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Nurses' and Midwives' Job satisfaction in Tanzanian Hospitals

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Integrated Disease Surveillance and Response (IDSR): Cumulative report for six months, January – June 2025 (Epidemiological weeks 1-26)

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ABSTRACT

Introduction: The Tanzanian Ministry of Health (MoH) continues to implement surveillance of reportable diseases and conditions through the Integrated Disease Surveillance and Response (IDSR) system. IDSR data are electronically captured and submitted to the MoH on a regular basis. The primary aim of IDSR is to provide a rational basis for decision-making and to support implementation of effective public health interventions targeting priority communicable diseases. This paper presents cumulative data captured and reported to MoH over a six-month period, from January to June 2015, corresponding to the World Health Organization (WHO) epidemiological weeks 1-26.

Methodology: Data were extracted from the IDSR system and analyzed to assess both regional and national performance in terms of timeliness and completeness of reporting disaggregated by months and regions. Performance was assessed based on the set national standard of ≥ 90% for both indicators. In addition, the analysis examined the cumulative number of reported cases and deaths, as well as their distribution by months and regions.

Results: All 26 regions of Tanzania Mainland submitted weekly reports to the national level with an overall average performance for all months of 90.6% for timeliness and 97.2% for completeness. The national completeness target was met in all weeks except epidemiological week 1. Cumulatively, a total of 369,864 cases and 33 deaths were reported for all IDSR immediate reportable diseases and conditions. The most commonly reported condition was diarrheal diseases, accounting for 47.8% (176,797) of all cases and was reported from all 26 regions. A majority of diarrheal cases were reported from Dodoma, 13,770 out of 176,797 (7.8%). Other regions reporting high numbers included Mara 13,622 (7.7%), Morogoro 11,879 (6.7%), and Rukwa 11,494 (6.5%). The months of May had the highest number of cases (78,496 (21.2%)). Of the 33 reported deaths, the majority were caused by cholera (n=26, 78.8%). Suspected cholera also had the highest case fatality rate (CFR) among all reported conditions, with 26 deaths out of 3,433 suspected cases, resulting in a CFR of 0.8.

Conclusions: The IDSR data for January to June 2025 (WHO epidemiological weeks 1-26) showed that the performance in terms of timeliness and completeness was high based on the set national standard of ≥90%. This is encouraging in that the Government is in a better position to detect and report cases in time for an immediate response to avert or at least limit a disease outbreak. On the other hand, there is an urgent need for the Government to institute new, and reinforce available, preventive and control measures against diarrheal diseases as they continued to be the leading reportable conditions. Based on the high fatality rate of cholera, the Government needs to reinforce preventive measures such as ensuring that community use and drink safe water, washing hands often with soap and safe water (i.e., before and while preparing food, before eating and after using the toilet), safe management of sanitation facilities (toilets), and cooking food well, covering it and eating it while hot.

Keywords: Integrated Disease Surveillance and Response, WHO Epidemiological Week 1-26, 2025, Tanzania

INTRODUCTION

In Tanzania, surveillance for reportable diseases and conditions under the Integrated Disease Surveillances and Response (IDSR) system are electronically collected and published through weekly and monthly reports of the Ministry of Health (MoH). The IDSR serves as a strategic framework for multi-disease surveillance of selected priority diseases or conditions, integrating data collection and response across the community, health facility, district and national levels. Its primary goal is to provide timely and actionable information for helping public health managers and decision-makers in improving detection of and response to major causes of morbidity, mortality and disability in African countries. The paper presents cumulative IDSR data collected over a six-month period from January to June 2025, corresponding to WHO Epidemiological Weeks 1 to 26.

METHODOLOGY

Data were extracted from IDSR system, which is derived from the DHSI2 platform, then cleaned and analyzed using SPSS version 24. The analysis focused on two key WHO indicators: timeliness and completeness, which were used to assess overall, monthly and regional performance of the surveillance system. In this study, timeliness refers to the proportion of all expected IDSR summary reports (weekly or monthly) that were submitted to the national database by the due date. Completeness refers to the proportion of all expected IDSR summary reports (weekly or monthly) that were submitted to the national database, regardless of the submission date. Performance was assessed based on the set national standard of ≥ 90% for both indicators. In addition, the analysis examined the cumulative number of reported cases and deaths, as well as their distribution by months and regions. The probability of specific infections or conditions resulting in death (case fatality rate, CFR) was also calculated.

RESULTS

Health Facility Performance

All 26 regions of Tanzania Mainland submitted weekly reports of selected priority reportable conditions to the national level as part of the IDSR system. During the period of January to June 2025, the overall reporting performance was 97.2% for completeness and 90.6% for timeliness. The performance of completeness and timeliness were above the set national standard of ≥ 90%. However, timeliness scores were below the national benchmark at 80.6% and 89.7%, respectively, for January and February, indicating some initial delays in reporting during the early weeks of the year. In contrast, the highest completeness score was achieved in June, reaching 98.7% (Table 1).

Table 1: Average Timeliness and Completeness of Health Facility Reporting by Month, January – June 2025

Month	% of Completeness	% of Timeliness
January	94.3	80.6
February	97.0	89.7
March	97.7	93.2
April	97.2	90.7
May	98.2	94.9
June	98.7	95.0
Overall Performance	97.2	90.6

As presented in Figure 1, the national target for timeliness of ≥ 90% was not met during the epidemiological weeks 1-4 and 13-14. In contrast, target for completeness was met in all the weeks except epidemiological week 1.

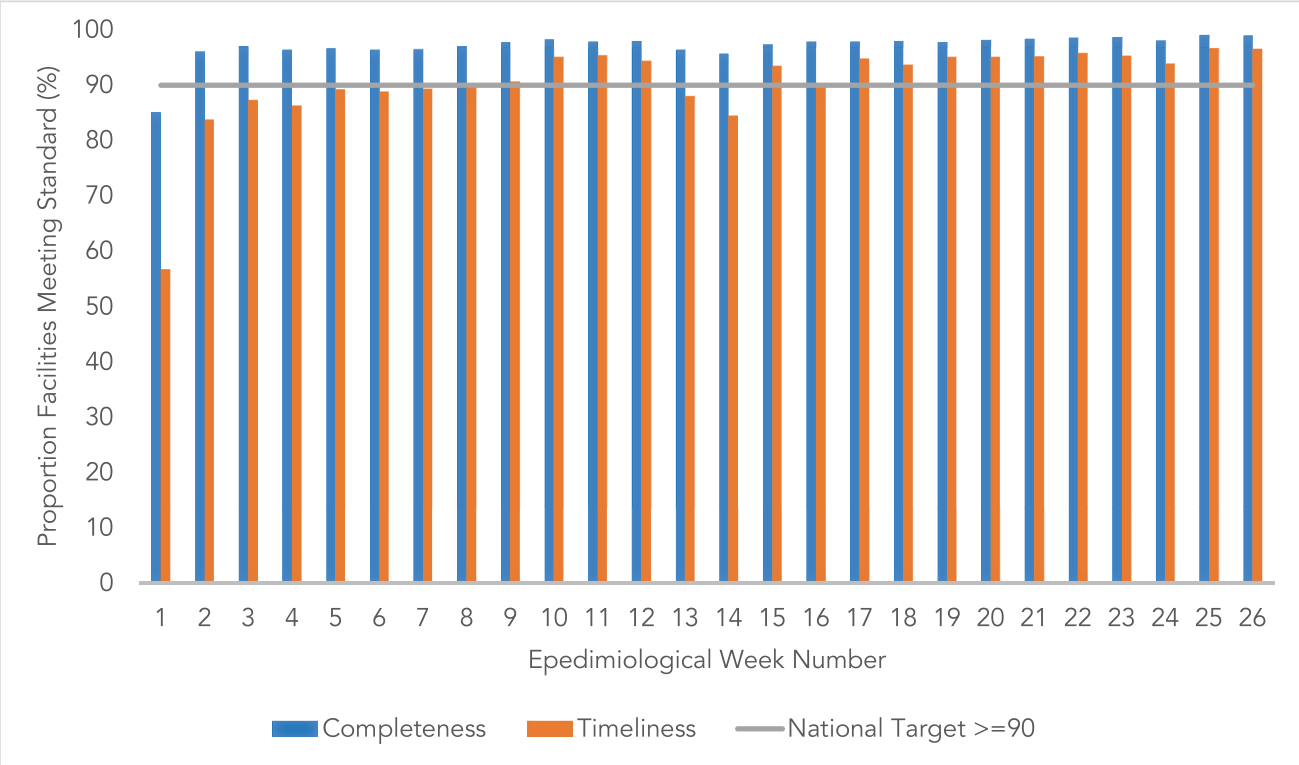

Figure 1: Completeness and Timeliness of Health Facilities Reporting by Week, January – June 2025 (Epidemiological Weeks 1 – 26)

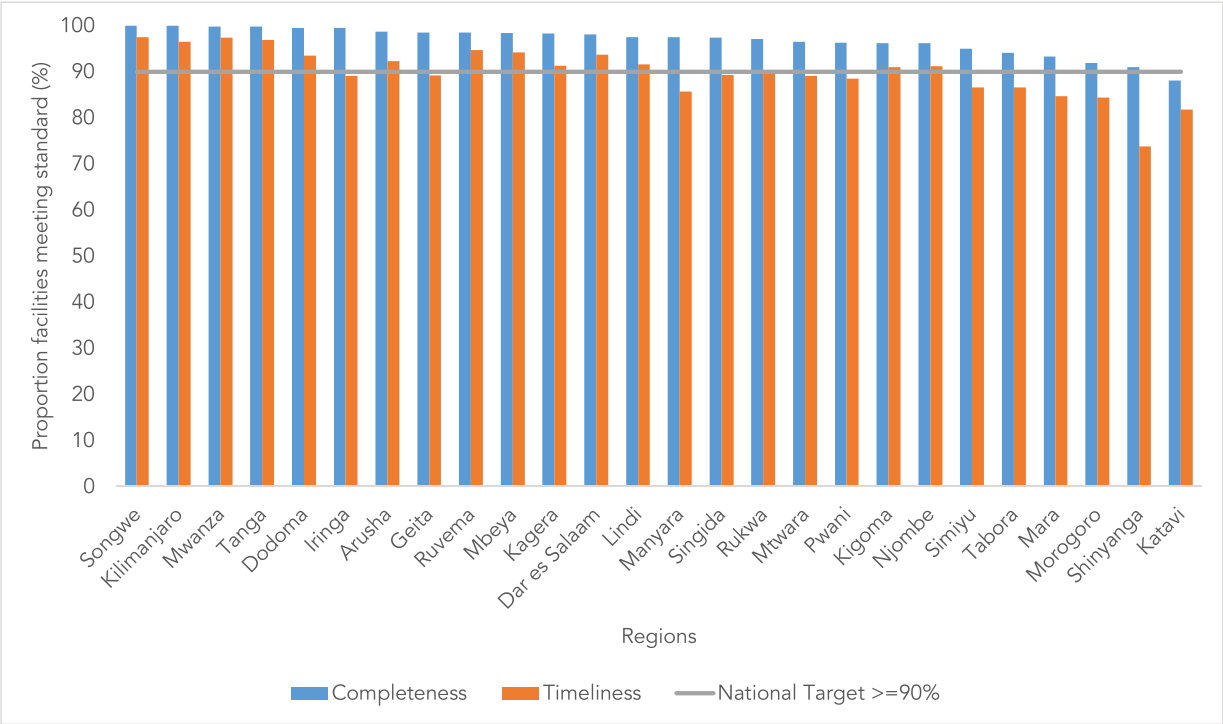

Figure 2: Timeliness and Completeness of Health Facility Reporting from the 26 Regions, January – June 2025

The overall timeliness and completeness of health facilities reporting by all 26 regions are illustrated in Figure 2. All regions, except Katavi, had overall completeness scores meeting the national target of ≥ 90%. However, 8 regions namely Manyara, Pwani, Simiyu, Tabora, Mara, Morogoro, Shinyanga and Katavi had timeliness scores below the national target of ≥ 90%, indicating areas that require further support to improve prompt reporting.

DISTRIBUTION OF CASES AND DEATHS

A total of 369,864 cases of all reportable diseases and conditions were reported between January and June 2025. Of these, 176,797 (47.8%) cases were due to diarrheal diseases (Table 2). During the same reporting period, a total of 33 deaths were reported of which 26 (78.8%) were due to suspected cholera. Suspected cholera also had the highest case fatality rate (CFR) among all reported conditions, with 26 deaths out of 3,433 suspected cases, resulting in a CFR of 0.8%.

Table 2: Numbers of Cases and Deaths Caused by Reportable Conditions, January - June 2025

Condition / Disease	Cases	Deaths	CFR (%)
AFP	626	0	0
Animal Bites	12,062	0	0
Anthrax	12	0	0
Bloody Diarrhea	8	0	0
Cholera	3,433	26	0.8
CSM	24	0	0
Dengue Fever	84	0	0
Diarrheal Diseases	176,797	0	0
SARI	4,213	7	0.2
Measles	1,327	0	0
Pneumonia	133,310	0	0
Rabies	25	0	0
Snake Bite	6,183	0	0
Typhoid	31,760	0	0
Total	**369,864**	**33**	**-**

Key: AFP = Acute Flaccid Paralysis; SARI= Severe Acute Respiratory Illness; CSM = Cerebrospinal Meningitis, CRF = Case Fatality Rate

Table 3: Number of Cases and Deaths Caused by Reportable Conditions, by Month, January – June 2025

Condition / Disease	January		February		March		April		May		June		Total	
	Cases	Death	Cases	Death	Cases	Death	Cases	Death	Cases	Death	Cases	Death	Cases	Deaths
AFP	105	0	127	0	129	0	141	0	115	0	9	0	626	0
Animal Bites	2,154	0	2,072	0	1,730	0	1,729	0	2,467	0	1,910	0	12,062	0
Anthrax	3	0	2	0	4	0	2	0	1	0	0	0	12	0
Bloody Diarrhea	2	0	4	0	1	0	0	0	1	0	0	0	8	0
Cholera	1,518	7	387	6	469	4	396	3	355	4	308	2	3,433	26
CSM	2	0	7	0	4	0	1	0	2	0	8	0	24	0
Dengue Fever	1	0	8	0	0	0	3	0	10	0	62	0	84	0
Diarrhea	34,398	0	31,122	0	26,406	0	24,987	0	35,221	0	24,663	0	176,797	0
SARI	871	0	646	0	640	0	667	4	776	0	613	3	4,213	7
Measles	408	0	273	0	233	0	219	0	163	0	31	0	1,327	0
Pneumonia	19,885	0	18,912	0	18,954	0	21,358	0	31,614	0	22,587	0	133,310	0
Rabies	1	0	6	0	7	0	7	0	2	0	2	0	25	0
Typhoid	5,515	0	5,012	0	4,760	0	4,345	0	6,680	0	5,448	0	31,760	0
Snake Bite	1,263	0	1,156	0	855	0	905	0	1,089	0	915	0	6,183	0
Total	66,126	7	59,734	6	54,192	4	54,760	7	78,496	4	56,556	2	369,864	33

Key: AFP = Acute Flaccid Paralysis; SARI= Severe Acute Respiratory Illness; CSM = Cerebrospinal Meningitis

Table 3 provides the number of cases and deaths attributed to immediate reportable conditions for each month during January through June 2025. While most conditions were reported constantly across months, there were notable exceptions: dengue fever was not reported in March, anthrax was absent in June, and bloody diarrhea was not reported in April and June. The total number of cases per month ranged from 54,192 in March to 78,496 in May. The highest number of deaths occurred in January and April with 7 deaths (21.2%) reported in each of those months.

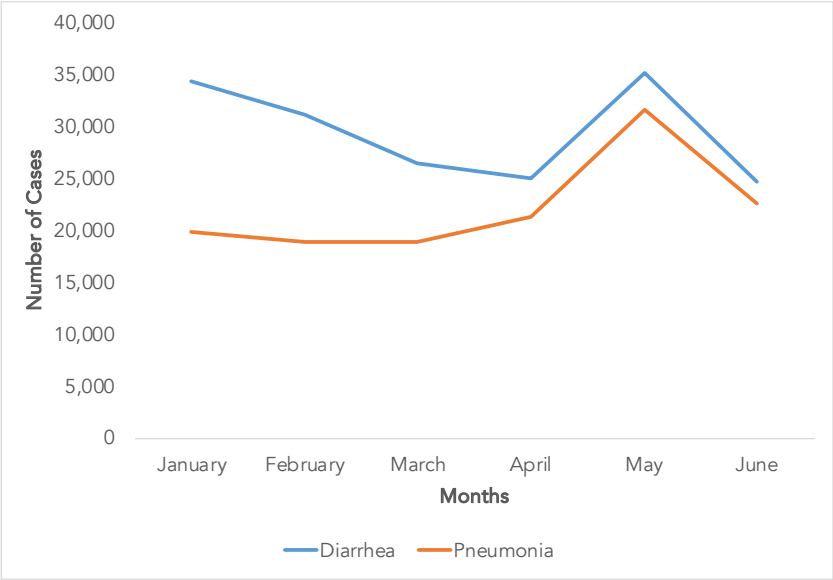

Figure 3: Monthly Trend in Reported Cases of Diarrhea and Pneumonia Over a Six Month Period (January to June 2025)

The monthly trend of reported cases for diarrhea and pneumonia is illustrated in Figure 3. These conditions had the highest reported cases during the period under review of January – June 2025. It shows seasonal or time-dependent variation in diarrhea and pneumonia cases. There was a steady decrease in diarrhea cases from January to April with a peak in May and a sharp drop in June. However, it is difficult to pinpoint a specific cause for the sharp rise in May, as there could be multiple contributing factors (e.g., change in hygiene, water contamination, or disease outbreaks). Like diarrhea, pneumonia cases showed an increase from March, peaking in May. The rise of pneumonia cases in May could be linked to the transition from rainy to dry season. The dry season is often characterized by colder temperatures, which can increase susceptibility to respiratory illnesses like pneumonia.

Table 4: Number of Reported Cases of Illnesses by Region, January – June, 2025.

Region	AFP	Animal Bites	Anthrax	Bloody Diarrhea	Cholera	CMS	Dengue Fever	Diarrheal Diseases	SARI	Measles	Pneumonia	Rabies	Snake Bite_	Typhoid
Arusha	26	640	11	0	0	0	0	8,674	249	52	14,763	6	88	374
Dar Es Salaam	27	545	0	0	5	2	84	10,340	2,682	40	7,105	0	367	1,575
Dodoma	25	1,030	0	0	23	0	0	13,770	306	25	5,014	0	369	1,926
Geita	26	245	0	0	0	0	0	4,394	0	65	3,828	0	56	866
Iringa	17	260	0	2	49	0	0	1,260	59	12	1,483	1	194	274
Kagera	30	434	0	0	0	0	0	5,631	0	60	5,332	1	174	1,531
Katavi	12	425	0	1	89	0	0	6,503	0	16	2,921	4	101	1,255
Kigoma	23	542	0	1	36	0	0	8,557	63	69	6,551	2	205	684
Kilimanjaro	21	531	1	0	0	0	0	3,758	0	62	7,478	0	245	541
Lindi	13	357	0	0	60	0	0	4,111	0	77	2,322	2	284	1,936
Manyara	26	538	0	1	0	0	0	6,078	579	82	8,622	2	252	1,757
Mara	23	805	0	0	240	0	0	13,622	32	78	7,686	0	416	1,510
Mbeya	32	279	0	3	614	0	0	5,290	47	47	4,886	0	215	2,077
Morogoro	26	702	0	0	13	0	0	11,879	9	50	7,582	2	561	3,292
Mtwara	22	317	0	0	10	0	0	4,796	28	77	3,015	0	280	584
Mwanza	49	450	0	0	145	0	0	8,219	131	37	4,846	0	87	1,207
Njombe	9	229	0	0	0	0	0	1,164	0	15	1,672	0	209	721
Pwani	19	557	0	0	0	0	0	5,658	4	27	4,654	0	473	609

Region	AFP	Animal Bites	Anthrax	Bloody Diarrhea	Cholera	CMS	Dengue Fever	Diarrheal Diseases	SARI	Measles	Pneumonia	Rabies	Snake Bite_	Typhoid
Rukwa	15	362	0	0	1,245	0	0	11,494	0	8	4,072	0	144	728
Ruvuma	42	594	0	0	45	0	0	5,428	0	69	4,690	2	393	2,594
Shinyanga	21	330	0	0	81	0	0	5,753	0	42	4,271	0	138	1,479
Simiyu	46	345	0	0	653	0	0	4,435	0	119	2,781	1	138	603
Singida	28	597	0	0	0	0	0	4,293	19	105	2,755	0	234	1,215
Songwe	12	82	0	0	112	0	0	2,700	0	25	2,081	0	74	756
Tabora	26	399	0	0	13	5	0	10,757	2	42	5,718	2	53	1,299
Tanga	10	467	0	0	0	17	0	8,233	3	26	7,182	0	433	367
Grand Total	626	12,062	12	8	3,433	24	84	176,797	4,213	1,327	133,310	25	6,183	31,760

Key: AFP = Acute Flaccid Paralysis; SARI= Severe Acute Respiratory Illness; CSM = Cerebrospinal Meningitis

Table 4 provides the distribution of reported cases by region for the 6 months from January to June 2025. The total number of reportable cases during this period was 369,864 cases. All 26 regions reported cases of Acute Flaccid Paralysis (AFP), animal bites, diarrhea, pneumonia, measles, snake bite and typhoid. Notably, dengue fever cases are reported exclusively from Dar es Salam region. Majority of reported cases (176,797; 47.8%) were due to diarrheal diseases. The highest number of diarrheal diseases cases came from the following regions: Dodoma 13,770 (7.8%), Mara 13,622 (7.7%), Morogoro 11,879 (6.7%), and Rukwa 11,494 (6.5%) (Table 4).

CONCLUSION

The IDSR data for January to June 2025 (WHO epidemiological weeks 1-26) showed that the performance based on timeliness and completeness was high based on the set national standard of ≥90%. This is encouraging in that the Government is in a better position to detect and report cases early enough for a response to avert or at least limit a disease outbreak. On the other hand, there is an urgent need for the Government to institute new and to reinforce available preventive and control measures against diarrheal diseases as they continued to be the leading reportable conditions. Based on the high fatality rate of cholera, the Government needs to reinforce preventive measures such as ensuring that communities drink and use safe water, washing hands often with soap and safe water (i.e., before and while preparing food, before eating and after using the toilet), safe management of sanitation facilities (toilets), and cooking food well, and covering and eating food while it is hot.

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MUHTASARI
Mkakati wa Ufuatiliaji na Udhibiti wa Magonjwa ya Mlipuko (IDSR): Ripoti ya Miezi Sita, Januari – Juni 2025 (Wiki 1-26)

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Utangulizi: Wizara ya Afya (WAF) inaendelea kutekeleza mfumo wa ufuatiliaji wa magonjwa na hali zinazotakiwa kuripotiwa kupitia Mfumo Jumuishi wa Ufuatiliaji na Udhibiti wa Magonjwa (IDSR). Takwimu za IDSR hukusanywa kwa njia ya kielektroniki na kuwasilishwa WAF kwa mtiririko. Lengo kuu la IDSR ni kutoa mwelekeo msingi wa kufanya maamuzi ya kisera na kusaidia utekelezaji wa afua madhubuti za afya kwa umma dhidi ya magonjwa ya kuambukiza yaliyopewa kipaumbele ambayo ni chanzo cha vifo na ulemavu. Makala hii inaripoti matokeo ya uchambuzi wa taarifa za IDSR kwa kipindi cha miezi 6 kuanzia Januari hadi Juni 2025 ambapo inalingana na wiki za epidemilogia 1-26 ya Shirika la Afya Duniani (WHO).

Mbinu za Utafiti: Takwimu zilichukuliwa kutoka kwenye mfumo wa IDSR na kuchambuliwa ili kutathmini utendaji wa kitaifa na wa kila mkoa kulingana na viashiria viwili muhimu vya WHO: Ufanisi (kwa mfano, asilimia ya wilaya zinazoripoti kwa wakati kwa ngazi ya kitaifa) na ukamilifu wa taarifa (yaani, asilimia ya wilaya zinazotoa ripoti kamili kwa ngazi ya kitaifa), kulingana na miezi na mikoa. Utendaji ulipimwa dhidi ya kiwango cha kitaifa kilichowekwa cha asilimia 90 au zaidi (≥ 90%) kwa kila kiashiria. Aidha, uchambuzi ulijumuisha idadi ya visa na vifo vilivyoripotiwa kwa jumla pamoja na mgawanyo wake kwa miezi na mikoa.

Matokeo: Mikoa yote 26 ya Tanzania Bara iliwasilisha taarifa za kila wiki katika ngazi ya taifa. Wastani wa kitaifa wa utendaji kwa kipindi chote ulikuwa asilimia 90.6 kwa wakati unaofaa (ufanisi) na asilimia 97.2 kwa ukamilifu wa taarifa. Lengo la kitaifa la uwasilishaji kwa ukamilifu wa taarifa lilifikiwa katika wiki zote isipokuwa wiki ya kwanza ya epidemiolojia. Kwa jumla, visa 369,864 na vifo 33 viliripotiwa kwa magonjwa na hali zote zinazopaswa kuripotiwa katika mfumo wa IDSR. Magonjwa ya kuharisha ulikuwa ni ugonjwa ama hali iliyoripotiwa zaidi, yakiwa na visa 176,797 (asilimia 47.8) ya jumla ya visa, na yaliripotiwa kutoka mikoa yote 26. Idadi kubwa ya visa vya kuharisha viliripotiwa kutoka: Dodoma: 13,770 (asilimia 7.8), Mara: 13,622 (asilimia 7.7), Morogoro: 11,879 (asilimia 6.7) na Rukwa: 11,494 (asilimia 6.5). Mwezi wa Mei ulikuwa na idadi kubwa zaidi ya visa (78,496, asilimia 21.2). Kati ya vifo 33 vilivyoripotiwa, vingi vilisababishwa na kipindupindu (vifo 26, asilimia 78.8). Kipindupindu pia kilikuwa na kiwango cha juu zaidi cha vifo (case fatality rate - CFR), ambapo kati ya visa 3,433 vilivyoshukiwa kuwa na ugonjwa wa kipindupindu, 26 walikufa na kusababisha CFR ya asilimia 0.8.

Hitimisho: Takwimu zilizochambuliwa za IDSR kwa kipindi cha Januari hadi Juni 2025 (wiki za WHO 1–26) zinaonesha kuwa utendaji kwa viashiria vya ufanisi na ukamilifu wa taarifa ulikuwa wa juu, ukilinganishwa na kiwango cha kitaifa kilichowekwa chaasilimia 90 au zaidi (≥ 90%). Hali hii inaashiria kuwa serikali ipo katika nafasi nzuri zaidi ya kutumia mfumo wa IDSR katika kubaini kwa haraka na kutoa taarifa za magonjwa, hivyo kuchukua hatua za haraka ili kuzuia milipuko ya magonjwa kutokea. Hata hivyo, kuna haja ya haraka kwa Serikali kuimarisha hatua za kinga na udhibiti dhidi ya magonjwa ya kuharisha, kwa kuwa yanaendelea kuwa magonjwa yanayoongoza kuripotiwa. Kutokana na kiwango cha juu cha vifo vya kipindupindu, serikali inapaswa kuimarisha mikakati ya kinga kama vile: kuhakikisha jamii inatumia maji safi na salama kwa kunywa na matumizi ya kawaida, kunawa mikono mara kwa mara kwa sabuni na maji safi (kabla, wakati wa maandalizi ya chakula, kabla ya kula, na baada ya kutoka chooni). Aidha, kuwepo na usimamizi salama wa usafi wa mazingira, na kupika chakula vizuri, kukihifadhi katika hali salama, na kukila kikiwa cha moto.

Maneno Muhimu: Mkakati wa Ufuatiliaji na Udhibiti wa Magonjwa ya Mlipuko, Wiki 1-26, 2025, Tanzania.

Factors associated with Nurses' and Midwives' job satisfaction at regional referral hospitals in Tanzania Mainland

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ABSTRACT

Introduction: Nurses and midwives play a critical role in the delivery of healthcare services, especially in developing countries like Tanzania. Their job satisfaction is a key determinant of both the high-quality patient care and retention of healthcare workers within the system. Despite their central role in the health sector, many nurses and midwives face persistent challenges, including inadequate compensation, limited career development opportunities, and suboptimal working conditions. These issues can negatively affect their motivation, performance and long-term commitment to the profession. This study assessed the factors influencing job satisfaction among nurses and midwives in Tanzania's Regional Referral Hospitals (RRHs). The findings are intended to inform policy reform and institutional improvements that promote a more supportive and sustainable working environment for these essential healthcare cadres.

Methods: This cross-sectional study involved nurses and midwives working in 28 RRHs across Tanzania. Data collection was conducted between July and September 2024, using a structured questionnaire administered via the Kobo electronic data collection platform, which ensured efficient and accurate data capture. The study aimed to assess the impact of various demographic and professional factors on job satisfaction among nurses and midwives.

Results: Overall, the study involved a total of 2313 nurses and midwives, of whom the majority 1404 (60.7%) reported being satisfied with their jobs. Key factors influencing satisfaction included age and level of education. The results indicate that age is a significant determinant of job satisfaction. While descriptive findings suggest that the youngest respondents (18–24 years) were most satisfied, the adjusted analysis demonstrates that those in the 25–34 year age group were significantly less likely to report satisfaction compared to their older counterparts (≥ 55 years). Respondents with lower educational qualifications at level of certificate reported higher satisfaction rate at 67.8% (p=0.001) compared to those with higher qualifications. Additionally, regarding employment status, nurses and midwives on temporary contracts were more likely to be satisfied (65.9%) than those on permanent employment (60.3%), but this difference was not statistically significant (p=0.142). Despite the overall positive satisfaction levels, there were notable areas of dissatisfaction, particularly in areas of salary 830 (35.9%), fairness in opportunities for seminars/workshops 752 (32.5%), access to different incentives 583 (25.2%), fairness in promotions, 514 (22.2%) and availability of career development opportunities 482 (20.8%)

Conclusion: Most nurses and midwives reported being satisfied with their jobs. However, factors such as age, education level and employment status were found to significantly to influence their level of satisfaction. Despite the generally high level of job satisfaction, notable gaps for improvement remain particularly in areas related to salary, incentives, and career development. Therefore, it is recommended that the Ministry of Health undertake a comprehensive review of salary structures, promotions pathways, and overall working conditions. In addition, there is a need for ongoing monitoring and evaluation of job satisfaction among nurses and midwives to support sustained improvement in their work environment and professional well-being.

Keywords: Factors, Job Satisfaction, Nurses and Midwives, Referral Hospitals, Tanzania.

INTRODUCTION

Job satisfaction is a key issue for healthcare professionals worldwide. Job performance and productivity of human resources in health sector are influenced by multiple factors, among which job satisfaction stands out as one of the most significant [1]. Job satisfaction is commonly defined as an individual's subjective evaluation of their work experience, encompassing feelings of contentment, fulfilment, and happiness derived from their job roles and the overall work environment [2].

Job satisfaction is commonly described as a pleasant or positive emotional state resulting from an individual's assessment of their work or the experiences associated with work [3]. It reflets individual's overall attitude toward his/her job. A person with a high level of job satisfaction is likely to hold a positive attitude toward his/her job, whereas one who is dissatisfied tends to develop attitude about his/her job [4].

The provision of optimal healthcare services in any country largely depends on a highly committed and motivated

workforce operating within a supportive and conducive working environment [5]. In this context, the job satisfaction of nurses and midwives is of utmost importance, as they represent a significant proportion of health workforce. Globally, nurses provide more than 50% of health services, and in some countries, this figure rises to 80%. Given their pivotal role, the level of job satisfaction nurses and midwives has a direct impact on organizational success and overall quality of healthcare delivery [6].

One of the major challenges facing the health industry is the need to identify key contributors to job satisfaction and leverage those factors to develop and implement effective staff retention strategies. This effort is crucial to ending the vicious circle of high turnover rates, which results in a shrinking healthcare workforce and places additional strain and exhaustion on the remaining nurses and midwives. Workplace turnover has been shown to have a detrimental effect on patient outcomes, as it often results in the loss of experienced, competent and qualified nurses and midwives, thereby compromising the continuity and quality of care [7].

Satisfied nurses and midwives are more likely to remain not only in the nursing profession but also within the organization where experience satisfaction [8]. Job satisfaction for nurses and midwives is a multifaceted phenomenon, encompassing factors such as adequate staffing levels, inclusion in decision-making processes, supportive administration, opportunities for career advancement, fair salary and benefits, as well as conducive working conditions [9].

METHODOLOGY

Study Design and Area

This study utilized a cross-sectional descriptive design and was conducted in 28 Regional Referral Hospitals (RRHs) in Tanzania. Quantitative data collection methods were employed, ensuring that statistical analysis could be performed to draw conclusion based on numerical data.

Study Population

The target population for this study comprised nurses and midwives working from 28 RRHs. The inclusion criteria specified that only nurses and midwives who had been working at their respective RRHs for a minimum of six months were eligible to participate in the study. This criterion was established to ensure that participants had enough experience in their roles to provide meaningful data. In contrast, nurses and midwives who were not primarily engaged in patient care were excluded from the study, as the focus was on individuals actively involved in patient-facing roles within the hospitals.

Sample Size Estimation and Sampling Procedure

In this study, a census sampling technique was used to gather data from all nurses and midwives working at the 28 RRHs in Tanzania who were available during the data collection period. The study employed a convenient sampling that ensures the entire population of nurses and midwives who met the eligibility criteria was included in the study. By using a census approach, the study aimed to provide a comprehensive and accurate representation of the nursing and midwifery workforce in these hospitals. This approach eliminates the possibility of sampling errors, as every individual within the specific group is included in the data collection process. Consequently, the results of the study are more robust, offering a true reflection of the experiences and characteristics of nurses and midwives in the RRHs. Additionally, the use of census sampling methods enhances the reliability of the data, which is crucial for making informed decisions in the healthcare sector. The findings from this study serves as a benchmark for future research, contribute to policy development, and inform resource allocation and healthcare planning at the national and regional levels [10].

Data Collection

Before the commencement of data collection, the questionnaires were translated into Kiswahili, the National language of Tanzania. A pre-test was conducted at Tabora District Hospital, after which the tools were refined to ensure reliability and clarity of the responses. Enumerators underwent comprehensive training to understand the objectives, purpose, and procedures of the study with a strong emphasis observing ethical issues during data collection. Following the training of enumerators, four teams were formed; each team was randomly assigned to one zone of 6 to 7 hospitals. Each team consisted of a team leader, three enumerators, and a driver. Every team was equipped with four tablets for digital data collection.

The refined questionnaires were scripted into the Kobo Toolbox; a free and open-source data collection software designed for use in field setting. This tool allowed for real-time data entry at the survey sites, enhancing data quality by reducing manual errors and eliminating the need for post-survey data entry and validation.

The questionnaire consisted of structured and semi-structured questions designed to collect information about participants' demographics such as age, gender, education, and experience. It also included questions about the subject's job satisfaction levels and reasons for satisfaction or dissatisfaction with their current roles.

Data Analysis

Data analysis was done using SPSS version 24. The analysis involved descriptive statistics to summarize participants characteristics, and cross-tabulations to analyse to examine differences and similarities in responses by sex, age groups, and education levels. Logistic regression analysis was used to determine factors associated with job satisfaction. A p-value less than 0.05 was considered statistically significant. To assess overall job satisfaction, mean satisfaction scores were calculated. Participants whose scores were above the mean were classified as satisfied [11]values and expectations with the work environment

and the organization. Low job satisfaction among midwives is supposed to be a problem to achieve organizational goals. Due to this reason, it is a must to determine their level of satisfaction and the contributing factors. The objective is to assess job satisfaction and associated factors among midwives working in Health Centers of Central Zone of Tigray, Ethiopia, 2019\nMethod: - An institution-based cross sectional study was conducted on March 2019 at Central Zone of Tigray among 140 midwives selected using simple random sampling. Logistic regression analysis was used to identify factors related to job satisfaction. Variables which have p-value less than or equal to 0.05 with corresponding AOR at 95 confidence interval was considered to declare the significance association.\nResult: This study revealed that job satisfaction of health professional working Central Zone of Tigray was 43.57%. Of which respondents' 92 (65.7%. Negatively worded items were reversed-coded to positive before computing the total satisfaction scores to maintain consistency in interpretation.

Ethical Consideration

Clearance to undertake the study was obtained from the National Ethical Research Committee of the National Institute for Medical Research (NIMR) Ref # NIMR/HQ/R.8a/Vol.IX/4411 and permission was granted from relevant health authorities from respective RRHs.

RESULTS

Demographic Profile of Study Participants

The socio-demographic characteristics of participants are presented in Table 1. A total of 2313 nurses and midwives participated in the study, ranging in age from 22 to 60 years, with a mean age of 38.04 years (SD = 9.03). Majority of participants were female, accounting for 1730 (74.8%). The 25-34 age group was the largest, comprising 1023 (44.2%) of the respondents. Regarding marital status, 1520 (65.7%) of participants were married. In terms of educational qualifications, most participants held a Diploma in Nursing (1437; 62.1%) while only 28 (1.2%) had attained a Master's degree or higher. Employment status, most participants 2140 (92.5%) were employed on permanent and pensionable terms and the largest proportion 541 (23.4%) were working in Obstetrics/Gynaecology (Obs/Gyne) department. Nearly half of participants 1103 (47.7%) had more than 10 years of working experience

Job Satisfaction among Nurses and Midwives Regarding Key Workplace Factors

Table 1: Socio-demographic Distribution of the Study Population (N=2313)

Variable	Frequency	Percent (%)
Gender		
Female	1730	74.8
Male	583	25.2
Age groups (Years)		
18-24	31	1.3
25-34	1023	44.2
35-44	653	28.2
45-54	455	19.7
55 and Above	151	6.5
Marital Status		
Married	1520	65.7
Single	700	30.3
Divorced/Separated	31	1.3
Widow/er	62	2.7
Highest Education Level		
Certificate in Nursing	482	20.8
Diploma in Nursing	1437	62.1
Advance Diploma	37	1.6
Bachelor Degree	329	14.2
Masters and Above	28	1.2
Type of Employment Contract		
Contract	173	7.5
Permanent	2140	92.5
Department		
Obs/Gyne	541	23.4
CTC	55	2.4
OPD/EMD	302	13.1
ICU	123	5.3
Internal Medicine	376	16.3
Surgery/Orthopaedics	357	15.4
Paediatrics	300	13.0
Operating Theatre	46	2.0
Administration	65	2.8
Other	148	6.4
Work Experience		
Below 5 years	629	27.2
5 – 10 years	581	25.1
Above 10 years	1103	47.7
Total	**2313**	**100.0**

Satisfaction levels of nurses and midwives regarding various aspects of their work environment were assessed, and the assessment results are presented in Table 2. A majority of participants, 1430 (61.8%), reported being satisfied with being part of the team they work with, while 748 (32.3%) were very satisfied. Regarding recognition of team achievements, 1593 (68.9%) were satisfied and 545 (23.6%) reported being very satisfied. Satisfaction with the technical assistance from co-workers was reported by 1524 (65.9%) with an additional 667 28.8% being very satisfied.

On Management- related aspects, 1505 (65.1%) expressed satisfaction with relationship between management and staff. Involvement in decision-making related to their work garnered 1595 (69.0%) satisfaction. Regarding perception of being valued for their contribution to patient care, majority 1502 (64.9%) were satisfied with a total of 518 (22.4%) being very satisfied. Job clarity was reported by 65.2% of participants as satisfactory. However, salary satisfaction was comparative low; few 1024 (44.3%) were satisfied, and only 166 (7.2%) reported to be very satisfied. In relation to promotions processes, this was viewed positively by majority 1429 (61.8%) who were satisfied.

In terms of incentives, a total of 1502 (64.9%) participants were satisfied and majority 1570 (67.9) felt that their job made good use of their skills and expertise. Career development opportunities were positively rated, with 1471 (63.6) participants being satisfied, although 482 (20.8%) reported dissatisfaction. Fairness in seminar or workshop opportunities had low satisfaction, with only 997 (43.1%) satisfied. Satisfaction with total working hours was high, with 1482 (64.1) participants being satisfied. The availability of medical equipment and supplies recorded the highest satisfaction rating, with 1648 (71.3%) participants expressing satisfaction.

Table 2: Job Satisfaction among Nurses and Midwives Regarding Key Workplace Factors

Factors	Very Dissatisfied n(%)	Dissatisfied n(%)	Satisfied n(%)	Very Satisfied n(%)
How satisfied are you with being part of a team that you are working with?	6(2.6)	74 (3.2)	1430 (61.8)	748 (32.3)
How satisfied are you with the recognition and acknowledgment of team achievements?	53 (2.3)	122 (5.3)	1593(68.9)	545 (23.6)
How satisfied are you with receiving technical assistance from co-workers when it's necessary?	46 (1.9)	77 (3.3)	1525 (66.0)	665 (28.8)
How satisfied are you with the relationship between management and staff?	47 (2.0)	213 (9.2)	1505 (65.1)	548 (23.7)
How satisfied are you with your involvement in decisions that affect your work?	66 (2.9)	347 (15.0)	1595 (69.0)	305 (13.2)
How satisfied are you with how the hospital values the contribution of nurses and midwives to patient care?	71 (3.1)	222 (9.6)	1502 (64.9)	518 (22.4)
How satisfied are you with the clarity of your job description?	59 (2.55)	185 (8.0)	1509 (65.2)	560 (24.2)
How satisfied are you with your salary in comparison to your responsibilities	293 (12.7)	830 (35.9)	1024 (44.3)	166 (7.1)
How satisfied are you with the process used to determine promotions?	125 (5.4)	514 (22.2)	1429 (61.8)	245 (10.6)
How satisfied are you with the availability of different incentives?	92 (4.0)	583 (25.2)	1502 (64.9)	136 (5.9)
How satisfied are you with how your job makes use of your skills, expertise, and abilities?	36 (1.56)	135 (5.84)	1570 (67.9)	572 (4.7)
How satisfied are you with the availability of opportunities for career development	19 (0.8)	482 (20.8)	1471 (63.7	341 (14.7)
How satisfied are you with the fairness in opportunities for seminars or workshops?	423 (18.2)	752 (32.5)	997 (43.1)	141 (6.2)
How satisfied are you with your total working hours?	109 (4.7)	427 (18.0)	1482 (64.1)	395 (13.2)
How satisfied are you with the availability of medical equipment and supplies?	53 (2.3)	362 (15.7)	1648 (71.3)	250 (10.7)
How satisfied are you with the fairness of the workload distribution in your department/unit/ward?	95 (4.1)	504 (21.8)	1495 (64.6)	219 (9.5)

Scoring Methodology and Classification of Satisfaction Levels

In this study, each response was assigned a score based on the level of satisfaction: "Very Dissatisfied" was given a score of 1, "Dissatisfied" a score of 2, "Satisfied" a score of 3, and "Very Satisfied" a score of 4. The total score for each respondent was calculated by summing the scores across all 16 items. The mean score was determined by dividing the total score by the number of items, resulting in a mean score of 46.8. Participants who scored above the mean were regarded as satisfied, while those scoring below the mean were classified as dissatisfied.

Analysis of the Factors Influencing Job Satisfaction Among Nurses and Midwives

An analysis was conducted to examine the influence of various demographic and professional variables on job satisfaction of nurses and midwives. The overall job satisfaction rate was found to be 60.7%. Table 3 presents satisfaction rates across different variables. Gender was not associated with job satisfaction (p=0.991), indicating both female and male participants reported similar levels of satisfaction.

Age groups, was found to have a statistically significant effect on satisfaction levels (p=0.004). The highest satisfaction was observed among participants aged, 18-24 years, with a job satisfaction rate of (77.4%), while those aged 25-34 had the highest job dissatisfaction rate of (43.1%). Marital status did significantly influence job satisfaction levels (p=0.527), though widowed participants reported higher satisfaction (66.1%) compared to other marital groups. Educational level showed a significant association (p=0.001). Interestingly, participants with a Master's degree or higher reporting the highest levels of dissatisfaction (67.9%). Employment contract type (p=0.146), and work experience (p=0.123) were not significantly associated with satisfaction levels, though participants with more than 10 years of experience reported slightly higher satisfaction rate (62.6%).

Table 3: Analysis of the Factors Influencing Job Satisfaction among Nurses and Midwives

Variable	Total (n)	Number of Participants Dissatisfied (%)	Number of Participants Satisfied (%)	P- Value
Gender				
Female	1730	680 (39.3)	1050 (60.7)	0.991
Male	583	229 (39.3)	354 (60.7)	
Age groups (Years)				
18-24	31	7 (22.6)	24 (77.4)	0.004
25-34	1023	441(43.1)	582(56.9)	
35-44	653	241(36.9)	412 (63.1)	
45-54	455	172 (37.8)	283 (62.2)	
55 and Above	151	48 (31.8)	103 (68.2)	
Marital Status				
Married	1520	587 (38.6)	933(61.4)	0.527
Single	700	289(41.3)	411(58.7)	
Divorced/Separated	31	12(38.7)	19(61.3)	
Widow/er	62	21 (33.9)	41(66.1)	
Highest Education Level				
Certificate in Nursing	482	155 (32.2)	327 (67.8)	0.001
Diploma in Nursing	1437	548 (38.1)	889 (61.9)	
Advance Diploma	37	14 (37.8)	23 (62.2)	
Bachelor Degree	329	173 (52.6)	156 (47.4)	
Masters and Above	28	19 (67.9)	9 (32.1)	
Type of Employment Contract				
Contract	173	59 (34.1)	114(65.9)	0.146
Permanent	2140	850 (39.7)	1290 (60.3)	
Work Experience				
Below 5 years	629	266 (42.3)	363 (57.7)	0.123
5 – 10 years	581	231 (39.8)	350 (60.2)	
Above 10 years	1103	412 (37.4)	691(62.6)	
Total	**2313**	**909 (39.3)**	**1404 (60.7)**	

Regression Analysis of Factors Influencing Job Satisfaction

The results of the logistic regression analysis are presented in Table 4 and provide further insights into predictors of job satisfaction among nurses and midwives. Gender was not a significant predictor of job satisfaction (B = -0.137, p = 0.210), indicating no substantial difference in satisfaction levels between male and female participants. Age groups approached statistical significance as a predictor (p = 0.060). Notably, participants aged 25-34 years showed a significant negative association (B = -0.579, p = 0.016). This suggests that participants aged 25-34 are 44.0% less likely to be satisfied compared to the reference group.

The highest level of professional education completed emerged as a highly significant predictor of job satisfaction (p = 0.000). Compared to those with certificate or lower qualification, participants with Diploma in Nursing were nearly 5 times more likely to report satisfaction (B = 1.572, p = 0.000). Those with an advanced diploma were 3.8 times likely be satisfied (B = 1.333, p = 0.001). Participants Bachelor's degree were 3.3 times more likely to report satisfaction (B = 1.196, p = 0.025).

Marital status was not significantly associated with job satisfaction (p = 0.735), and neither was work experience (p = 0.829), indicating that these variables did not meaningfully contribute to predicating satisfaction levels. However, employment status was a significant predictor of job satisfaction (B = 0.546, p = 0.005). Participants with permanent employment were approximately 1.7 times more likely to be satisfied compared to those on temporary contracts.

Table 4: Regression Analysis of Factors Influencing Job Satisfaction

Variable	Reference Group	Coefficient (B)	p-Value	Odds Ratio (Exp(B))	95% CI Lower	95% CI Upper
Gender (Male vs Female)		-0.137	0.21	0.872	0.703	1.08
Age group 18-24	≥ 55 years	0.025	0.962	1.025	0.371	2.831
Age group 25-34		-0.579	0.016	0.56	0.349	0.899
Age group 35-44		-0.242	0.239	0.785	0.525	1.174
Age group 45-54		-0.243	0.232	0.784	0.526	1.169
Educational Level - Certificate in Nursing	Master's and above	1.572	0	4.818	2.121	10.946
Educational Level - Diploma in Nursing		1.333	0.001	3.794	1.694	8.496
Educational Level - Advance Diploma		1.196	0.025	3.307	1.162	9.409
Educational Level - Bachelor Degree		0.684	0.107	1.982	0.864	4.549
Marital Status – Married	Widowed	-0.046	0.87	0.955	0.549	1.662
Marital Status – Single		-0.153	0.603	0.858	0.481	1.529
Marital Status - Divorced/Separated		-0.205	0.658	0.815	0.329	2.018
Employment Status (Employed)	Contract	0.546	0.005	1.726	1.176	2.533
Work Experience Below 5 years	> 10 years	0.023	0.899	1.024	0.711	1.473
Work Experience 5 – 10 years		0.079	0.601	1.082	0.805	1.454
Constant		-0.34	0.511	0.712		

DISCUSSION

The findings of this study show that majority of participants were satisfied with their jobs. Key factors influencing job satisfaction included age, level of education attained, and employment status.

Satisfaction level of nurses and Midwives with their job

The results indicate that overall job satisfaction among nurses and midwives was moderate. This is consistent with findings from a study conducted in Accra, Ghana, which reported a composite mean score of 3.05 (SD =0.56) for overall job satisfaction [12]. Similarly, findings from a study conducted in Saudi Arabia showed that 58% of nurses and midwives were satisfied with their jobs, although concerns regarding salary, working hours, and promotion opportunities remained prevalent [13] .

This study confirms global evidence teamwork and professional support are among the most positively rated aspects of job satisfaction. A significant proportion of participants expressed satisfaction with their team and technical assistance they received from co-workers. These findings highlight the importance of a supportive working environment in maintaining morale and motivation among healthcare workers.

Despite overall moderate to high level of job satisfaction, dissatisfaction with salary and promotion opportunities remined evident. Only few participants reported being satisfied with their remuneration and opportunity for career advancement. This aligns with global trends, where financial compensation and limited opportunities for career advancement are consistently reported as key factor negatively affecting job satisfaction among healthcare professional's morale [9].

Factors influencing job satisfaction among Nurses and Midwives

Our results showed age, level of education, and employment status as significant factors influencing job satisfaction among nurses and midwives. These findings are consistent with previous research, which has highlighted multiple factors such leadership support, workload, career development opportunities, and resource adequacy as key factors of job satisfaction [12,13, 14] . Regression analysis indicated that nurses and midwives with lower educational qualifications reported higher levels of satisfaction. This may be attributed to lower expectations regarding career progressions and remuneration, compared to those with higher qualifications who may experience greater frustration when professional expectations are not met

In terms of age, younger nurses and midwives, particularly those aged 18-24 years, reported highest satisfaction levels, possibly due to their early career enthusiasm and lower exposure to work-related stress. Conversely, participants aged 25-34 years exhibited highest dissatisfaction rates, which may reflect frustration with limited career progression, workload demands and growing awareness of systemic challenges in healthcare system. Therefore, our findings underscore the need for targeted interventions for mid-career nurses and midwives including mentorship programs and structured career development initiatives, to improve job satisfaction.

Our findings on employment status are also consistent with previous studies. For example, a study by Panchal et al. [15] in India found that nurses on permanent contract reported significantly higher job satisfaction scores compared to those on temporary contract. Similar findings were reported by Anis & Osman, and Kiptulon et al.[16,17], who observed that job security is a key driver of satisfaction among healthcare workers. These studies collectively underscore that permanent contracts not only enhance job stability but also contribute to higher morale, organizational commitment and long-term retention of staff.

Implications for Policy and Practice

Higher job satisfaction levels among nurses and midwives contribute to improved patient care, greater professional commitment, and enhanced retention of healthcare workers. Conversely, dissatisfaction can result to increased absenteeism, low work engagement, and ultimately, decline in the quality healthcare services [6] . The observed positive correlation between resilience and job satisfaction underscores the importance of institutional support mechanisms. Interventions such as stress management programs, workload optimization, and the creation of psychologically safe work environment can strengthen the resilience of nurses and midwives, thereby contributing to greater job satisfaction and performance.

These findings emphasize the critical areas for policy intervention and administrative action. To improve job satisfaction, retain skilled healthcare workers, and improve quality of healthcare services, policymakers and hospital administrators should consider the following strategies: (i) Enhance remuneration and benefits to ensure competitive compensation; (ii) Establish transparent promotion pathways to support career advancement; (iii) Ensure adequate staffing levels and equitable distribution of resources, including medical supplies and equipment; (iv)_ Foster a supportive and inclusive work environment promoting teamwork, recognition and open communication; and (v) Providing continuous professional development opportunities, including access to seminar, workshops and mentorship programs.

By addressing these factors, healthcare institutions can create an environment that not only supports the well-being of nurses and midwives but also improves the overall quality and sustainability of healthcare service delivery.

CONCLUSIONS

Most nurses and midwives reported being satisfied with their jobs. However, factors such as age, education level and employment status were found to significantly to influence their level of satisfaction. Despite the generally high level of job satisfaction, notable gaps for improvement remain particularly in areas related to salary, incentives, and career development. Therefore, it is recommended that the Ministry of Health undertake a comprehensive review of salary structures, promotions pathways, and overall working conditions. In addition, there is a need for ongoing monitoring and evaluation of job satisfaction among nurses and midwives to support sustained improvement in their work environment and professional well-being.

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MUHTASARI
Visababishi Vinavyohusiana na Kuridhishwa kwa Kazi ya Wauguzi na Wakunga katika Hospitali za Rufaa za Mikoa Tanzania Bara.

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Utangulizi: Wauguzi na Wakunga wana mchango mkubwa katika utoaji wa huduma za afya, hususan katika nchi zinazoendelea kama Tanzania. Kuridhika kazini kwa wataalamu hawa wa afya ni muhimu katika kuhakikisha utoaji wa huduma zenye ubora wa hali ya juu kwa wagonjwa na pia huchangia kudumu kwao kazini ndani ya mfumo wa afya. Licha ya umuhimu wao, Wauguzi na Wakunga wengi wanakabiliwa na changamoto mbalimabli ikiwemo fidia duni, fursa finyu za kujiendeleza kitaaluma, na mazingira duni mahali pa kazi. Changamoto hizi zinaweza kuathiri motisha yao, utendaji kazi, na hatimaye ubora wa huduma wanazotoa. Kwa kuzingatia hali hiyo, utafiti huu ulilenga kutathmini mambo yanayoathiri kuridhika kwa kazi miongoni mwa Wauguzi na Wakunga katika Hospitali za Rufaa za Mikoa ya Tanzania (RRHs) nchini Tanzania, kwa lengo kutoa taarifa zitakazosaidia katika kuboresha sera na mazingira ya kazi kwa kada hizi muhimu katika sekta ya afya.

Mbinu: Utafiti huu ulihusisha Wauguzi na Wakunga kutoka RRHs 28 kote nchini Tanzania. Ukusanyaji wa takwimu ulifanyika kati ya Julai na Septemba 2024 kwa kutumia dodoso kwenye mfumo wa kielektroniki aina ya KOBO. Mfumo huu uliwezesha ukusanyaji wa takwimu kwa ufanisi na kwa usahihi. Utafiti huu ulijikita katika kuchambua athari za mambo mbalimbali ya kidemografia na kitaaluma katika kuridhika kwa kazi kwa Wauguzi na Wakunga.

Matokeo: Kwa ujumla utafiti ulihusisha jumla ya Wauguzi na Wakunga 2,313, ambapo wengi wao, yaana 1,404 (asilimia 60.7), waliripoti kuwa wameridhika na kazi zao. Mambo muhimu yaliyoonekana kuwa na athiri kwenye hali ya kuridhika kazini ni pamoja na umri wa mfanyakazi na kiwango cha elimu ambapo Wauguzi na Wakunga wenye umri mdogo (miaka 18-24) walionyesha kiwango cha juu cha kuridhika kwa asilimia 77.0 (p=0,004), ikilinganishwa na makundi mengine ya umri. Wauguzi na Wakunga wenye elimu ngazi ya cheti waliripoti kiwango cha juu cha kuridhika kwa asilimia 67.8 (p=0.001) ikilinganishwa na walio na elimu ya juu zaidi. Aidha, kwa upande wa aina ya ajira, wafanyakazi waliokuwa kwenye mikataba ya muda walioneka kuwa na kiwango kikubwa zaidi cha kuridhika (asilimia 65.9) ikilinganishwa na wale walio kwenye ajira ya kudumu (asilimia 60.3), ingawa tofauti hiyo haikuwa kubwa kitakwimu (p=0.142). Pamoja na hali hiyo ya kuridhika kwa ujumla, kulikuwepo na viwango vya kutoridhika katika baadhi ya maeneo muhimu, ikiwemo: mishahara 830 (asilimia 35.9), usawa katika fursa za kuhudhuria semina/warsha 752 (asilimia 32.5), upatikanaji wa motisha mbalimbali 583 (asilimia 25.2), usawa katika upandishaji vyeo, 514 (asilimia 22.2), na upatikanaji wa mafunzo ya kujiendeleza kitaaluma 482 (asilimia 20.8).

Hitimisho: Wauguzi na Wakunga wengi walionekan kuridhika na kazi zao, ambapo umri wa mtumishi, kiwango cha elimu na hali ya ajira (ajira ya kudumu ama ya muda) vilibainika kuwa na ushawishi mkubwa katika kiwango cha kuridhika kazini. Hata hivyo, licha ya kiwango cha juu cha kuridhika kwa kazi kwa ujumla, kulikuwepo na maeneo yanayohitaji maboresho, hasa yale yanayohusiana na mshahara, motisha za kazi, na usawa katika upatiknaji wa fursa za mafunzo ya kujiendeleza kitaluma. Kwa kuzingatia hayo, kuna haja kwa Wizara ya Afya kufanya mapitio ya kina ya miundo ya mishahara, kuongeza fursa za kupandishwa vyeo, na kuboresha mazingira ya kazi ili kuongeza hali ya kuridhika kazini miongoni mwa Wauguzi na Wakunga. Aidha, ufuatiliaji wa kutathimini kuridhika kwa kazi kwa wafanyakazi uwe endelevu ili kuhakikisha uboreshaji wa mazingira ya kazi zinazingatia mahitaji halisi kwa Wauguzi na Wakunga ambao ni watumishi muhimu katika sekta ya afya.

Maneno Muhimu: Visababishi, Kuridhika kwa Kazi, Wauguzi na Wakunga, Hospitali za Rufaa, Tanzania

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Integrating Diabetes Mellitus Screening into HIV Care: Best practices for Comprehensive Health Management at Town Health Centre, Lindi Municipality

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ABSTRACT

Introduction: The association between people living with HIV (PLHIV) and non-communicable diseases (NCDs) has become an increasingly important in public health concern, particularly due to the rising life expectancy among PLHIV, attributed to the widespread availability and use of antiretroviral therapy (ART). Recognizing the growing burden of NCDs in this population, the World Health Organization (WHO) recommends that healthcare systems adopt a holistic approach, by integrating routine screening for conditions such as diabetes, hypertension, and cardiovascular diseases into HIV care. This study documents best practices in the integration of diabetes mellitus (DM) screening into HIV care at the Town Health Center, in the Lindi Region of Tanzania.

Methodology: Diabetes mellitus screening was conducted following the structured procedure outlined in the Job Aids for NCD Integration. Healthcare workers (HCWs) first provided a health education to HIV clients attending the Center, focusing on diabetes and its associated risk factors. All clients aged 15 years and above were screened using a standardized tool that assessed for symptoms such as frequent urination, excessive thirst, and unexplained weight loss. Anthropometric measurements including weight, height, and Body Mass Index (BMI) were also taken to assess obesity-related risk. Patients presenting with any one of the symptoms or at least two risk factors, were eligible for random blood glucose (RBG) testing and referred to a clinician for further assessment. Diabetes was diagnosed based on fasting blood glucose levels ≥7.0 mmol/L or RBG >11.1mmol/L.

Results: Between January and June 2025, a total of 791 client visits were recorded at the Town Health Center, with 353 individuals screened for DM symptoms. The majority of those screened were female clients 268 (75.9%). Of the 353 clients, 305 (86.4%) exhibited symptoms that met the criteria for random blood glucose (RBG) testing. Among those 9 clients (3.0%) were diagnosed with DM, all of whom were female clients. To support this process, an improvised diabetes screening register was introduced to document essential client's information, and enabled HCWs to track and manage diabetes screening data more efficiently. Patients diagnosed with DM were seamlessly integrated into both the HIV and NCD clinics at the Center where they received comprehensive and coordinated care. Additionally, two major operational challenges were effectively addresses including incomplete documentation and shortage of medical supplies.

Conclusions: These findings underscore the critical need for integrating NCD screening into routine HIV care. Integrating DM screening into HIV care represents a significant advancement in delivering comprehensive health services to individuals living with these dual conditions. By embedding NCDs screening and management within existing HIV care frameworks, health facilities can significantly enhance access to essential services and improve overall patient outcomes. Experiences from the Town Health Center highlight the importance of tailored strategies, such as development of improvised screening registers and providing ongoing training for HCWs. These efforts not only streamline service delivery but also foster a supportive environment that encourages patient adherence and satisfaction. As the prevalence of diabetes and other NCDs continues to rise among PLHIV, such integrated care model serves as a valuable blueprint for other health facilities. Ultimately, this holistic approach contributes to improved quality of life for patients, more efficient use of healthcare resources, and a stronger, more resilient healthcare system.

Keywords: Diabetes Mellitus; HIV Care; Screening; Integrated Services; Health Outcomes

INTRODUCTION

The increasing prevalence of hypertension and diabetes among adults living with HIV in Tanzania present a growing public health concern. Recent studies indicate that the prevalence of diabetes among HIV-infected individuals is notably high, with rates reaching 13%, based on HbA1c measurements [1] . Furthermore, a prospective cohort study revealed an incidence of new-onset hypertension at 33 cases per 100 person-years and diabetes at 3 cases per 100 person-years among adults with HIV [2].

This increasing burden of non-communicable diseases (NCDs) is compounded by factors such as older age, obesity,

and limited access to comprehensive healthcare services [3,4]. Alarmingly, many individuals remains unaware of their NCD status, with a significant proportion of those affected, particularly by hypertension remaining undiagnosed [3].

These challenges underscore the urgent need for integrated healthcare approaches that address both HIV and coexisting NCDs. Managing these conditions in isolation is often inefficient and burdensome for patients. Integrated management strategies, on the hand, can significantly improve health outcomes by offering screening, diagnosis, and treatment for diabetes and hypertension within existing HIV care platforms. This approach not enhances access to essential services but also reduces the burden of multiple clinic visits and fosters continuity of care.

Moreover, integration aligns with patient preferences for comprehensive, one-stop services, supporting better adherence to treatment regimens, ultimately resulting in improved health outcomes and quality of life for patients(5). This review outlines best practices for integrating DM screening into HIV care, drawing from practical experiences at the Town Health Center in Lindi Region. It highlighting successful strategies, challenges addressed and offering insights for other facilities aiming to implement similar model in resource-limited settings.

Policy Framework

The World Health Organization (WHO) emphasizes the critical importance of integrating the prevention and control of non-communicable diseases (NCDs) into existing HIV/AIDS care platform. This approach is particularly vital in resource-limited settings, where individuals frequently face multiple, overlapping health challenges. WHO recommends that healthcare systems adopt a holistic, patient-centered model that include routine screening and management of NCDs such as diabetes, hypertension, and cardiovascular diseases[6]. The WHO recommendations include implementing standardized protocols for risk assessment, early detection, and management of NCDs within HIV care settings[6]; promoting integrated service delivery to improve the efficiency, reduce stigma and enhance treatment adherence; and strengthening the overall resilience of healthcare system by addressing both communicable and NCDs concurrently.

At the national level, Tanzania has demonstrated strong policy alignment with these global recommendations. The National Integrated Guidelines for the Management of HIV, STI, and Viral Hepatitis (2024), published by the United Republic of Tanzania, provide a comprehensive framework for integrating NCD management into routine HIV care. Recognizing the rising prevalence of NCDs among individuals living with HIV, these guidelines underscore the importance of a holistic approach to healthcare. They advocate for routine screening and management of NCDs, particularly diabetes mellitus and hypertension, to enhance the overall health outcomes of people living with HIV. The guidelines aim to streamline healthcare delivery by minimizing the need for multiple visits, thereby improving access to essential services[7].

To support implementation, the Ministry of Health has developed the Job Aids for NCD Integration into HIV Care, which serves as practical tools designed to facilitate the incorporation of non-communicable disease screening and management into existing HIV treatment protocols. Specifically focusing on DM, these job aids provide HCWs with clear guidelines on how to implement routine screening using standardized tools. They outline the diabetic screening tool which is necessary for assessing patients for diabetes sign and symptoms, risk factors, conducting blood glucose tests, and documenting results effectively[8].

In addition, the Boresha Afya Yangu initiative plays a pivotal role in strengthening health facilities across Tanzania's southern zone by providing essential resources and training for the integration of NCDs management into HIV care. The initiative supports HCWs with essential screening tools, including glucometers and blood glucose strips, to facilitate diabetes screening. Additionally, Boresha Afya Yangu offers mentorship and training programs aimed at enhancing the capacity of HCWs, particularly nurses and doctors, in utilizing diabetes screening tools and effectively documenting patient information. This support not only enhances the quality of care but also promotes a culture of integrated service delivery, contributing to improved quality of care to better health outcomes for patients living with both HIV and NCDs.

METHODOLOGY

Study Area

The study was conducted from January to June 2025 at Town Health Centre. The Centre is situated in Lindi Municipal Council, and serves a population of around 22,460 inhabitants. This Centre offers a wide range of healthcare services, including reproductive health services such as antenatal care and labor delivery, as well as a Care and Treatment Clinic (CTC) for HIV/AIDS. Additionally, it provides dental services, laboratory testing, and a NCDs clinic. The Outpatient Department (OPD) further supports community health needs.

Facility Preparation for Services Integration

To efficiently integrate DM screening into HIV care, the Town Health Center implemented a series of preparatory measures aimed at enhancing its infrastructure and resource availability. Recognizing the importance of accurate and efficient screening, the facility established a dedicated a screening area for diabetes, thoughtfully designed to ensure patient comfort and confidentiality. This area was equipped with essential tools, including weighing scale, stadiometer, sphygmomanometers, glucometer, diabetic screening tools, and improvised DM screening register. A significant contribution came from USAID Boresha Afya Yangu Southern Zone, which donated a high-quality glucometer and glucose strips.. These user-friendly and reliable devices significantly enhanced the facility's capacity to conduct diabetes screenings, ensuring timely and accurate blood glucose measurements.

Training and Mentorship

The mentorship program for HCWs at the Town Health Center provided comprehensive, hands-on training for CTC nurses and a medical doctor, focusing on the effective use of the DM screening tool (Figure 1). The training session emphasized critical aspects of identifying risk factors, recognizing clinical signs and symptoms of diabetes, accurate administration and interpretation of blood glucose tests for eligible patients. A patient is suspected to have diabetes or at risk of developing diabetes if has any one of the signs/symptoms or at least two risk factors. The training also covered systematic documentation of patient information using the improvised DM screening register. The mentorship also reinforced the importance of adhering to standardized protocol and maintaining accurate records for continuity of care and monitoring outcomes. This capacity-building initiative was crucial in equipping HCWs with the necessary skills, confidence, and consistency to perform screenings effectively. As a result, the quality of integrated care improved, enabling earlier detection and better management of DM among PLHIV.

TOOL FOR SCREENING FOR DIABETES AT TRIAGE POINT

To be filled every 6 months

Patient ID……..

Age……

Sex……**weight**……**height**……**BMI**…….. Date……

Does the patient have any of the following?

	Signs and symptoms	Write Y (Yes), N (No) or N/A Not Applicable	Comment
1	Frequent Urination (Do pass urine many times in the day) ?		
2	Do you feel thirsty all the time or drink a lot of water more than before?		
3	Do you feeling hungry all the time?		
4	Have you lost a lot of weight that you cannot explain the cause?		
5	Do pass urine many times in the night (Nocturia)?		
6	blurry vision (Are there times when you do not see well)		
7	Do your wounds take long to heal than before (chronic ulcer)		
8	Do you have any sexual problems (e.g. inability to maintain erection)?		
9	Do you feel tired for prolonged period?		
10	Do you feel dizzy sometimes		
11	Do have tingling, numbness or burning sensation, painful feet or legs		
	Risk Factors		
1	Age>30 years		
2	Overweight/ obesity (BMI>25kg/M$^{2)}$		
3	Family history of Diabetes		
4	History of Gestational Diabetes (diabetes in Pregnancy)		
5	Currently smokes-		
5(a)	*Used to smoke and quit less than 12 months ago*		
5(b)	*Used to smoke and quit more than 12 months*		
6	Consumes alcohol regularly (> 237 ml of beer (5% alcohol), 100mls of wine (10% alcohol) and 25 mls of spirits (40% alcohol)		
	Conclusion	Suspected (number of signs & symptoms/risk factors	If yes DO TEST
	Patient is suspected to have diabetes or at risk of developing diabetes if; a) has any one of the signs/symptoms or b) any two risk factors above	_____ ----------	

Sources: Job Aids for Integration of Non communicable diseases-Ministry of Health, United Republic of Tanzania(8)

Figure 1: Diabetes Mellitus Screening Tools.

Screening Process

Diabetes mellitus screening was conducted following the structured procedure outlined in the Job Aids for NCD Integration. Healthcare workers (HCWs) first provided a health educate to patients attending the clinic, focusing on diabetes and its associated risk factors. All patients aged 15 years and above were screened using a standardized tool that assessed for symptoms such as frequent urination, excessive thirst, and unexplained weight loss. Anthropometric measurements including weight, height, and Body Mass Index (BMI) were also taken to assess obesity-related risk. Patients presenting with any one of the signs/symptoms or at least two risk factors, were eligible for random blood glucose (RBG) testing and referred to a clinician for further assessment. Diabetes was diagnosed based on fasting blood glucose (FBG) levels ≥7.0 mmol/L or random blood glucose (RBG) >11.1mmol/L. After screening, HCWs document all the diabetic cases in MTUHA 5 register. Document the following in the CTC 2 card; height, weight column, BP in column. Nutrition status based on BMI whether: obese, overweight, underweight, normal. Record RBG/FBG values in column 23 of the CTC2 Card. Record code 40 in disease signs and symptoms column 7. Record sessions given on lifestyle modification.

RESULTS

Screening Statistics

From January 2025 to June 2025, a total of 791 client visits from individuals aged 15 years and above attended CTC at Town Health Center. Majority of clients were females 566 (70.3%). Among these, 353 clients (44.6%) were screened for DM related symptoms, females account for (75.9%) of screened clients. Out of the screened clients, 305 (86.4%) exhibited symptoms that made them eligible for random blood glucose testing, this included and 250 (82.0%) females. A total 9 (3.0%) all female clients were diagnosed with diabetes mellitus (Table 1).

Table 1: Diabetes mellitus screening results from January 2025-June 2025

Situation	Total	Males (%)	Female (%)
Clients visited: ≥15 years	791	225 (29.7)	566 (70.3)
Clients screened for diabetes mellitus related symptoms	353	85 (34.1)	268 (75.9)
Clients with diabetes mellitus related symptoms (N=353)	305	55 (18.0)	250 (82.0)
Clients diagnosed with Diabetes mellitus (N=305)	9	0	9 (3.0)

Improvised Diabetes Screening Register

An improvised diabetes screening register was used to document essential client's information, such as name, CTC ID, age, sex, weight, height, BMI, eligibility, and RBG results. This made easy for HCWs to systematically track and manage diabetes screening data (Figure 2). The structured approach enhances documentation accuracy and facilitates better client management. The improvised diabetes screening register could be adapted by other health facilities to streamline their screening processes, ensuring comprehensive data collection and improving overall efficiency in managing chronic conditions.

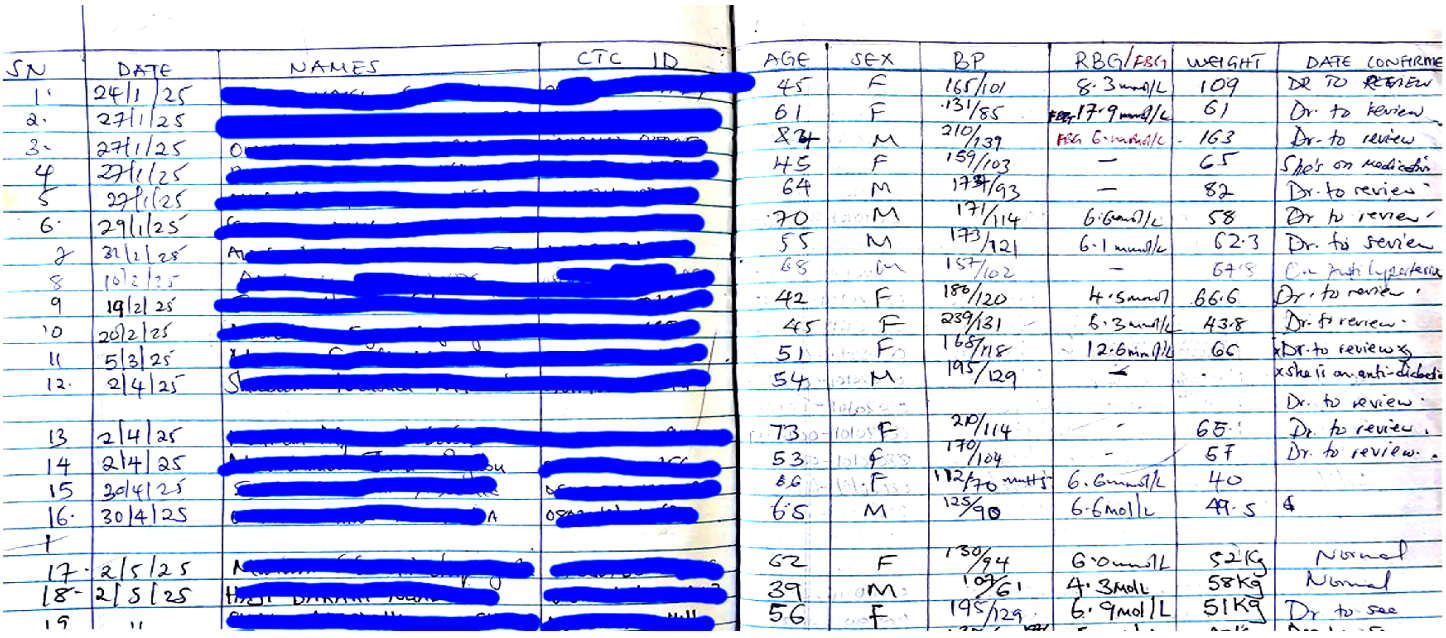

Figure 2: Improvised diabetes mellitus register

Integration into Care

Patients diagnosed with DM were seamlessly integrated into both the HIV and NCD clinics at the Town Health Center. Following diagnosis, they received comprehensive, and coordinated care that addressed both HIV treatment and diabetes management. This integration approach included regular follow-up appointments, during which HCWs monitored blood glucose levels, adjusted diabetes medications as needed, and reinforcing adherence to ART. By integrating services, the dual-care model streamlined treatment pathway, minimized patient burden, and promoted continuity care. The holistic approach not only improved service efficiency but also led to better health outcomes, including improved glycemic control and a reduction in complications associated with both HIV and diabetes.

Incomplete Documentation

Incomplete documentation is a common challenge in patient records-keeping, often affecting the quality of care and continuity of services. In this study, the issue was effectively addressed through frequent mentorship sessions for HCWs, which emphasized the importance of accurate and complete documentation. These mentorship sessions provided hands-on training and practical guidance on how to accurately record patient information during diabetes screening and follow-up. As a result, HCWs became more diligent and consistent in their documentation practices. Reinforcing the value of thorough record-keeping not only improved data quality but also facilitated better monitoring, ultimately enhancing the quality of care provided to patients and facilitating better tracking of patients progress and diabetes-related health outcomes, ultimately enhanced the overall quality of care.

Shortage of Medical Supply

Shortage of medical supplies often hinder the delivery of quality healthcare services. In this study, a critical challenge was the limited availability of glucometers and glucose strips posed a significant barrier to effective diabetes screening. Anticipating this issue during the preparation phase, the health center partnered with Boresha Afya Yangu, which donated adequate supplies of functioning glucometers and glucose strips. This partnership ensured that HCWs had uninterrupted access to essential tools to conduct screenings. As a result, the health center maintained consistent diabetes testing services, improving client access to care and strengthening the overall effectiveness of the integrated HIV-NCD care model.

Inadequate Training of HCWs

Inadequate training among HCWs initially posed a challenge to effective implementation of diabetes screening. To overcome this gap, the health center established a continuous mentorship program aimed at strengthening the knowledge and skills of HCWs. This program included regular training sessions, hands-on workshops, and ongoing support from experienced mentors. Through this structured approach, HCWs gained greater proficiency in using diabetes screening tools and improved their understanding the proper documentation procedures. The emphasis on continuous learning not only enhanced the quality and consistency of screening but also promoted a culture of professional development within the healthcare team. This capacity-building initiative played a key role in sustaining the integrated care model and improving service delivery.

DISCUSSION

The study demonstrated the feasibility of integrating DM screening into HIV care, which was achieved through the use of an improvised screening register, continuous HCWs training, and targeted interventions to address challenges related to incomplete documentation and medical supply shortages.

At Town Health Center, the statistical findings reveled a diabetes prevalence of 3.0% (9 out of 305 tested clients), with all diagnosed cases occurring among female clients. This prevalence aligns with the lower range of previously reported rates in sub-Saharan Africa, where studies have documented diabetes prevalence ranging from 3.0% in Nigeria to 14.9% in Zimbabwe among HIV-positive populations [9,10]. The observed gender distribution in our study, with females constituting 75.9% of screened clients and 100% of diagnosed diabetes cases, reflects the demographic profile of HIV care setting in Tanzania. It may also suggest possible gender-specific metabolic vulnerabilities among women living with HIV. The high symptom-based screening uptake rate (86.4%) suggests effective risk stratification and responsiveness among HCWs. However, this approach may underestimate the true burden of diabetes by missing asymptomatic cases. Evidenced from South African studies where biochemical screening identified pre-diabetes prevalence as high as 17.7%, underscores the need to complement symptom-based approaches with routine biochemical testing for more accurate case detection [11].

The development and implementation of an improvised diabetes screening register represented a key innovation addressing systematic documentation challenges commonly faced in resource-constrained healthcare settings. The register enabled systematically capture of essential client information, and facilitating consistent tracking and management of diabetes screening data by HCWs. This improvement enhanced both documentation accuracy and efficiency in client management. The innovation addresses a fundamental gap frequently identified in integration studies, where inadequate data systems have been shown to undermine screening fidelity and continuity of care [12]. Evidence from Zambia supports the value of embedded screening tools within routine medical records, as the absence of

standardized documentation system was associated with reduced prioritization of screening activities and lower implementation fidelity [13]. The adaptability of this improvised register provides a scalable and sustainable solution that could be replicated across similar settings, providing a standardized approach to diabetes screening documentation within HIV care programs.

The seamless integration of diabetes-positive patients into both HIV and NCD clinics at the Town Health Center exemplifies best practices in comprehensive chronic disease management. This integrated approach streamlined treatment pathways, reduced patient burden, and promoted continuity of care, thereby enhancing service efficiency and improving health outcomes. The dual-care model aligns with evidence from multi-site African studies reporting high patient retention rates (93.1%) and maintained viral suppression rate (averaging 99.2%) in integrated chronic care programs [14]. The successful implementation at the Town Health Center demonstrates that co-located services can effectively manage complex comorbidities while maintaining quality of HIV care. This model operationalizes WHO recommendations for holistic healthcare delivery and responds to the rising burden of NCDs among PLHIV. Furthermore, the observed improvement in glycemic control and reduced complications support existing evidence that integrated care models enhance clinical outcomes and optimize resource utilization in resource-limited settings [15].

Incomplete documentation emerged as a significant challenge affecting care quality and continuity, consistent with findings from HIV-NCD integration programs across sub-Saharan Africa[16]a rising burden of noncommunicable diseases (NCDs. The Town Health Center addressed this challenge through frequent mentorship sessions focusing on strengthening accurate and complete documentation practices. This intervention aligns with evidence identifying inadequate documentation as a primary barrier to successful integration efforts [17]. The continuous mentorship model adopted represents a sustainable quality improvement strategy that simultaneously builds internal capacity and addresses immediate documentation deficits. Literature further supports mentorship-based interventions as effective strategies for improving HCWs performance and maintaining program fidelity in resource-limited settings. The success of this approach at Town Health Center provides a practical and replicable model for other facilities seeking to strengthen documentation system within integrated HIV-NCD service delivery frameworks.

The shortage of glucometers and glucose test strips represented a critical barrier to effective diabetes screening implementation, highlighting supply chain challenges commonly encountered in resource-limited healthcare settings [16]a rising burden of noncommunicable diseases (NCDs. To address this constraint, the Town Health Center established a strategic partnership with Boresha Afya Yangu, which donated adequate supplies to ensure uninterrupted screening services. Similarly, supply chain disruptions have been documented across sub-Saharan Africa, where equipment shortages frequently compromise screening programs despite initial supply provision [16,18]a rising burden of noncommunicable diseases (NCDs. The partnership mode adopted with Town Health Center represents a sustainable approach that extends beyond meeting immediate supply needs to establishing continuous support mechanisms. Reliable access to diagnostic supplies is fundamental to maintaining screening fidelity, ensuring patient confidence and support scale-up. The success of this partnership provides a replicable framework for other health facilities to engage with non-governmental organizations, private sector partners, or donor agencies in building sustainable supply chains for integrated screening programs.

Initial inadequate training of HCWs posed significant implementation challenges, reflecting workforce capacity constraints commonly reported in HIV-NCD integration studies [18]. In response, the Town Health Center established a comprehensive mentorship program comprising regular training sessions, hands-on workshops, and continuous support from experienced mentors. Existing literature emphasizes that workforce constraints and competing priorities often reduce screening fidelity, as HCWs may deprioritize new procedures due to heavy workloads and insufficient training [18,19]. The continuous mentorship model directly addresses these challenges by providing sustained, hands-on support rather than one-time training interventions. This approach builds confidence and competence among HCWs while fostering program sustainability through internal capacity development. The success of this training model aligns with recommendations for task-sharing and role realignment highlighted in systematic reviews of integration programs [20]. Overall, the Town Health Center's experience demonstrates that sustained investment in healthcare workforce capacity can overcome initial implementation barriers and drive long-term improvements in service delivery quality and program effectiveness.

POLICY IMPLICATIONS

To further strengthen integrated care, health facilities should prioritize multidisciplinary collaboration, ensuring that HCWs from various specialties work together to develop and implement comprehensive, patient-centered care plans. This collaborative approach enhances coordination, reduces service fragmentation, and improves overall health outcomes. Investment in robust data management systems is also essential to effectively track patient outcomes, identify gaps in care and facilitate timely clinical decision-making. Additionally, establishing regular feedback mechanisms such as performance reviews, patient satisfaction survey, and program evaluation that can provide valuable insight to continuously refine and improve integrated care delivery. Expanding community outreach initiatives is equally important. Public education campaigns and community-based screenings can raise awareness about the importance and benefits of early detection and integrated management of chronic conditions,

especially among vulnerable population. By implementing these strategies, health facilities can create a more resilient, responsive, and patient-centered healthcare system, ultimately improving the quality of care and health outcomes for individuals living with HIV and other NCDs.

CONCLUSIONS

Integrating DM screening into HIV care represents a significant advancement in delivering comprehensive health services to individuals living with these dual conditions. By embedding NCDs screening and management within existing HIV care frameworks, health facilities can significantly enhance access to essential services and improve overall patient outcomes. Experiences from the Town Health Center highlight the importance of tailored strategies, such as development of improvised screening registers and providing ongoing training for HCWs. These efforts not only streamline service delivery but also foster a supportive environment that encourages patient adherence and satisfaction. As the prevalence of diabetes and other NCDs continues to rise among PLHIV, such integrated care model serves as a valuable blueprint for other health facilities. Ultimately, this holistic approach contributes to improved quality of life for patients, more efficient use of healthcare resources, and a stronger, more resilient healthcare system.

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MUHTASARI

Uunganishaji wa Uchunguzi wa Kisukari katika Huduma za VVU: Uzoefu wa Kituo cha Afya cha Mji, Mkoa wa Lindi, Tanzania

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Utangulizi: Uhusiano kati ya watu wanaoishi na VVU (PLHIV) na magonjwa yasiyoambukiza (NCDs) umeendelea kuwa suala muhimu zaidi katika afya ya umma, hasa kutokana na kuongezeka kwa muda wa kuishi miongoni mwa PLHIV kutokana na upatikanaji mpana na matumizi ya tiba ya antiretroviral (ART). Kutambua mzigo unaoongezeka wa NCDs katika kundi hili, Shirika la Afya Duniani (WHO) linapendekeza kwamba mifumo ya afya kubadili mkakati na kuunganisha uchunguzi wa kawaida wa hali kama vile kisukari, shinikizo la damu, na magonjwa ya moyo katika huduma za VVU. Utafiti huu unaelezea uzoefu na mbinu bora za kuunganisha uchunguzi wa kisukari (DM) katika huduma za VVU katika Kituo cha Afya cha Mji, katika Mkoa wa Lindi, Tanzania.

Mbinu: Uchunguzi wa kisukari ulifanyika kwa kufuata mwongozo uliowekwa katika Job Aids kwa unganishaji wa NCDs. Wafanyakazi wa afya (HCWs) kwanza walitoa elimu ya afya kwa wagonjwa wa VVU wanaotembelea Kituo, kuhusu kisukari na sababu zake za hatari. Wateja wote wenye umri wa miaka 15 na zaidi walichunguzwa kwa kutumia chombo kilichosanifiwa ambacho kilitathmini dalili kama vile kukojoa mara kwa mara, kiu kupita kiasi, na kupungua uzito bila sababu. Vipimo vya anthropometric ikiwa ni pamoja na uzito, urefu, na BMI vilichukuliwa pia kutathmini hatari inayohusiana na unene. Wagonjwa waliokuwa na mojawapo ya dalili au zaidi au angalau sababu mbili za hatari, walifanyiwa kipimo cha sukari ndani ya damu (RBG) na kurejelewa kwa daktari kwa tathmini zaidi. Uthibitisho wa kisukari ulifanywa kwa kipimo cha sukari ya damu ya kufunga ≥7.0 mmol/L au RBG >11.1 mmol/L.

Matokeo: Kati ya Januari na Juni 2025, jumla ya ziara 791 za wateja zilirekodiwa katika Kituo cha Afya cha Mji, ambapo watu 353 walichunguzwa kwa dalili za DM. Asilimia kubwa ya waliochunguzwa walikuwa wanawake 268 (asilimia 75.9). Kati ya wagonjwa 353, 305 (asilimia 86.4) walikidhi vigezo vya kupimwa kwa RBG. Kati ya hao, wagonjwa 9 (asilimia 3.0) waligundulika kuwa na kisukari, wote wakiwa ni wanawake. Ili kusaidia mchakato huu, rejista ya uchunguzi wa kisukari ilianzishwa ili kurekodi taarifa muhimu za wagonjwa. Rejista hii iliwezesha HCWs kufuatilia na kusimamia taarifa za uchunguzi wa kisukari

kwa ufanisi zaidi. Wagonjwa waliothibitishwa kuwa na DM walijunganishwa moja kwa moja katika kliniki za VVU na NCD ndani ya Kituo ambapo walipokea huduma kamili kwa pamoja na zilizoratibiwa. Aidha, changamoto kuu mbili za uendeshaji, ikiwa ni ukosefu wa nyaraka kamili na upungufu wa vifaa vya matibabu zilitatuliwa kupitia mikakati mahususi.

Hitimisho: Matokeo haya yanaainisha umuhimu ya kuunganisha uchunguzi wa NCD katika huduma za VVU. Kuunganisha uchunguzi wa DM katika huduma za VVU ni hatua muhimu katika kuboresha huduma jumuishi kwa watu wanaishi na VVU. Kwa kuingiza uchunguzi na usimamizi wa NCDs ndani ya mifumo iliyopo ya huduma za VVU, vituo vya afya vinaweza kuongeza upatikanaji wa huduma muhimu na kuboresha matokeo ya kiafya kwa ujumla. Uzoefu kutoka Kituo cha Afya cha Mji unaonyesha umuhimu wa mikakati bunifu kama uanzishaji wa rejista za uchunguzi na mafunzo endelevu kwa HCWs. Mbinu hizi sio tu zinaboresha utoaji wa huduma bali pia zinajenga mazingira yanayochochea utiifu na kuridhika kwa wagonjwa. Kadri kiwango cha kisukari na NCDs zingine kinavyozidi kuongezeka miongoni mwa PLHIV, mfano huu wa huduma jumuishi unaweza kutumika kama mwongozo ama rejea muhimu kwa vituo vingine vya afya. Hatimaye, njia hii ya pamoja inachangia kuboresha ubora wa maisha kwa wagonjwa, kuongeza ufanisi wa matumizi bora ya rasilimali za afya, na kuimarisha uimara wa mfumo wa afya.

Maneno Muhimu: Kisukari; Huduma za VVU; Uchunguzi; Huduma Jumuishi; Matokeo ya Afya.

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Enhancing Health Service Delivery through Implementation of the Afya Supportive Supervision System from July 2023 to March, 2025: A Lesson from Tanzania

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ABSTRACT

Introduction: Supportive supervision is a collaborative process between healthcare providers and supervisors aimed at improving the quality of healthcare services. To strengthen this practice, the Ministry of Health (MoH), in collaboration with President's Office – Regional Administration and Local Government (PORALG) and other stakeholders, developed a digital platform known as Afya Supportive Supervision (AfyaSS) system. In the 2023/2024 fiscal year, the AfyaSS system was rolled out across various levels of healthcare service delivery in Mainland Tanzania. The platform offers a digital framework for real-time health facility monitoring, enabling supervisors and supervisees to make informed and evidence-based decisions. By improving accountability, optimizing resource management, and service quality, AfyaSS represents a significant advancement in supportive supervision practices. This paper presents the implementation of AfyaSS system during 2023/2024 fiscal year, outlining its effectiveness, challenges encountered, and opportunities for further improvement.

Methodology: This study employed a descriptive study design, analyzing data collected during the routine supportive supervision using the AfyaSS system. Data collection was carried out using checklists uploaded into the AfyaSS system. These checklists comprised a series of structured questions designed to guide supervisors throughout supportive supervision process, with responses entered directly into the system. AfyaSS system generated real-time reports for basic analysis, while detailed assessments were conducted using exported datasets. Data were analyzed descriptively using Microsoft Excel, generating frequencies, percentages, and cross-tabulations to ensure valid and reproducible findings.

Results: It was observed that AfyaSS system was implemented across all 26 regions of Mainland Tanzania during the 2023/2024 fiscal year. Pwani region recorded the highest number of completed supervisions, with 1,097 supervision visits successfully conducted out of 1,211 planned visits with a 90.6% completion rate. In contrast, Ruvuma region reported the lowest performance, with only 17 supervision visits completed out of 147 planned visits representing an 11.6% completion rate. Capacity building was a critical factor in the rollout of Afya SS system. A total of 3,302 members of the Regional Health Management Teams (RHMTs) and Council Health Management Teams (CHMTs) were trained on the use of the system, alongside 110 staff from partner organizations. Key partners supporting the implementation included the United Nations Children's Fund (UNICEF), United States – Centres for Disease Control and Prevention (US-CDC), EngenderHealth, Jhpiego through the United States Agency for International Development (USAID) - Afya Yangu Project, Pathfinder, Marie Stopes, and Ifakara Health Institute through the United States President's Malaria Initiative (PMI) Shinda Malaria Project. Despite notable achievements, several challenges hindered optimal implementation of AfyaSS system. These included limited access and difficulties in generating reports, use of outdated checklists, shortage of trained healthcare workers, inadequate availability of devices such as tablets and smartphones, limited follow-up on quality improvement plans, and slow internet connectivity particularly in rural areas.

Conclusion: The digital Afya supportive supervision system in Tanzania marks a transformative advancement in healthcare supervision, strengthening data-driven decision-making and improving service quality. Its long-term success, however, hinges on addressing persistent challenges such as uneven technological infrastructure, limited capacity among health workers, and the need for sustained financial and technical support. Securing commitment from both national and international stakeholders, alongside ongoing investment and system adaptation will be crucial to ensure that AfyaSS system continue to deliver meaningful improvement in Tanzania's healthcare system.

Keywords: Afya Supportive Supervision (AfyaSS), Digital System, Supportive Supervision, Tanzania

INTRODUCTION

Supportive supervision is a cooperative effort between healthcare providers and supervisors aimed at enhancing the quality of healthcare service delivery. It focuses on providing assistance to enhance the skills and knowledge of healthcare providers. Supportive supervision has demonstrated its potential to drive quality improvement in both structural and procedural aspects within the healthcare system including health facilities [1–4].

The Ministry of Health (MoH), in partnership with various stakeholders, has continued to implement the Digital Health Strategy (2019–2024)[5]. One of the focus areas in the strategy is on enhancing systems to manage supportive supervision carried out by the MoH, President's Office - Regional Administration and Local Government (PO-RALG), Regional Health Management Teams (RHMTs), Council Health Management Teams (CHMTs), and Partners across all levels of healthcare delivery.

In order to strengthen and streamline supportive supervision activities across all levels of healthcare system, the MoH in partnership with the PO-RALG and other key stakeholders, developed a digital platform called Afya Supportive Supervision (AfyaSS) system [4,6]. This system was officially launched in September 2021 during the Annual Conference of Regional and District Medical Officers (RMOs and DMOs), marking a significant step towards improving the quality of health services through more effective monitoring and support. The introduction of AfyaSS system aims to improve accountability, facilitate data-driven decision-making, and strengthen the overall supervision process [4].

In the 2023/2024 fiscal year, various activities were identified, planned, and implemented to strengthen the utilization of the AfyaSS system and improve the delivery of quality healthcare services nationwide. This paper presents the implementation of supportive supervisions activities in the 2023/2024 fiscal year conducted through the AfyaSS system across different levels of healthcare service delivery in Tanzania. It provides an overview of the system's effectiveness, highlighting key challenges encountered, and outlines opportunities for further improvement. The overarching goal is to ensure that AfyaSS system remains a vital digital tool for enhancing supportive supervision, promoting efficiency, and ultimately improving health outcomes.

METHODOLOGY

Study Design and Setting

This study employed a descriptive study design whereas data gathered during the routine supportive supervision using the AfyaSS system were analyzed. The data encompassed all regions and councils across Mainland Tanzania, providing a comprehensive view of the system's use and performance in diverse geographical and administrative contexts.

Implementation Process for AfyaSS System

The AfyaSS system was designed to support all stages of the supportive supervision process from planning, execution, reporting, and follow-up. During the planning stage, supervisors used the AfyaSS system web platform or mobile application to schedule visits, select facilities, identify checklists, form supervision teams, and assign roles. This online supervision plan was shared with facility in-charges and relevant stakeholders for coordination.

During supervision visits, supervisors used tablets or smartphones to administer structured checklists, with both online and offline functionalities. These checklists included sections on service delivery, infrastructure, supply chain, data quality, and clinical care practices. Supervisors engaged directly with healthcare workers, documented strengths and gaps, registered supervisees, and developed action plans with timelines. Photos of best practices and areas needing improvement were uploaded as evidence.

Following supervision, AfyaSS system automatically generated preliminary reports. Supervisors reviewed, finalized, and submitted these reports to facility management, RHMTs, CHMTs, and MoH. This structured approach ensured documentation of findings and allowed timely feedback and accountability at all system levels.

Data Collection

Data were collected using standardized checklists uploaded by MoH directorates, PORALG, and partner programs into the AfyaSS system. These checklists ensured uniformity across regions and health facilities. Responses entered into the system were automatically synchronized to the central server once internet connectivity was available. To maintain confidentiality, user accounts were protected by unique usernames and passwords, with access restricted according to supervisory roles.

Data analysis

Data analysis followed a two-tiered approach. First, AfyaSS automatically processed responses to generate predefined summary reports, including scores, frequencies, and compliance percentages. These descriptive statistics provided immediate feedback to facilities and supervisors. Second, for in-depth assessment, data were exported into Microsoft Excel for advanced descriptive analysis, including frequencies, proportions, and cross-tabulations. These outputs were further discussed during quarterly Regional Quality Improvement Focal Persons (RQIFPs) meetings to identify trends, monitor regional performance, and guide action plans. Furthermore, a quarterly data analysis of the AfyaSS system was conducted to evaluate: system coverage; number of supervisions planned and conducted; completeness of the supervision process; implementation of action plans left at the facilities; technical and financial support from the government and partners.

Ethical Issues

The study analyzed routine program data captured by AfyaSS system. Permission for data use was granted by the MoH and PO-RALG. No patient-identifiable information was collected, ensuring compliance with ethical requirements for confidentiality and data protection.

RESULTS

Coverage of AfyaSS System Use per Region

Since its introduction, the AfyaSS system has been widely implemented across all 26 regions of Tanzania Mainland. Within AfyaSS, supportive supervision activities were tracked under three categories: planned, conducted, and completed. Conducted supervisions refer to visits carried out using the AfyaSS application, whereas completed supervisions are those for which reports have been written, finalized and submitted. Pwani region recorded the highest number of completed supervisions, with 1,097 out of 1211 conducted visits, representing a 90.6% completion rate. In contrast, Ruvuma region recorded the lowest performance, with only 17 completed supervision out of 147 conducted visits, achieving a 11.6% completion rate. The distribution of conducted and completed supportive supervisions for the fiscal year 2023/2024 is presented in Figure 1.

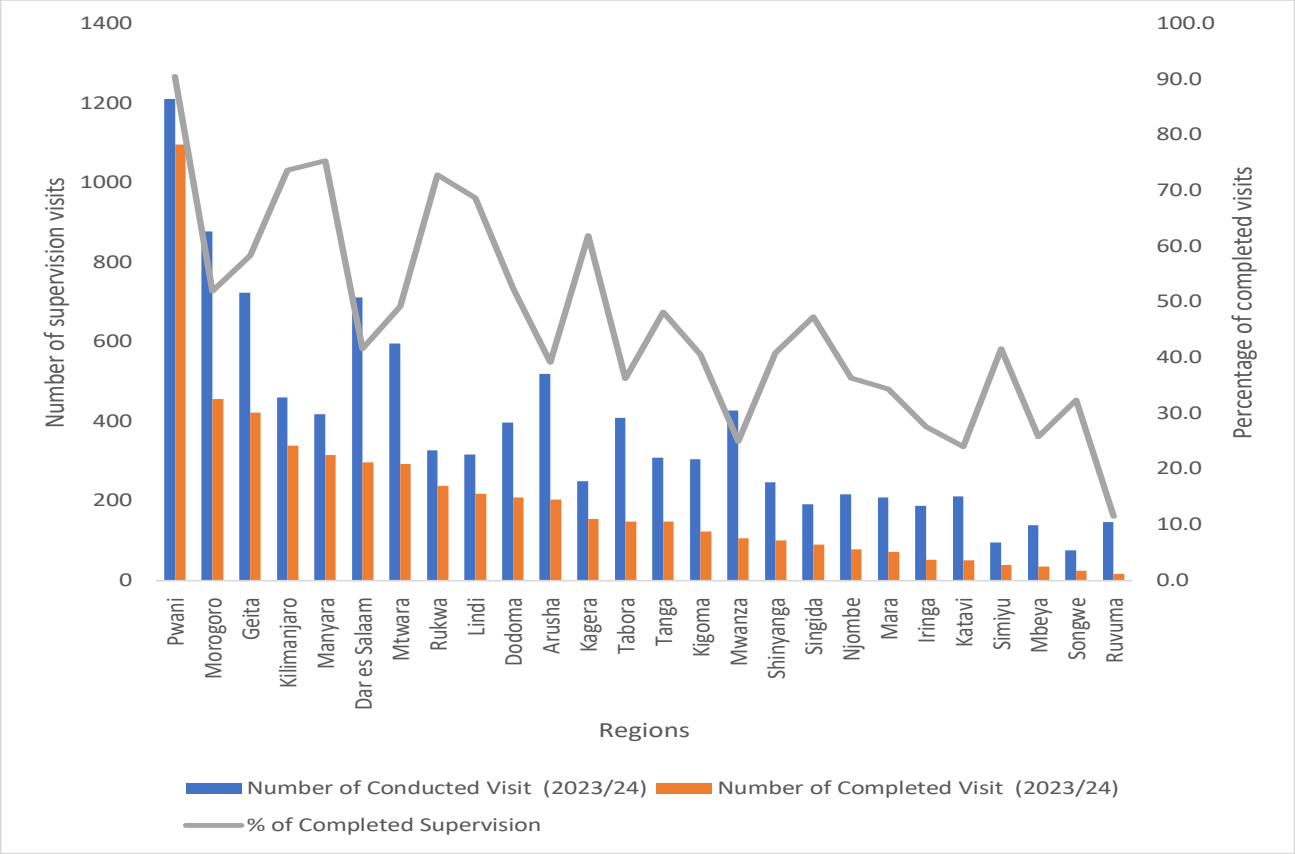

Figure 1: The number of conducted and completed supportive supervisions across 26 regions of Tanzania Mainland in 2023/2024 fiscal year.

Training and Capacity Building

Capacity building was critical for AfyaSS rollout. During the reporting period, a total of 3,302 health management staff (367 from RHMTs and 2,935 from CHMTs) were trained using blended approaches including classroom sessions, virtual sessions, and on-the-job orientation. Training content covered system navigation, supervision planning, checklist administration, report generation, and data use for decision-making. In addition, 135 staff from development partners including Jhpiego, Pathfinder, Marie Stopes, Ifakara Health Institute (Shinda Malaria Project), and EngenderHealth were trained on system utilization. This ensured that both government and partner-supported initiatives were aligned with AfyaSS processes (Tables 1 and 2).

Table 1: The number of healthcare workers trained on AfyaSS system across 26 regions in Tanzania Mainland in Fiscal Year 2023/2024

Region	RHMTs	CHMTs	Mode of Training			Total Number of Trainees
			Physical	Virtual	On-job	
Arusha	20	158	170	8	-	178
Dar es Salaam	8	130	119	19	-	138
Dodoma	6	35	41	-	-	41
Geita	22	262	3	-	281	284
Iringa	17	56	44	9	20	73
Kagera	4	32	36	-	-	36
Katavi	14	109	123	-	-	123
Kigoma	11	184	186	9	-	195
Kilimanjaro	13	120	85	48	-	133
Lindi	41	327	368	-	-	368
Manyara	7	53	60	-	-	60
Mara	22	65	87	-	-	87
Mbeya	3	55	26	25	7	58
Morogoro	29	372	395	6	-	401
Mtwara	15	132	112	35	-	147
Mwanza	12	186	140	48	10	198
Njombe	17	75	56	36	-	92
Pwani	23	70	90	3	-	93
Rukwa	20	93	80	33	-	113
Ruvuma	16	58	74	-	-	74
Shinyanga	9	27	36	-	-	36
Simiyu	2	4	2	4	-	6
Singida	1	11	1	1	10	12
Songwe	9	26	29	-	6	35
Tabora	21	146	150	17	-	167
Tanga	5	149	16	138	-	154
TOTAL	**367**	**2,935**	**2,529**	**439**	**334**	**3,302**

Table 2: Number of Staff from Partners Trained on AfyaSS System Utilization in 2023/2024

Partner	Number of Staff trained	Dates of Training
Jhpiego (USAID Afya Yangu Project)	38	5th -7th December 2023
Pathfinder	28	29th -30th April 2024
Marie Stopes	25	29th -31st July 2024
Ifakara Health Institute (PMI Shinda (Defeat) Malaria Project)	19	1st -3rd February 2024
EngenderHealth	17	13th -19th August 2023
EngenderHealth - (BRIGHT Project)	8	28th October -1st November 2024
Total	**135**	

Partners Support on the AfyaSS System Implementation

The Implementation of the AfyaSS system was a collaborative effort between the Government of Tanzania and development partners. In the 2023/2024 fiscal year, several partners played a critical role in supporting the implementation and utilization of AfyaSS system for supportive supervision.

Firstly, the United Nations Children's Fund (UNICEF) provided substantial support in multiple areas. This included the revision of the National Supportive Supervision Guidelines (2017) to align with the AfyaSS framework, also the development of an integrated supportive supervision checklist for Primary Healthcare (PHC) facilities, as well as tailored checklists for Regional Management Supportive Supervision for CHMTs (RMSS-C) and hospitals (RMSS-H). UNICEF also supported the pilot implementation of the integrated PHC checklist in four regions: Dar es Salaam, Kigoma, Songwe, and Mtwara targeting two councils in each region. In addition, UNICEF funded the implementation research to evaluate the acceptability, feasibility, and adaptability of the Integrated Supportive Supervision Guidelines and Checklists for PHC facilities in Tanzania. The organization also supported system enhancement culminating in the development of the AfyaSS system version 3, which is scheduled for deployment in February 2025.

Secondly, EngenderHealth provided crucial support in building the capacity of healthcare workers to effectively use the AfyaSS digital system. A total of 128 healthcare workers, including 18 members of RHMTs and 110 members of CHMTs, received comprehensive training lasting for at least 3 days . This training was conducted in regions supported through the Scaling Up Family Planning (SuFP) project which are Dodoma, Tanga, Dar es Salaam, and Kilimanjaro. The training equipped participants with the skills needed to utilize the AfyaSS system for improved service delivery and decision-making in their respective healthcare facilities (Table 3).

Furthermore, EngenderHealth played a key role in revising important tools such as the Reproductive, Maternal, Newborn and Child Health (RMNCH) checklist, the Data Quality Assessment (DQA) checklist, and the Supply Chain Management checklist. These revised tools were subsequently utilized during supportive supervision across eight regions: Tanga, Arusha, Kilimanjaro, Morogoro, Dar es Salaam, Pwani, Dodoma, and Geita. These efforts were part of the SuFP project, aimed at enhancing the quality of health services and consistency of supervision in these areas.

Table 3: Number of Healthcare Workers Trained on AfyaSS System Through EngenderHealth Support in Fiscal Year 2023/2024

Region	Number of HCWs trained		Dates of Training
	RHMTs	CHMTs	
Dodoma	6	24	22nd -23rd Sept 2023
Dar es Salaam	4	15	14th -15th March 2024
Tanga	3	43	2nd -3rd May 2024
Kilimanjaro	5	28	27th -31st May 2024
Total	**18**	**110**	

Lastly, the United States Center of Disease Control and Prevention (US-CDC), through the MoH Cooperative Agreement (CoAg) project, has provided valuable support in conducting quarterly data analyses of the AfyaSS system. This initiative aims to enhance the system's utilization across various levels of service delivery, ensuring that data-driven insights are available to inform decision-making processes. Additionally, the US-CDC has played a key role in the development of a reporting and feedback mechanism that facilitates communication from the national level down to RHMTs, CHMTs, and healthcare facilities. This system is designed to improve accountability and ensure that vital information is efficiently shared across all levels of the health system.

Enhancement of AfyaSS System

The AfyaSS system was enhanced with support from UNICEF and MonitAfrica as consultants. The ongoing enhancement of the AfyaSS system, focused on strengthening its functionality and user experience to better support healthcare service delivery. Key updates include refining the system's interface to make it more user-friendly, improving the synchronization process for real-time data collection, and integrating new features that allow more comprehensive reporting, easier tracking of action plans and more robust data analysis tools. With these updates, AfyaSS system continues to serve as vital tool for monitoring and improving the quality of healthcare services at all levels. The third version of AfyaSS system was updated in February 2025.

Monitoring the Implementation use of AfyaSS System

Implementation is monitored through quarterly data analyses, which provide AfyaSS system users with valuable insights into system usage and the effectiveness of health interventions. These

analyses enable healthcare professionals and management teams to track progress, assess system performance, and make informed decisions to optimize health service delivery.

Quarterly meetings are held with key stakeholders, including representatives from PORALG, RHMTs, CHMTs, other healthcare workers, and partners to share experiences and discuss strengths and challenges related to the use of the AfyaSS digital system. These meetings play a vital role in continuously improving the system's functionality. During the 2023/2024 fiscal year, three such meetings were held with adequate representation from all regions.

Lessons learnt

Based on the assessment, the following achievements and challenges were identified and should be addressed for the AfyaSS system advancement

Achievements

- » Strong leadership support: Effective use of AfyaSS system has been greatly supported by leadership especially in Pwani, Morogoro, Geita, and Dar es Salaam regions.
- » User-friendly system: The AfyaSS system reduces paperwork, provides immediate feedback to supervisees, simplifies follow-up, and standardizes the supervision process.
- » Improved record-keeping: AfyaSS System enables easy retrieval of data and allows comparisons with previous supervision sessions.

Challenges

- » Limited capacity in some regions: In areas where healthcare workers have low digital skills, users faced difficulties in writing and accessing reports.
- » Outdated checklists: Many checklists in the system are not aligned with current needs, prompting calls for review and updates by relevant department
- » Shortage of devices: Insufficient availability of tablets and necessary devices hamper effective supportive supervision
- » Poor internet connectivity: Slow internet in certain remote areas disrupts the smooth use of the AfyaSS system.

DISCUSSION

The implementation of the AfyaSS system in Tanzania represents a significant advancement in healthcare management and quality assurance. By digitizing the supervision process, the system enhances oversight of health services, strengthens accountability, and improves the quality of healthcare particularly in remote and under-resourced areas. The findings from this implementation align with evidence from other low- and middle-income countries (LMICs), where digital health innovations have been shown to enhance the efficiency and effectiveness of supportive supervision, data use, and decision-making. However, challenges related to technology adoption remains and require continued attention.

A key contribution of AfyaSS system is the improvement in data collection and management. Unlike paper-based systems, which are vulnerable to delays, inaccuracies, and incomplete reporting, AfyaSS system ensures timely, accurate, and readily accessible data. This enables supervisors to track performance trends and respond to emerging challenges in near real time. These findings corroborate earlier studies highlighting the role of digital platforms in strengthening data quality and completeness, which form the basis for effective public health interventions [7].

Another important benefit of AfyaSS system is its capacity to support real-time monitoring and feedback. The system allows health managers to provide immediate feedback to facilities, enabling timely corrective measures and reinforcing accountability. This is consistent with evidence from other digital health initiatives, which demonstrate that real-time reporting shortens the time required to address inefficiencies and contribute to improved service delivery [8]. Additionally, the integration of automated reporting within AfyaSS system has improved transparency across all levels of the health system by reducing bottlenecks commonly associated with manual reporting processes.

The study also demonstrates how AfyaSS system has strengthened decision-making for health administrators across various levels of service delivery. By identifying underperforming facilities and highlighting areas requiring urgent intervention, the system enables targeted allocation of resources. This approach enhances equity by prioritizing facilities most in need, a critical step toward reducing service delivery disparities between urban and rural settings. The active involvement of development partners further reinforced this process by supporting training, updating supervision tools, and facilitating quarterly data reviews.

Despite these achievements, several implementation challenge of AfyaSS system remain. Infrastructural barriers such as limited internet connectivity, unreliable power supply, and inadequate digital devices were particularly evident in rural regions, where supportive supervision is often most needed. These challenges mirror those reported in other LMICs, where uneven digital infrastructure hampers the scalability of health innovations. Additionally, workforce capacity gaps and outdated supervision checklists limited optimal system utilization. The shortage of trained health workers with adequate digital literacy highlights the need for continuous capacity building, refresher training, and supportive mentoring to sustain long-term adoption.

Sustainability of AfyaSS system will require deliberate institutionalization within existing health system structures.

Embedding the system into routine planning, financing, and reporting processes is essential. Integrating AfyaSS system into annual health budgets at national, regional, and council levels will ensure resource availability for maintenance, upgrades, and continued workforce training [9,10]. Furthermore, strong leadership engagement as observed in high-performing regions such as Pwani and Morogoro should be leveraged to foster ownership, accountability, and peer learning across regions.

Finally, Tanzania's experience with AfyaSS system provides valuable lessons for other LMICs considering digital tools for supportive supervision. The phased implementation, partner engagement, and continuous system enhancement demonstrate that digital innovations are feasible in resource-constrained settings if adequately supported by political will, technical expertise, and sustained financing. Scaling up such systems should prioritize addressing infrastructural barriers, updating supervision tools to remain relevant, and embedding digital solutions within broader health sector reforms.

CONCLUSION

The digital Afya supportive supervision system in Tanzania marks a transformative advancement in healthcare supervision, strengthening data-driven decision-making and improving service quality. Its long-term success, however, hinges on addressing persistent challenges such as uneven technological infrastructure, limited capacity among health workers, and the need for sustained financial and technical support. Securing commitment from both national and international stakeholders, alongside ongoing investment and system adaptation will be crucial to ensure that AfyaSS system continue to deliver meaningful improvement in Tanzania's healthcare system.

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MUHTASARI

Uimarishaji wa Utoaji wa Huduma za Afya kwa Utekelezaji wa Mfumo wa Usimamizi Shirikishi (AfyaSS) kuanzia Julai 2023 hadi Machi, 2025: Uzoefu kutoka Tanzania

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Utangulizi: Usimamizi Shirikishi ni mchakato wa ushirikiano kati ya watoa huduma za afya na wasimamizi unaolenga kuimarisha ubora wa huduma za afya. Ili kuimarisha utendaji huu, Wizara ya Afya (WAF), kwa kushirikiana na Ofisi ya Rais – Tawala za Mikoa na Serikali za Mitaa (OR-TAMISEMI) na wadau wengine, ilitengeneza mfumo wa kidijitali linalojulikana kama Afya Supportive Supervision System (AfyaSS). Mfumo huu ulitumiwa katika ngazi mbalimbali za utoaji wa huduma za afya Tanzania Bara. AfyaSS inatoa mfumo wa kidijitali wa ufuatiliaji wa wakati halisi wa kituo cha afya, kuruhusu wasimamizi na wasimamiwa kufanya maamuzi yanayozingatia ushahidi huku ikiimarisha uwajibikaji, usimamizi wa rasilimali na ubora wa huduma. Andiko hili linaripoti utekelezaji wa AfyaSS kwa shughuli za usimamizi shirikishi zilizofanyika ikionyesha ufanisi wake, changamoto, na fursa za uboreshaji.

Mbinu za Utafiti: Utafiti huu ulitumia uchambuzi wa maelezo

ambapo takwimu zilikusanywa wakati wa usimamizi shirikishi wa kawaida kwa kutumia mfumo wa AfyaSS zilichambuliwa. Ukusanyaji wa takwimu ulifanywa kwa kutumia orodha hakikifu zilizopakiwa kwenye mfumo wa AfyaSS. Orodha hizi za ukaguzi zilikuwa na mfululizo wa maswali ya kuwaongoza wasimamizi wakati wa mchakato wa usimamizi shirikishi, huku majibu yakiingizwa kwenye orodha. Kwa uchambuzi wa awali, mfumo wa AfyaSS hutoa ripoti kiotomatiki kulingana na uchanganuzi uliobainishwa mapema. Hata hivyo, kwa uchambuzi wa kina zaidi, data inaweza kutumwa kwenye Excel kwa uchambuzi zaidi.

Matokeo: Utafiti uligundua kuwa AfyaSS imetekelezwa katika mikoa yote 26 ya Tanzania Bara. Mkoa wa Pwani ulikuwa na idadi kubwa ya simamizi zilizokamilika, ambapo simamizi shirikishi 1,097 zilitekelezwa ikiwa ni sawa na asilimia 90.6 ya ukamilishaji, huku Ruvuma ikifanya kiwango cha chini, ikiwa na simamizi shirikishi 17 pekee zilizokamilishwa ikiwa ni sawa na ukamilishaji wa asilimia 11.6. Kujenga uwezo wa watoa huduma kulichukua jukumu muhimu katika utekelezaji, ambapo watoa huduma 3,032 wakiwemo Wajumbe wa RHMT na CHMT walipatiwa mafunzo kuhusu matumizi ya AfyaSS, pamoja na wafanyakazi 110 kutoka mashirika yasiyo ya Kiserikali. Mashirika yaliyounga mkono utekelezaji ni pamoja na Shirika la Umoja wa Mataifa la Kuhudumia Watoto (UNICEF), Vituo vya Marekani vya Kudhibiti na Kuzuia Magonjwa (US-CDC), EngenderHealth, Jhpiego, Pathfinder, Marie Stopes, na Ifakara Health Institute chini ya mradi wa Afua ya Rais wa Marekana ya Kupambana na Malaria (PMI) Shinda (Defeat) Malaria.

Licha ya mafanikio yake, changamoto kadhaa ziliathiri utekelezaji wa AfyaSS. Changamoto hizi ni pamoja na ugumu wa kupata na kutoa ripoti, orodha za ukaguzi zilizopitwa na wakati, uhaba wa wahudumu wa afya waliofunzwa, ukosefu wa vifaa muhimu kama vile vishikwambi na simu janja, ufuatiliaji mdogo wa mipango ya uimarishaji ubora, na munganisho hafifu wa intaneti hasa maeneo ya vijijini.

Hitimisho: Mfumo wa AfyaSS ni maendeleo makubwa katika usimamizi wa huduma za afya nchini kwa kuwezesha kufanya maamuzi yanayotokana na takwimu katika kuboresha huduma za afya. Hata hivyo, ufanisi wake unategemea kushughulikia changamoto kama vile upungufu wa kiteknolojia, kuwajenga uwezo watoa huduma, na kupata usaidizi endelevu. Uwekezaji unaoendelea na marekebisho ni muhimu kwa mafanikio yake ya muda mrefu na matokeo chanya katika utoaji wa huduma za afya.

Maneno Muhimu: Mfumo wa Usimamizi Shirikishi wa Afya (AfyaSS), Mfumo wa Kidijitali, Usimamizi Shirikishi, Tanzania.

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