

# The influence of Performance Monitoring Team on the Use of Health Information by Health Facilities at Shabedino and Hawella Districts of Sidama, Ethiopia

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## Abstract

**Background:** Routine health information system is vital for the decision-making process. However, evidence is critically lacking in many low-income settings, including Ethiopia. Therefore, this study aimed to assess the influence of the performance monitoring team on the utilization of health information by health facilities in Shabedino and Hawella Districts, Sidama, Ethiopia.

**Methods:** A facility-based cross-sectional survey was employed in selected public health facilities of Shebedino and Hawella districts, Sidama Regional State, Ethiopia. The data were collected using a pretested, structured, and interviewer-administered questionnaire and an observational checklist. Data were entered into Epi-info version 7 and exported to STATA version 16 for analysis. Average score  $\pm$  standard error with the 95% CI was used to measure performance monitoring function and data utilization status. The performance monitoring function and data utilization status were compared among the 13 health institutions using a scatter plot. Spearman correlation was used to determine the association between PMT function and data utilization level.

## Result:

According to this study, the overall performance monitoring team functionality level was 71% (95%CI; 67%,75%), and the overall data utilization status was 53% (95%CI;48%,58%). The scatter plot result showed a positive correlation between performance monitoring team function and data utilization status.

**Conclusion:** According to this survey, the overall data utilization status was low, and the performance monitoring team function has a slight effect on the utilization of health-related data. Therefore, strong collaborative work/engagement between partners, the ministry of health, the regional health bureau, Woreda health offices and Health facilities needs to be prioritized to maximize data utilization status through PMT. [*Ethiop. J. Health Dev.* 2022;36 (SI-2)]

## Introduction

Routine health information is vital for operational, tactical, and strategic decision-making. A health management information system (HMIS) is a system that collects, compiles, stores, analyses, and uses health data to assist decision-makers. In Ethiopia, the "Information Revolution" has been adopted as one of the transformation agendas in the Health Sector Transformation Plan (HSTP), which entails a fundamental shift away from traditional methods of information utilization to bring about a fundamental cultural and attitudinal shift regarding the practical use of information in the decision-making process (1).

Performance Monitoring Team (PMT), is a team that meets monthly and is chaired by the institution's head. The team is responsible for ensuring a quality data collection process, analyses, and presenting and displaying timely data for decision makers to improve evidence-based decision-making primarily at the facility level and later on the health system. These factors enable the system to contribute to remarkable health status improvements through tracking the progress of key indicators, early identification of health system bottlenecks, and enhancement of evidence-based decision making (2).

The level of report completeness is lower than expected, and reporting within the preset national schedule is not being met regularly at all levels (3). Health information is generated at each level of the health system and then submitted to the next level without adequate use for performance improvement at the point of generation(4). Health workers in the health system are either not utilizing routine health information at all or not in the best way to drive planning, performance management, and the delivery of services. This creates hindrances to the efficiency and effectiveness of healthcare delivery (5). Therefore, as part of implementation research, this assessment aims to determine the level of routine health information systems in Shabedino and Hawella districts, Sidama Regional State.

## Methods

### *Study setting, design, period and Population*

The study area included Shabedino and Hawella district health offices and health facilities found in those districts. Shabedino district ( district is the third level of administrative division of Ethiopia) is located 27 KM away from Hawassa City, the Capital City of the Sidama region and 302 KM from Addis Ababa, the Capital City of Ethiopia, while Hawella district is located at a distance of 17 KM from Hawassa and 294KM from Addis Ababa.

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According to the 2007 projected population and housing census, Shabedino and Hawella Districts have a total population of 196,753 and 107,193 respectively in 2021. Hawella District has four health centres and eleven health posts (a *health post is the most peripheral healthcare unit and the first level for the provision of healthcare for the community*) that provide preventive, promotional, curative, and rehabilitative services (6). In contrast, the Shabedino district has a total of six functional health centres, one Hospital, and 23 health posts.

A facility-based cross-sectional study was conducted from April 07-22/2021. The Study population were all public health facilities in Shabedino and Hawella district.

### Sample size determination and procedure

All public health facilities found in Shebedino and Hawella woredas (districts) and the two Woreda Health Offices (WoHOs) were included in this study. Six Health centres (HCs), one Hospital from Shebedino, and four HCs from Hawella woreda were included in the survey. Study populations were selected purposely based on their experience with health information systems.

### Measurement of study variables

#### *Indicators to measure data utilization*

Preparing minimum data visuals like a map of the catchment area and catchment population profile, producing HMIS analytical report, Provision Feedback to Health facilities and receiving feedback from higher levels were used to measure data utilization

#### *Indicators to measure PMT function*

Having Routine Decision-Making Forums and Processes; Having Strategic and Annual plans; being supervised by the WoHO/Zone /Region; Conducting Supervision to HFs, and Data Dissemination outside the Health Sector are used to measure PMT function

### Data collection tools and procedures

Data were collected using a pretested, structured, and interviewer-administered questionnaire and an observational checklist, adapted from the Performance of the routine health information System (PRISM) framework.

A two-day training was given to seven graduate public health professionals' data collectors, and three public health expert supervisors on the study's objective and

the confidentiality of information. Participants were informed about the study's goal and methodology and the confidentiality of the information during the data collection process. At the study site, data collectors were supervised, and meetings were held with them after each day to discuss issues and double-check data completeness and correctness.

### Data processing and analysis

The data was entered into Epi-info version 7 and exported to STATA version 16 for further analysis. All indicators that measure PMT function were classified with yes or no category then indicators with 'yes' response were added together and divided with the total indicators to determine the overall level of PMT function at each health institution. A similar approach was applied to determine the overall data utilization status. The overall PMT function and data utilization status were compared among the 13 health institutions using a scatter plot. Spearman correlation was used to determine the relationship between PMT function and data utilization.

An average score  $\pm$  SD with 95% CI was used to measure the overall PMT function and data utilization level. Spearman correlation coefficient with p-value was used to measure the overall relationship between the two indicators.

### Result

In this study, two district health offices, one Hospital and ten HCs were included, with a response rate of 100%. A total of 25 respondents (One district health office head, one district health office planning officer, Ten HC heads, ten HC health management information system (HMIS) focals, one Hospital CEO, one hospital quality officer and one hospital HMIS focal) were involved in getting information from health institutions.

### PMT Functionality status

At the health facility level, a total of 34 indicators and at the district health office level 39 indicators were used to measure PMT functionality. The overall PMT functionality level was 70.8% (95% CI; 67%, 75%). Among the health institutions, Hawella district health office was on the highest level at 97% (95%CI; 92%, 102%), and Hawela lida health centre and Dulecha health centre were on the same level 86% (95% CI; 74%, 98%), Dobe toga health centre and Mero health centre were on the least level 51% (95% CI; 33%, 68%) [Table 1].

Table 1: PMT function status among Health Institutions of Shebedino and Habela districts

Health Institution	Number of indicators to measure PMT function	Average score of PMT function (SD)	95%CI
Dobe toga HC	34	0.51(.09)	[0.33 0.68]
Morocho HC	34	0.77(.07)	[0.63 0.92]
G/Kiristos HC	34	0.80(.07)	[0.67 0.94]
Fura HC	34	0.57(.09)	[0.39 0.74]
Dulecha HC	34	0.86(.06)	[0.74 0.98]
Leku PH	34	0.57(.09)	[0.39 0.74]
Telamo HC	34	0.60(.08)	[0.42 0.77]
Hayise HC	34	0.77(.07)	[0.63 0.92]
Galuko Hireye HC	34	0.66(.08)	[0.49 0.82]

Hawela lida HC	34	0.86(.06)	[0.74 0.98]
Mero HC	34	0.51(.09)	[0.33 0.68]
Shebedino Woreda	39	0.74(.07)	[0.60 0.89]
Habela Woreda	39	0.97(.03)	[0.92 1.02]
<b>Overall</b>		<b>0.71 (.02)</b>	<b>[0.67 0.75]</b>

#### Data Utilization status

A total of 23 indicators at the health facility level and 50 at the district health office were used to measure data utilization. The overall data utilization was 53% (95% CI; 48%, 58%). Hawela lida health centre was on

a good level with data utilization of 74% (95%CI=56% 2%]. The next was Hawella district health office at 67% (95% CI, 53%, 80%) while Dulecha health centre was on the least level which was 30% (95% CI; 10%, 51%) [Table 2].

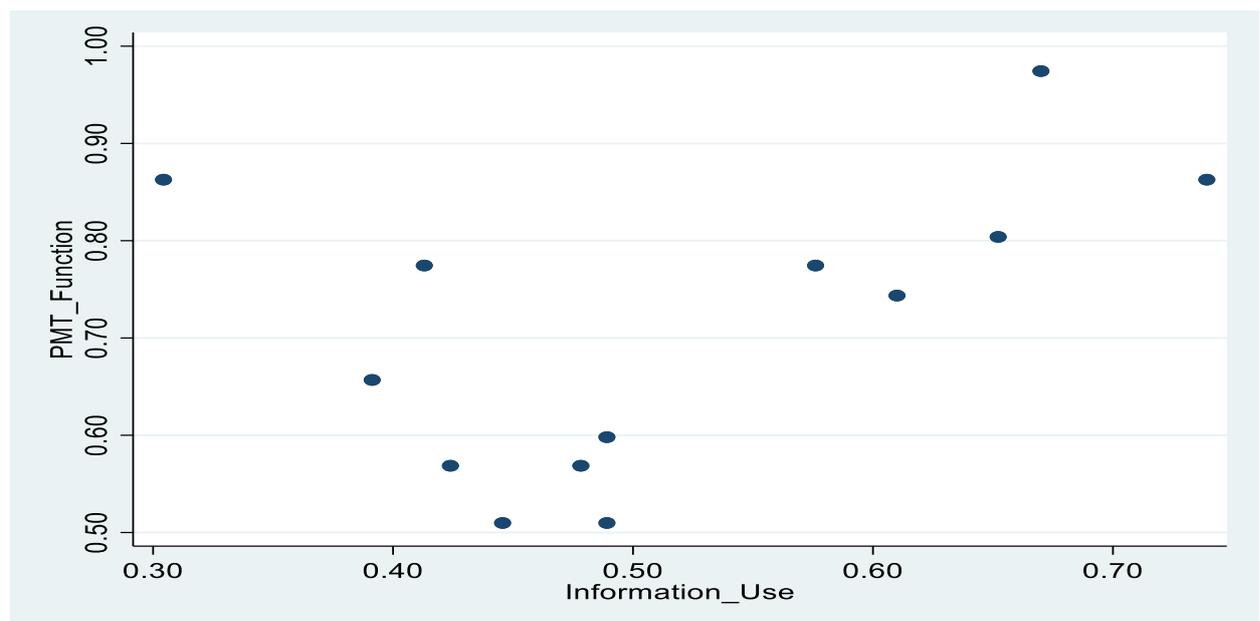
**Table 2 Data utilization status among Health Institutions of Shebedino and Habela districts**

Health Institution	Number of indicators to measure data utilization	Average score of data utilization status (SD)	95%CI
Dobe toga HC	23	0.49(.10)	[0.28 0.70]
Morocho HC	23	0.41(.10)	[0.20 0.63]
G/Kiristos HC	23	0.65(.10)	[0.44 0.86]
Fura HC	23	0.42(.10)	[0.21 0.64]
Dulecha HC	23	0.30(.09)	[0.10 0.51]
Leku PH	23	0.48(.10)	[0.26 0.70]
Telamo HC	23	0.49(.10)	[.0.28 0.70]
Hayise HC	23	0.58(.10)	[0.36 0.79]
Galuko Hireye HC	23	0.39(.10)	[0.18 0.61]
Hawela lida HC	23	0.74(.09)	[0.56 0.92]
Mero HC	23	0.45(.10)	[0.23 0.66]
Shebedino Woreda	50	0.61(.07)	[0.47 0.74]
Habela Woreda	50	0.67(.07)	[0.53 0.80]
<b>Overall</b>		<b>0.53(0.03)</b>	<b>[0.48 0.58]</b>

#### Association between PMT function and data utilization

Spearman's correlation was run to assess the relationship between PMT function and data utilization using a sample of 13 health institutions. There was a positive correlation between PMT function and data

utilization status. In addition to that, a scatter plot was designed to visually present the results, making it easier to understand their relationship. Accordingly, a positive relationship was observed between PMT function and data utilization level (Figure 1).



**Figure 1: Relationship between PMT function and Information use status among Health Facilities in Shebedino and Habela districts.**

## Discussion

This study is conducted -to determine the influence of PMT function on information utilization for decision-making in the public health facilities of Shebedino and Habela districts of Sidama region, Ethiopia.

According to the current study, the overall PMT functionality level was 70.8%. Consistently, a study conducted in south-west Showa zone showed that health Center and woreda health offices 75 % and 100% of PMT was formally established according to national standards, respectively. Still, most of the PMT did not know how to prioritize the problem and know the root cause and needs refreshment training on information use (7). The reason behind this might be due to several factors like poor data visualization status, failure to analyze HMIS data, the inability to do root cause analysis for prioritized problems, and inadequacy of conducting supervision to the district health office, and lacking opportunities to make judgments based on higher-level oversight

According to the present finding, routine health information utilization was 53%. This finding is higher than a study carried out in North Gondar (22.5%) [8], Jimma (32.9%) [9], East Gojjam (45.8%) (10), and west Amhara (38%) (11). The difference observed might be due to differences in study periods and criteria used to measure routine health information utilization. The other possible explanation could be that in the recent past, the government of Ethiopia has given a due attention to the utilization of information for evidence evidence-based decision making and the improvement of health care professionals' professional culture of information use (2). On the other hand, the current finding was lower than a study conducted in the North Gondar zone in the Amhara region (78.5%) (12). Nevertheless, a comparable level of routine health information utilization was found in studies conducted in Wollega (57.6%) (13), Dire Dewa (53.1%) (14), Tanzania (58%) (15), Uganda (59%) (16), and Benin (58.9%) (17).

According to this study,; PMT functionality status and data utilization level showed a positive correlation. The reason behind this is that having efficient PMTs usually lead to improved data utilization, as the members are a group formed within a health facility that regularly and systematically monitors and appraises the performance of their respective health facility and health post against annual targets. On the other hand, PMTs also directly tackle issues in data quality and performance coverage and delayed accomplishments through an established process of problem identification, root cause analysis, intervention design and implementation follow-up system that helps to facilitate data utilization for decision-making process (18).

Regardless of the above findings and discussions, this study has limitations. The sample size used for the study might have affected the study's significant findings as it is inadequate. The cross-sectional nature of the study design might have also dictated our sample

size, and scarcity of previous research on the subject is another limitation.

## Conclusions

According to this study, PMT functionality status was slightly higher than the data utilization level, and a positive correlation was observed between the two indicators. As a result, strong collaborative work/engagement between partners, the ministry of health, the regional health bureau, Woreda health offices and Health facilities needs to be focused on strengthening the PMT's function to improve the data utilisation culture.

## List of Abbreviations

CBMP: Capacity Building and Mentorship Program, DUP: Data Use Partnership, HIS: Health Information System, HMIS: Health Management Information System, HSDP: Health Sector Development Program, IR: Information Revolution, IRR: Information Revolution Roadmap, M&E: Monitoring and Evaluation, MOH: Ministry of Health, PHCU: Primary Health Care Unit, PMT: Performance Monitoring Team, PRT: Performance Review Team, SRHB: Sidaama Regional Health Bureau, WHO: World Health Organization, WoHo: Woreda Health Office

## Declarations

### *Ethics approval and consent to participate*

Ethical clearance was obtained from the Institutional Review Board (IRB) of Hawassa University, College of Medicine and Health Sciences. An official permission letter from the Regional Health Bureau was written to the Sidama Regional Health Bureau. Informed verbal consent was taken from study participants. The participants were informed that their participation in the study is voluntary and they have the right to: not answer a question, terminate the interview, or withdraw from the study at any time in the data collection process.

### Consent to publish

Not applicable.

### Availability of data and materials

The data supporting this study's findings will be found from the corresponding author upon reasonable request.

### Competing interests

The authors declare that they have no competing interests.

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This baseline assessment was funded by Data Use Partner Ship (DUP) project. The funder had no role in study design, data collection and analysis, decision to publish, or manuscript preparation.

### Authors' contributions

All authors participated in planning the study, monitoring data collection process and analyzing the data, writing the result and the manuscript. All authors read and approved the final manuscript.

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