Influence of Supportive Supervision on Performance of Community Health Promoters in Tuberculosis Service Delivery in Mombasa County, Kenya

Otieno Moses Ochieng[1*], Mapesa Job[1], Tenambergen Wanja Mwaura[2]

[1]*Kenya Methodist University, P.O. Box 267 - 60200, Meru, Kenya.*

[2]*Riara University, P.O. Box 49940 - 00100, Nairobi, Kenya.*

**Correspondence Email: otienom.ochieng@gmail.com*

Abstract

Tuberculosis remains a major public health challenge globally and in Kenya. In Mombasa County, Community Health Promoters (CHPs) play a central role in community-level TB activities, including sensitization, referral of presumptive cases, contact tracing, and defaulter follow-up. This study examined how supportive supervision influences CHP performance in TB service delivery. A descriptive cross-sectional design was used, involving 233 participants (CHPs, Community Health Assistants, and Sub-County Community Health services Coordinators). We collected data through questionnaires and key informant interviews and analyzed using descriptive statistics, Mann–Whitney U tests, and logistic regression. Overall, CHPs reported moderate performance across TB service indicators, with notable gaps in pre-service preparation, refresher training, availability of tools, incentives, and feedback systems. The logistic regression model was statistically significant, explaining a moderate proportion of variance in performance (Cox & Snell $R^2 = 0.329$; Nagelkerke $R^2 = 0.462$). Three components of supportive supervision independently predicted higher CHP performance: adequate pre-service training (OR = 3.57, p = .002), timely feedback (OR = 3.45, p = .004), and regular review meetings (OR = 3.94, p = .001). The findings indicate that strengthening foundational training, institutionalizing structured review mechanisms, and ensuring timely supervisory feedback are critical for improving CHP performance in TB service delivery. The study recommends enhancing pre-service training, establishing clear feedback loops, integrating TB-specific review meetings into routine supervision, and ensuring adequate support systems to sustain effective community-based TB services.

Key Words: *Tuberculosis control, Supportive supervision, Community Health Promoters, Performance determinants, Mombasa County.*

1.0. Introduction

Tuberculosis (TB) is still a major global health problem. Even though it can be prevented, treated, and cured, TB became again in 2023 the leading cause of death from a single infectious disease, killing more people than HIV/AIDS and COVID-19 (WHO, 2024). This happened after a period when COVID-19 had dominated global health priorities. Every year, more than 10 million people fall in with TB, and the number of new cases worldwide is still increasing. This shows that much stronger global action is needed to reach the goal of ending the TB epidemic by 2035, a goal agreed upon by all United Nations (UN) Member States and World Health Organization (WHO), (Hershkovitz et al., 2015). In 2014 and 2015, WHO Member States and the UN renewed their commitment to end TB by adopting the WHO End TB Strategy and the UN Sustainable Development Goals (SDGs) (Hershkovitz et al., 2015). The End TB Strategy outlines specific milestones for 2020 and 2025, and ambitious targets for 2030 and 2035, focusing on sharply reducing TB cases and deaths and protecting affected households from catastrophic health related costs.

A major obstacle to ending TB is the worldwide shortage of health workers, especially in low- and middle-income countries, which slows progress toward fair access to health care (Alawode et al., 2025). Using Community Health Promoters (CHPs) to support TB control has worked well in many resource constrained settings and is a practical way to accelerate progress toward the End TB Strategy targets. In Kenya, CHPs are supervised by Community Health Assistants (CHAs) and together they provide an essential link between health facilities and the community (Community Health Strategy [CHS], 2020-2025). TB is highly stigmatized, and this stigma often stops people from seeking care, or involving their close contacts when they are diagnosed (Alselwi, 2024). This weakens early case finding, contact tracing, and consistent treatment. When CHPs are well trained and properly supervised, they can play a key role in giving health education, reducing stigma, increasing community awareness, and improving the use of health services, including TB services (CHS, 2020-2025). Supportive Supervision is a fundamental health system function that cuts across all levels of care (Anoke et al., 2021). When appropriately designed and consistently implemented, it contributes to the delivery of high-quality services (Anoke et al., 2021). It is characterized by a respectful, non-authoritarian approach, with the primary aim of strengthening health workers' knowledge, skills, and motivation. According to WHO (2020), supportive supervision promotes open, two-way communication, fosters teamwork and collaborative problem-solving, and emphasizes monitoring performance against clearly defined targets. It also encourages systematic use of data for decision-making and requires regular follow-up to ensure that agreed corrective actions are implemented and that service delivery standards are sustained.

Kenya is one of the 30 high-burden countries for drug-susceptible tuberculosis globally and ranks among the top five in Africa (WHO, 2021). Within Kenya, Mombasa County is also among the five counties with the highest TB burden. Its annual TB case-finding target in 2024 was 5,112 cases, yet reports from the Mombasa County Department of Health Services (2025) show that only 3,989 cases (78% of the target) were notified in 2024. Of these, 495 cases (12.4%) were referred by CHPs, far below the referral target of 30%. For drug-susceptible TB cases started on treatment in 2024, Mombasa reported a treatment success rate of 90%, cure rate of 79%, death rate of 4%, treatment failure of 1%,

and loss to follow-up of 5%. The relatively high loss to follow up indicates that CHPs are not fully achieving their role in tracing treatment interrupters and returning them to care. Given the central role of CHPs in community-based TB services, strengthening their effectiveness is essential. Supportive supervision of CHPs by CHAs is considered one of the most fundamental strategies for ensuring that community health programs meet their objectives (Deussom et al., 2022). However, little evidence exists on how supportive supervision is practiced and how it affects CHP performance in TB services in Mombasa County. This gap provides the basis for the present study.

"The study shows that supportive supervision is an important determinant of Community Health Promoters' performance in TB services in Mombasa County"

This study examined how supportive supervision influences the performance of CHPs in TB service delivery in Mombasa County, Kenya, with a particular focus on the perspectives of Community Health Assistants. The overall objective was to generate evidence on the role of supportive supervision in shaping CHPs performance in community-based TB services, to inform the design, implementation, and evaluation of interventions aimed at strengthening the effectiveness and sustainability of these services.

2.0. Materials and Methods

Design, Setting, Population, and Sample

This was a Descriptive Survey study with quantitative and qualitative data. The study was carried out in April 2025 in Kisauni Sub-County, Mombasa County, and had a target population of 466 which comprised of 443 CHPs, 17 CHAs, and 6 Sub-County Community Health Coordinators (SCCHSCs). A total of 233 participants took part in the study where CHPs were sampled using Yamane formula, while the CHAs and SCCHSCs were included through census.

Data Collection

Data was collected among CHPs and CHAs using questionnaires and key informant interviews for the SCCHSCs.

Data Analysis

Data were entered and analyzed using Statistical Package for the Social Sciences (SPSS) version 27.0. Descriptive statistics were used to summarize participants' characteristics and key study variables. To examine differences in performance scores between groups, the Mann–Whitney U test was used. This non-parametric test was selected because the performance scores were derived from ordinal indicators and the distribution of the composite scores did not meet the assumptions of normality required for parametric tests such as the Chi-square test or independent samples t-test. The test, therefore, allowed comparison of performance scores between independent groups of participants.

The outcome variable, performance of CHPs in TB services, was measured using four indicators: community sensitization activities, referrals of presumptive TB cases, contact tracing, and quality of reporting. Responses to these indicators were scored and aggregated to generate a composite performance score for each CHP. The composite scores were then categorized into two levels of performance (good performance and poor performance) based on the predetermined scoring threshold.

To identify predictors of CHP performance, Binary Logistic Regression analysis was conducted. The dependent variable (performance) was coded as 1 = good performance and 0 = poor performance. Independent variables included building capacities of CHPs, availability of resources, feedback mechanisms, and performance monitoring and evaluation systems. Variables with statistically significant associations in the bivariate analysis were entered into the logistic regression model to determine their independent effects on CHP performance. The strength of association was reported using Odds Ratios with 95% confidence intervals, and statistical significance was set at $p < 0.05$. Qualitative data was analyzed thematically.

Ethical Considerations

We acquired authorizations to conduct the study from Kenya Methodist University's Institutional Scientific and Ethical Review Committee (KEMU/ISERC/HSM/03/2025), National Commission for Science, Technology and Innovation (NACOSTI/P/25/417115), Kilifi County Government for Pre-test (KLF/DOH/RESEARCH/VOL.1/283), and Departments of Health, Mombasa County Government (MSA/CH/ADM.37/VOL.111/59). Prior to data collection, participants were informed about the purpose of the study, study procedures, and their role in the research. Written informed consent was obtained from all participants before they took part in the study. Participation was entirely voluntary, and participants were informed that they were free to decline participation or withdraw from the study at any time without any negative consequences. Confidentiality and anonymity of participants were strictly maintained throughout the study. Questionnaires did not contain participants' names or personal identifiers, and responses were coded to ensure anonymity. All information collected was used strictly for research purposes and was accessible only to the research team. For the qualitative key informant interviews, participants were interviewed in a private setting to ensure privacy and encourage open responses. Interview recordings and transcripts were securely stored and password-protected to prevent unauthorized access.

3.0. Results and Discussion

Response Rate, Reliability, and Participant Characteristics

A total of 233 participants were included in the survey. These comprised 210 CHPs, 17 CHAs, and 6 Sub-County Community Health Strategy Coordinators (SCCHSCs). For the quantitative component of the study, 227 questionnaires were distributed to participants who were directly involved in community TB services, including 210 CHPs and 17 CHAs. Of these, 224 completed questionnaires were returned, representing an overall response rate of 98.7%, which indicates strong participation hence reducing the risk of non-response bias, thereby enhancing the validity of the findings (Jabkowski & Cichocki, 2024). Specifically, 208 out of 210 CHPs completed the questionnaire, while 16 out of 17 CHAs completed their respective questionnaires. For the qualitative component, all 6 SCCHSCs were purposively selected and participated as key informants through in-depth interviews to provide contextual insights on supportive supervision and the performance of CHPs in TB services. Thus, the final data set consisted of 224 quantitative responses (208 CHPs and 16 CHAs) and 6 qualitative key informant interviews with SCCHSCs, giving a total of 230 participants who provided study data out of the 233 sampled.

The reliability of the questionnaire was assessed using Cronbach's Alpha to determine the internal consistency of the items measuring the study constructs. Cronbach's alpha evaluates the extent to which items within a scale measure the

same underlying concept. A Cronbach's alpha coefficient of 0.70 or higher is generally considered acceptable for research purposes, indicating adequate internal consistency among the items. Prior to the main study, the questionnaire was pre-tested in Kilifi County to assess its reliability and clarity. Reliability analysis showed acceptable to excellent internal consistency, with Cronbach's alpha values ranging from 0.704 to 0.929 for all main study constructs among both CHPs and CHAs, indicating that the instrument was suitable for data collection.

Most CHPs were aged 41–50 years, whereas the majority of CHAs were below 40 years, suggesting a younger supervisory cadre overseeing an older frontline workforce, a dynamic previously associated with supervisory tension and reduced supervisory influence (Ogutu et al., 2023). SCCHSCs were aged 27–54 years, reflecting a relatively experienced managerial group. The CHP workforce was predominantly female (85.1%), while CHAs had a more balanced gender distribution, consistent with the increasing feminization of frontline and primary health cadres (Alobaid et al., 2020). Most CHPs (76.4%) were married, implying substantial family responsibilities that may compete with community work, as documented in prior studies on community health workers' role strain (Ndu et al., 2022). In terms of education, 66.4% of CHPs had primary or secondary education, aligning with the Community Health Strategy (CHS 2020–2025) requirement that CHPs should at least be able to read and write, whereas all CHAs held a diploma or bachelor's degree, consistent with their formal supervisory roles. Workload data indicated that many CHPs covered 51–150 households and CHAs supervised 1–50 CHPs and 1–6 Community Health Units (CHUs), exceeding CHS (2020–2025) recommendations of a maximum of 100 households per CHP and one CHU with about 10 CHPs per CHA. This pattern suggests an overstretched community health workforce, with potential implications for the quality and consistency of supportive supervision and TB service delivery.

Performance of CHPs in Community TB Services

Assessment of performance was based on five key service delivery indicators as shown in Table 1.

Table 1

Comparison of CHPs' and CHAs' Perceptions of Performance in Key TB Service Delivery Indicators (Mann–Whitney U Test)

TB Service Delivery Indicator		N	M	U	Z	P
Sensitization of the Community on TB	CHPs	208	3	1479.5	–0.759	0.448
	CHAs	16	2			
Referral of Presumptive TB Cases	CHPs	208	2	2252.0	2.433	0.015
	CHAs	16	3			
TB Contact Tracing	CHPs	208	3	1431.5	–0.952	0.341
	CHAs	16	3			
Tracing TB Treatment Interrupters	CHPs	208	3	1650.5	–0.055	0.956
	CHAs	16	3			
Quality of Reports Submitted by CHPs	CHPs	208	3	1660.5	–0.014	0.989
	CHAs	16	3			

Note. CHPs = Community Health Promoters; CHAs = Community Health Assistants. M = Mean; U = Mann–Whitney U statistic; Z = standardized test statistic; p = significance value.

Table 1 shows that across all five TB service delivery indicators, CHPs and CHAs showed varying levels of agreement regarding performance adequacy. For community sensitization on TB, most CHPs had a mean score of 3.0 and CHAs had 2.0 concerning adequacy of TB sensitization activities. The non-significant Mann–Whitney U test ($p = 0.448$) indicates shared perceptions that sensitization efforts remain insufficient, consistent with SCCHSC observations of sub-optimal performance. Regarding referral of presumptive TB cases, CHPs largely disagreed that referrals were adequately conducted (mean of 2.0), while CHAs held more positive views, with a mean of 3.0. The significant group difference ($p = 0.015$) suggests supervisors perceive referral performance more favorably than frontline workers. This aligns with routine program data showing CHPs contributed only 12.4% of all TB case notifications in Mombasa in 2024, indicating a gap between supervisory perception and actual referral outcomes.

For TB contact tracing, both CHPs and CHAs had a mean score of 3.0. This non-significant test result ($p = 0.341$) reflects generally similar and ambivalent perceptions, suggesting inconsistent implementation. This aligns with documented barriers to effective contact tracing, including limited community cooperation and resource constraints (Tesfaye et al., 2020; Tukamuhebwa et al., 2024). In assessing tracing of TB treatment interrupters, CHPs had a mean score of 3.0, implying that this activity was adequately performed, though. At the same time, CHAs held similar perception (Mean = 3.0). The lack of a significant difference ($p = 0.956$) indicates broadly comparable perceptions. However, persistent loss to follow-up of 4% suggests that successful tracing does not always result in patient return to care.

Both CHPs and CHAs felt that CHPs' reports were of good quality (Mean = 3.0). The Mann–Whitney U test also showed no significant difference ($p = 0.989$), indicating general agreement that reporting is acceptable but still has room for improvement. High-quality community-level data remain essential for strengthening service delivery (Regeru et al., 2020). Overall, the findings show mostly aligned but moderate assessments of TB service performance across cadres, with a notable divergence only in perceptions of referral adequacy. This highlights specific areas, particularly referral processes, where enhanced supervision and clearer communication between CHPs and CHAs may improve performance.

Supportive Supervision for CHPs in TB Services

Supportive supervision was conceptualized as a multidimensional construct comprising eight key components as shown in Table 2. Across the eight supportive supervision indicators, CHPs consistently rated supervision inputs lower than CHAs, with only two indicators showing statistically significant differences (Table 2). Pre-service training had similar mean score of 3.0 for both groups. The non-significant test result ($p = 0.752$) suggests shared concern about insufficient preparation. Key informants confirmed that many CHPs begin work without the mandatory 10-day MOH basic training, contrary to CHS requirements. For refresher training and mentorship, CHPs overwhelmingly rated support as inadequate (Mean = 2.0), whereas CHAs were more positive (Mean = 3.0). The significant difference ($p < 0.001$) highlights a clear mismatch between supervisory expectations and CHP experiences. Similar findings by Altaras et al. (2024) emphasize the importance of consistent onsite coaching and mentorship. Regarding the availability of tools and materials, both cadres acknowledged gaps that tools were adequate. The non-significant difference ($p = 0.111$) reflects shared recognition of supply inconsistencies, consistent

with SCCHSC reports and findings by Mwaniki (2022).

Table 2

CHPs' and CHAs' Perceptions of Supportive Supervision Components in TB Services

Supportive Supervision Indicator		N	M	U	Z	p
Pre-service Training on Community TB Services	CHPs	208	3	1741.0	0.317	0.752
	CHAs	16	3			
Refresher Training and Mentorship on Community TB Services	CHPs	208	2	2625.5	4.034	0 .001
	CHAs	16	3			
Availability of Functional Tools and Materials for CHPs	CHPs	208	2	2051.5	1.595	0.111
	CHAs	16	3			
Availability of Incentives for CHPs on TB Activities	CHPs	208	1	1580.0	-0.372	0.710
	CHAs	16	1			
Frequency of Feedback to CHPs on their Performance	CHPs	208	3	2222.0	2.301	0.021
	CHAs	16	3			
Timeliness of Feedback to CHPs on their Performance	CHPs	208	3	2079.5	1.702	0.089
	CHAs	16	3			
Availability of Standardized M&E Framework for CHPs	CHPs	208	3	1450.5	-0.874	0.382
	CHAs	16	2.5			
Review Meetings Focusing on CHPs' Performance in Community TB Services	CHPs	208	3	1965.0	1.237	0.216
	CHAs	16	4			

For incentives, the respondents reported inadequate support. The non-significant test result ($p = 0.710$) confirms a common perception that motivation mechanisms remain weak, echoing concerns raised by Chiguzo et al. (2022). Perceptions of feedback frequency differed significantly ($p = 0.021$). CHPs felt feedback was insufficient, while CHAs were more satisfied. This points to a supervision–experience gap and aligns with evidence that regular feedback improves performance (Rowe et al., 2022). For timeliness of feedback, CHPs expressed more dissatisfaction than CHAs, although the difference was not statistically significant ($p = 0.089$). These findings suggest the need for clearer feedback schedules, in line with Freitas et al. (2023), who note that effective feedback depends on timing and delivery mechanisms.

Regarding the availability of standardized Monitoring and Evaluation (M&E) frameworks, CHAs leaned more negative than CHPs. The non-significant difference ($p = 0.382$) indicates broad agreement that M&E systems lack consistency. This supports Global Fund (2020) guidance on the importance of standardized M&E structures. For review meetings, both groups generally agreed that meetings occur, but the absence of a significant difference ($p = 0.216$) suggests shared but moderate satisfaction. SCCHSCs reported that meetings rarely focus specifically on TB, contrary to CHS (2020–2025) guidance to tailor review meetings to program needs. Overall, the results show pervasive gaps in training, tools, incentives, and feedback. These are areas central to effective supportive supervision, and underscore the need for strengthened supervisory systems to improve CHPs' performance in TB service delivery.

Relationship between Supportive Supervision and Performance of CHPs in TB Services

To determine the predictive influence of key supportive supervision determinants on CHPs' performance in TB services, a binary logistic regression analysis was conducted. The analysis aimed to identify which independent variables significantly contributed to the likelihood of high CHPs' performance after controlling for the effect of other factors (Table 3). The logistic regression model examining determinants of CHPs' performance in community TB services was statistically significant ($\chi^2 = 89.342$, df = 8, $p < .001$), indicating that the set of supportive supervision variables collectively explained a meaningful share of variation in performance. The model showed moderate explanatory power (Cox & Snell $R^2 = 0.329$; Nagelkerke $R^2 = 0.462$), met goodness-of-fit criteria (Hosmer–Lemeshow $\chi^2 = 7.629$, $p = .366$), and achieved an overall classification accuracy of 79.9%.

Table 3

Logistic Regression Results for Supportive Supervision Predictors of CHPs' Performance in TB Services

Predictor	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
Pre-service Training on Community TB Services (1)	1.272	.417	9.308	1	0.002	3.569	1.576	8.081
Refresher Training and Mentorship Sessions on Community TB Services (1)	.658	.525	1.574	1	0.210	1.931	.691	5.401
Availability of Functional Tools and Materials for CHPs (1)	.690	.455	2.297	1	0.130	1.994	.817	4.865
Availability of Incentives for CHPs on TB Activities (1)	-.473	.928	.260	1	0.610	.623	.101	3.842
Frequency of Feedback to CHPs on their Performance (1)	-.687	.462	2.210	1	0.137	.503	.204	1.244
Timeliness of Feedback to CHPs on their Performance (1)	1.237	.428	8.349	1	0.004	3.445	1.489	7.972
Availability of Standardized M&E Framework for CHPs (1)	.715	.444	2.596	1	0.107	2.044	.857	4.875
Review Meetings Focusing on CHPs' Performance in Community TB Services (1)	1.372	.428	10.269	1	0.001	3.942	1.704	9.123
Constant	-2.931	.372	62.171	1	0.000	0.053		

Three supportive supervision components were independently associated with higher CHP performance: adequate pre-service training ($p = .002$; OR = 3.57, 95% CI 1.58–8.08), timely feedback ($p = .004$; OR = 3.45, 95% CI 1.49–7.97), and regular review meetings ($p = .001$; OR = 3.94, 95% CI 1.70–9.12). In contrast, refresher training, availability of tools and incentives, feedback frequency, and standardized M&E frameworks were not statistically significant predictors in the multivariate model ($p > .05$), suggesting limited independent effects after accounting for the stronger predictors. Together, these findings underscore the central importance of robust initial training, prompt supervisory feedback, and structured review processes in

strengthening CHPs' effectiveness in TB service delivery.

The findings of this study indicate that some components of supportive supervision had a significant association with the performance of CHPs in TB services, while others did not. These differences may reflect variations in how supervision interventions are implemented and experienced at the community level. For instance, capacity building for CHPs emerged as an important factor influencing performance. Regular training and mentorship equip CHPs with the necessary knowledge and practical skills required for effective TB service delivery, including identifying presumptive TB cases, conducting contact tracing, and promoting community awareness. At level one of the healthcare system, structured training strengthens confidence and competence among CHPs, hence enabling them to perform their roles more effectively (CHS 2020-2025). This finding suggests that continuous professional development and mentorship should remain a core component of supportive supervision programs.

Similarly, timely feedback mechanisms was associated with improved performance. Constructive feedback allows CHPs to understand their strengths and areas requiring improvement, thereby promoting accountability and motivation. In many community health programs, feedback also helps align community-level activities with broader program goals. When supervisors provide timely performance feedback (Freitas et al., 2023), CHPs are better able to refine their approaches to community engagement and TB case identification.

In contrast, some supervision components may not have demonstrated statistically significant associations with performance. This may be due to contextual factors such as variability in the availability of resources, differences in supervisory frequency across community units, or limitations in the operationalization of these components within the program. For example, although monitoring and evaluation systems are essential for program oversight, their effectiveness depends on the extent to which data collected at the community level are actively used for decision-making and supportive feedback.

From a programmatic perspective, these findings have important implications for TB service delivery within Mombasa County. Strengthening supportive supervision structures that prioritize capacity building, structured feedback, and practical mentorship may enhance the effectiveness of CHPs in TB services. Additionally, ensuring that supervision processes are integrated with routine program monitoring can improve responsiveness to challenges encountered by CHPs at the community level.

Overall, the findings highlight the importance of designing supportive supervision systems that are not only administrative but also developmental in nature. By emphasizing mentorship, training, and feedback, TB programs can improve performance of community-based health workers and strengthen TB case detection and follow-up at community level.

4.0. Conclusion

The study shows that supportive supervision is an important determinant of Community Health Promoters' performance in TB services in Mombasa County. Overall, CHPs reported only moderate performance in key tasks such as community sensitization, referral of presumptive TB cases, contact tracing, treatment interrupter tracing, and reporting, with several indicators falling short of program targets. There were also consistent gaps in pre-

service preparation, refresher training, availability of tools and incentives, and the perceived frequency and timeliness of feedback. These findings point to a supervision environment that is present but unevenly implemented and not optimally resourced. Multi-variable analysis further indicates that not all supervisory elements contribute equally to performance. Pre-service training, timeliness of feedback, and review meetings were independently associated with higher odds of good performance, while refresher training, tools, incentives, feedback frequency, and standardized M&E frameworks were not significant predictors after adjustment. This suggests that ensuring all CHPs receive adequate initial training, institutionalizing timely feedback from supervisors, and regularly conducting focused review meetings are the most critical supervision components for strengthening CHP performance in TB service delivery within this setting.

5.0. Recommendations

This study recommends that County Departments of Health institutionalize regular, TB-focused review meetings facilitated by SCCHSCs and implemented by CHAs, given their strong association with higher CHP performance. The Ministry of Health should strengthen pre-service training for CHPs by updating the curriculum and ensuring all CHPs complete the mandatory course before deployment. Sub-County Health Management Teams (SCHMTs), through SCCHSCs, should establish structured, timely feedback loops between CHAs and CHPs, with CHAs providing documented feedback and mentorship. In addition, the Ministry of Health and National TB Program, together with County Departments of Health Services and partners, should ensure consistent availability of essential tools and functional TB-specific M&E systems, including support for digital solutions, to create an enabling environment for effective supervision and performance.

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