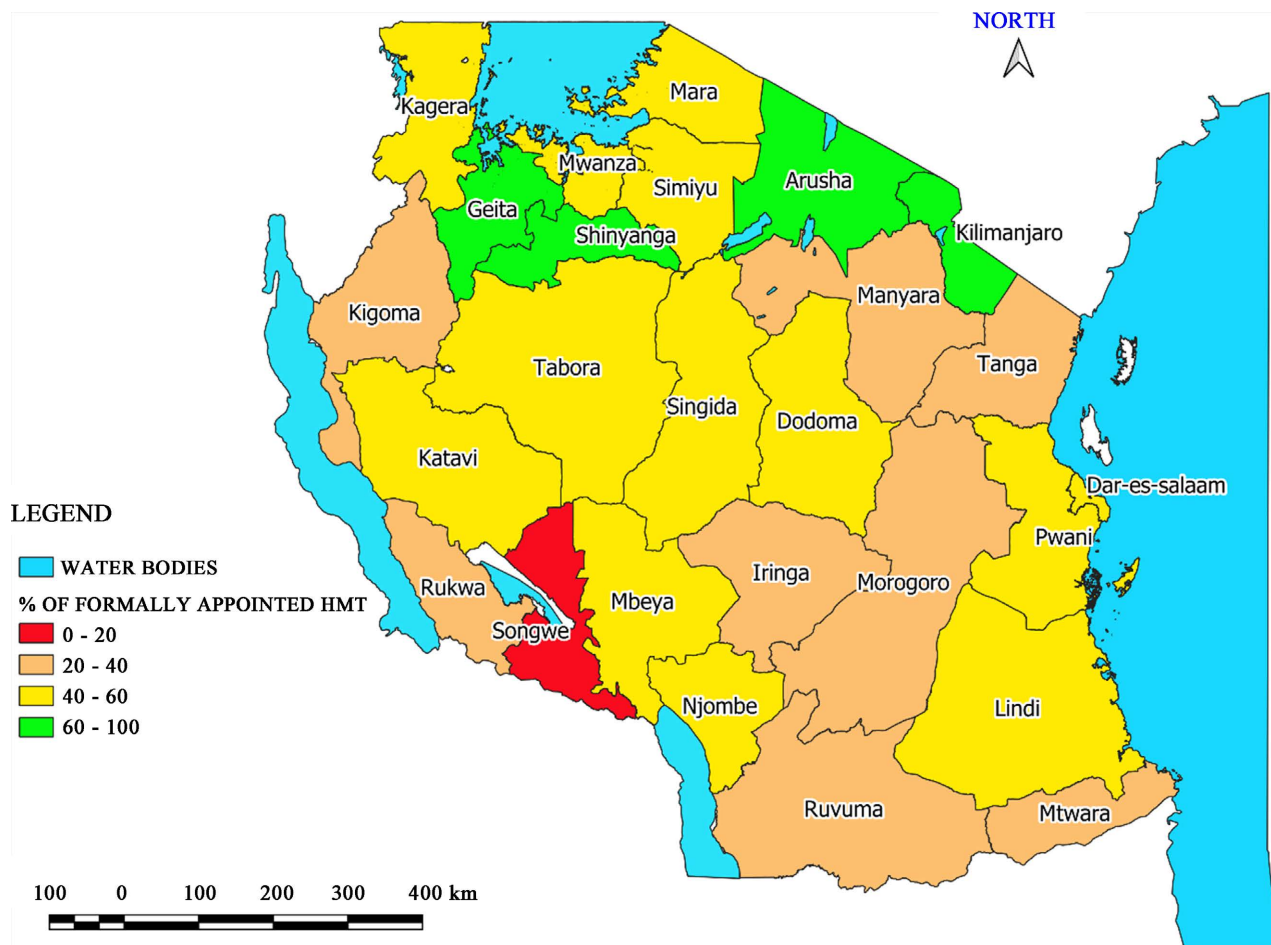
From the findings, it was found that 44.1% (95% C.I: 42.9% - 45.5%) of health facilities had formally appointed HFMTs, this is significantly smaller compared to ones with HFMTs that are not formally appointed ( $P < 0.001$ ). It was furtherly observed that, 64.4% (95% CI: 62.6% - 66.3%) of health facilities with formally appointed HFMTs had satisfactory overall health facility management scores, this is significantly higher compared to 15.4% (95% C.I = 14.1% - 16.6%) for health facilities with HFMTs that are not formally appointed. This is an indication that by having knowledge on assigned responsibilities as stipulated in guidelines, HFMTs become effective.

Among health facilities located in urban areas, 48.9% (95% C.I: 46.2% - 51.7%) of health facilities were observed to have formally appointed HFMTs which is significantly higher compared to rural located health facilities that had 42.8% (95% C.I: 41.5% - 44.3%) of health facilities with formally appointed HFMTs ( $P < 0.001$ ). On the other hand, public owned health facilities were observed to have 44.8% (95% C.I: 43.4% - 46.3%) of health facilities with formally appointed HFMTs,

this is insignificantly different to 41.9% (95% C.I: 39.3% - 44.6%) of privately owned health facilities ( $P = 0.06$ ).

By council type, the findings revealed that city councils had 59.7% of health facilities with formally appointed HFMTs, this coverage is significantly higher compared to municipal councils, district councils and town councils with 52.1%, 37.6% and 42.9% of health facilities with formally appointed HFMTs respectively ( $P < 0.001$ ). It was also revealed that 72.5% of hospitals have formally appointed HFMTs that is significantly higher compared to health centers and dispensaries with 50.4% and 43.0% of health facilities with formally appointed HMTs respectively ( $P < 0.001$ ).

Regional performance coverage was compared among all 26 Tanzania Mainland regions (Figure 3), obtained proportions revealed that % of health facilities with functional HFMTs differs significantly among regions ( $P < 0.001$ ). Regions with satisfactory coverage include Geita (83%), Kilimanjaro (77.8%), Shinyanga (84.1%) and Arusha (68.2%), Poor coverage was observed in Songwe region (18.9%). The remaining 21 region had its coverage ranging between 20% and less than 60%.



Source: SRA data 2017/2018.

**Figure 3.** Performance coverage (in percentage) of health facilities with formally appointed HFMTs regionwide.

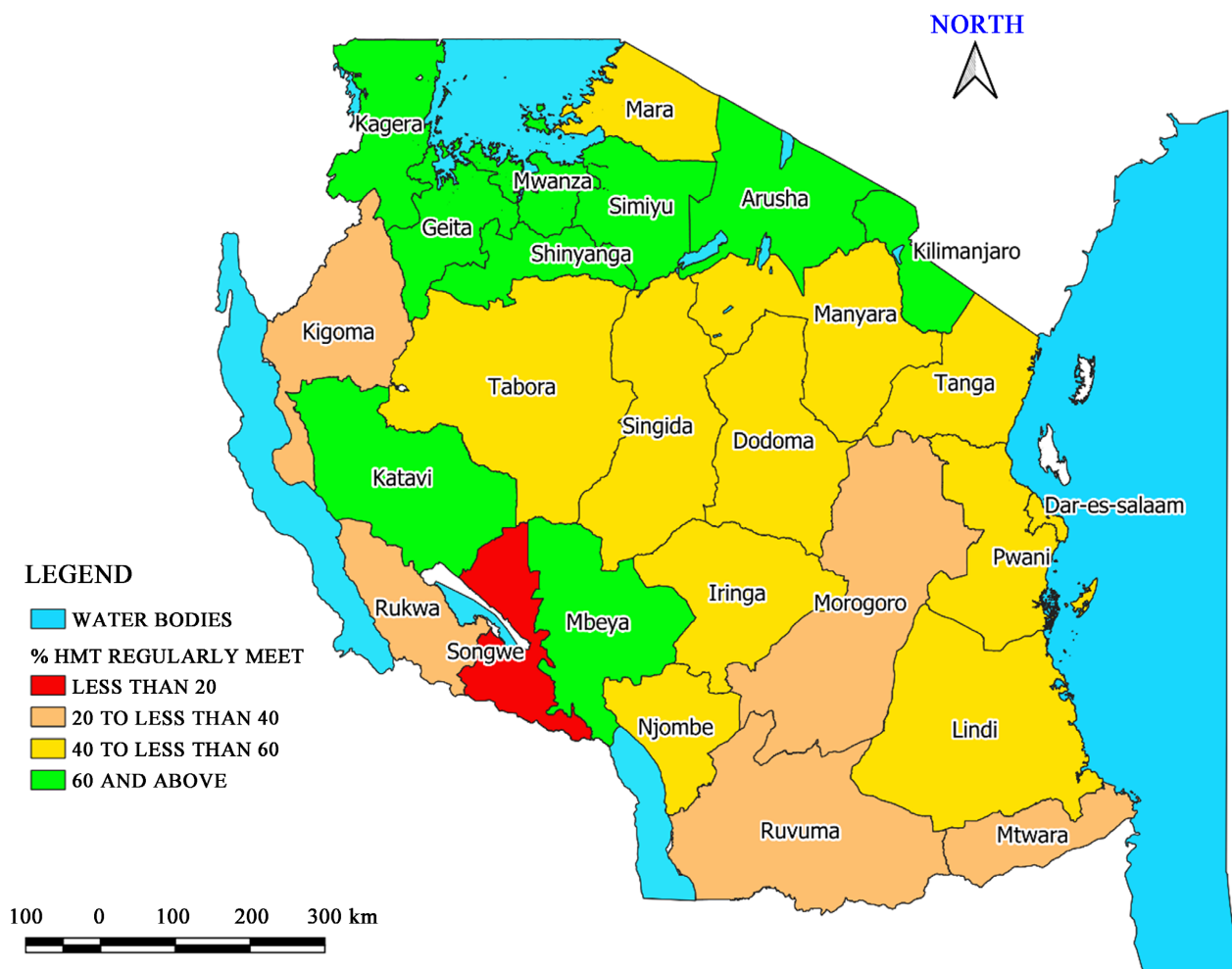


### 3.3. Meetings Regularities of Primary HFMTs

HFMTs members are supposed to meet regularly on monthly basis with recorded meeting minutes with resolutions on areas to work on before the next meeting as provided in the TQIF: 2011-2016 (MoHSW, 2011). Health facilities that meet regularly on equal interval basis (monthly) are expected to be more efficient and hence catalyst for improved health services delivery, governance and quality of health services that a health facility is registered accredited to provide.

In this study, it was observed that among health facilities located in urban areas, 55.1% (95% C.I: 52.4% - 57.9%) of health facilities were observed to have HFMTs that regularly meet which is significantly higher compared to rural located health facilities that had 51.4% (95% C.I: 50.0% - 52.9%) of HFMTs that regularly meet ( $P = 0.02$ ). On the other hand, public owned health facilities were observed to have 53.9% (95% C.I: 52.4% - 55.3%) of HFMTs that regularly meet which is significantly higher to 46.9% (95% C.I: 44.3% - 49.6%) of privately owned health facilities ( $P < 0.001$ ).

By council type, the findings revealed that city councils had 68.2% of health



Source: SRA data 2017/2018.

**Figure 4.** Performance coverage (in percentage) of formally appointed health facilities that meet regularly.

facilities had HFMTs with regular meetings that is significantly higher compared to municipal councils, district councils and town councils with 57.5%, 44.7% and 51.5% of health facilities respectively that had HFMTs which meet regularly ( $P < 0.001$ ). It was also revealed that 78.8% of hospitals had HFMTs that regularly meet which is significantly higher compared to health centers and dispensaries with 61.7% and 50.7% of health facilities HFMTs respectively that meet regularly ( $P < 0.001$ ).

Regional performance coverage was compared among all 26 Tanzania Mainland regions (**Figure 4**). Findings revealed that performance of health facilities with HFMTs that meet regularly on monthly basis differs significantly among regions ( $P < 0.001$ ). Regions with satisfactory coverage include Geita (86.7%), Kilimanjaro (74.1%), Shinyanga (70.9%), Mwanza (70.3%), Arusha (67.1%), Katavi (65.1%), Mbeya (64.5%), Kagera (63.0) and Simiyu (62.0%). Poor coverage was observed in Songwe region (18.3%). The remaining 16 region had its coverage ranging between 20% and less than 60%.

### 3.4. Formal Appointment of HFMTs and Meetings Regularity

Findings revealed that formal appointment of HFMTs members has an effect on having HFMTs that meet regularly. Among health facilities with formally appointed HFMTs, 77.2% (95% C.I: 76.0% - 78.5%) of health facilities were observed to have regular meetings which is significantly higher compared to health facilities with no formally appointed HFMTs that had 51.4% (95% C.I: 50.0% - 52.9%) of health facilities that meet regularly ( $P = 0.02$ ).

## 4. Discussion

As observed from the findings, most of health facilities do not have functional HFMTs. This may be one among reasons for poor healthcare delivery in Tanzania (Afnan-Holmes et al., 2015; Kruk et al., 2017). The HFMTs are responsible for planning, coordinating and managing provision of health and social welfare services with broad range of specific functions that include: ensuring that Quality Improvement Teams (QITs), Work Improvement Teams (WITs) and Medicines and Therapeutic Committees (MTCs) are functioning properly in a way that ensures quality services delivery and contribute in tackling the challenge of antimicrobial resistance (Kesale & Swai, 2023). Therefore, non-functional HFMTs have negative implication to overall health facility management performance as observed from this study. Due to its functions, non-functionality of HFMTs has negative effect to smooth operationalization of QIT activities implementation, therefore improving facility management is an important consideration to improve healthcare delivery and consequently enhance patient satisfaction (Gage et al., 2020; Larson et al., 2019). Studies suggests that Facility management is important in ensuring proper performance of different functions of health facilities (Lega et al., 2013) and a contributor of enhanced community trust and hence care seeking (Kruk et al, 2009). As suggested by this study, HFMTs functionality

influences customer satisfaction. The same is observed in another study conducted in Ghana that came with the finding that management practices are key determinants of healthcare facility performance that may be manifested through customers satisfaction with health services provided in a health facility (Kwamie et al., 2014).

This study has shown that HFMTs had formal appointment (a letter showing their roles and responsibilities) had better performance. This is also in line with findings from a study by Adeniran and colleagues in Ekiti State, Nigeria in which it was shown that having job description can help to increase performance of health facilities managers (Adeniran et al., 2022). Also, the study has found that 52.3% of health facilities had HFMTs that regularly meet. The lack regular HFMTs meeting in about 48% of health facilities is alarming given the fact that regular meetings enable members of management teams to share ideas, experience, challenges and also receive feedback and set a room for ensuring accountability in implementation and sharing of resources (Adeniran et al., 2022).

It is recommended that the Ministry of Health, and President's Office-Regional Administration and Local Government to speed-up efforts to build leadership capacity of leaders in PHC facilities. This can be achieved by adding a mandatory requirement for those already in the leadership positions in PHC facilities, to have leadership training through continuing professional development under professional councils. Such efforts have been institutionalized among Nurse Leaders working in PHC facilities in Zambia (Foster et al., 2018). A study in Ethiopia, has also reported that training of managers of PHC facilities helps to improve implementation of priority health interventions, and that it can help to achieve the sustainable development goals (Argaw et al, 2021). Also, a mentorship approach has been shown to have potential of improving capacity of health centre managers in Ethiopia to adhere to set management standards (Liu et al, 2022). Investing in ensuring that at PHC facilities there is effective leadership, can also contribute to the new paradigm shift from health systems to systems for health (Shroff et al., 2022). Also, investing in improving leadership competencies at PHC level is an essential strategy that will contribute to building resilience in Tanzania health sector (Forsgren et al., 2022; Karamagi et al., 2022); and also it helps to improve the performance of health system given the fact that leadership and governance as one of the six WHO health systems building blocks (service delivery; health workforce; health information system; medical products, vaccines and technologies; health financing; and leadership and governance (stewardship)), has a driving role in all the other building blocks (World Health Organization, 2007; Kapologwe et al, 2023).

## 5. Conclusion

Health facility management is a key consideration towards the smooth operationalization of a health facility including overseeing the implementation of quality

improvement initiatives. In Tanzania, less than a quarter of health facilities have functional HMTs with a more pronounced challenge among lower-level and rural-located health facilities. From the same findings, it is observed that the non-functionality of HMTs has a negative effect on customer satisfaction. With this prevailing situation, quality service delivery will be compromised to clients attending lower-level health facilities that are mostly located in rural areas and are from a low Social Economic Status group. This may be a hindrance to government efforts towards universal health coverage in terms of equitable accessibility to quality health services regardless of Socio-Economic Status.

## 6. Recommendations

To enhance quality improvement and hence strengthen the quality improvement processes and systems as whole, enhancing the functionality of health facility management teams is an important consideration. This may be achieved through a number of interventions including capacity building (Trainings and Mentorships), monitoring and episodic evaluation of indicators that entail HMTs functionality including appointed teams' members having well-defined terms of references, conduct of regular meetings (monthly and quarterly) and capacity of the teams to oversee implementation of quality improvement initiatives as provided in quality improvement frameworks. More efforts are to be exerted on lower-level PHC facilities (dispensaries and health centers) most of which are located in rural areas.

## Source(s) of Support/Funding

No official funding was received by the authors for the study. Data manipulation and analysis were conducted as a part of usual responsibilities. Most of authors are from Health Quality Assurance Unit which is responsible for implementing SRA and hence obliged to disseminate evaluation results through publications.

## Disclosure of Relationships and Activities

However, during 2017/2018's SRA of PHCs that yielded these data, Mohamed A. Mohamed, Eliudi S. Eliakimu, Joseph C. Hokororo, Chrisogone J. German, Talhiya A. Yahya and Ruth R. Ngowi were working with the Health Quality Assurance Division (now called Health Quality Assurance Unit) and were responsible for the implementation of SRA and QIPs follow-up.

## Ethical Issues

This study did not involve human subjects, hence for this type of study formal consent is not required. However, prior permission was sought from the Ministry of Health, Community Development, Gender, Elderly and Children (recently renamed as Ministry of Health) before the use of the dataset. The Ministry of Health is a custodian of Health Management Information Systems data including SRA database. Ethical clearance is not necessary for this type of study because data were

collected in the course of implementing an initiative by the government and hence this analysis aims at giving feedback on prevailing circumstances after its successful implementation.

## Acknowledgements

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## Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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