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Use of Electronic Quality Monitoring Tool and Central Dashboard to Improve Clinical and Programmatic Decisions

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Abstract. The HIV service quality improvement tool is deployed in 123 health facilities in Ethiopia. The tool uses a central dashboard for visualization and decision making at the health facility and higher levels of the health systems. The dashboard is developed on excel with analytics about HIV testing, case finding, treatment linkage and quality indicators. The dashboard was developed based on the requirements requested during discussions with HIV clinicians and the program team.

Keywords. Quality monitoring, clinical care, programmatic decision, decision making, Ethiopia

1. Introduction

The 2018 Ethiopia Population-based HIV Impact Assessment (EPHIA) shows that Ethiopia is moving closer to HIV epidemic control. There is a critical need for reliable and timely site level data to support epidemic control. The data generated as part of the health facility level performance monitoring is being used at national, regional and health facility level for evidence-based decision making, program planning and resource allocation purposes. We present here the electronic quality monitoring tool, and the data that is used at the health facility and program level for improving the quality of HIV services in Ethiopia.

2. Methods

An electronic HIV services and program monitoring tool was established and deployed at 123 health facilities, 5 Regional Health bureaus (RHBs), and 69 sub-regional health offices in 2018. The PTQIT system was deployed in PEPFAR program priority towns with high HIV patient volume. The PTQIT is a web-based tool designed to manage and

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share aggregated weekly and monthly data generated at health facilities to facilitate data use at point of generation and next level health offices. The aggregate data from all health facilities is compiled at regional health bureau (RHB) level. The RHBs share the aggregate report using a Secured Extensible Markup Language (XML) file format. The central dashboard was designed based on requirements needed for the type of analyses from the HIV program, and monitoring and evaluation teams. The data collected from PTQIT is imported to the central dashboard using power query.

3. Results

We developed a regional dashboard at the central level to summarize the results of each region in terms of HIV testing, case finding, treatment linkage, and quality of services. The central dashboard is designed on an excel platform where the graphs and charts are embedded in the system using power query and power pivot models. The PTQIT data is updated into the central dashboard on a monthly basis. The HIV program receives the updated central dashboard monthly, which is used to identify gaps that need performance improvement at all levels. The output of the central dashboard is used not only for regular monitoring of performance but also as reliable evidence in national and regional HIV program planning. Some of the key features of the central dashboard include regional comparisons, trends over time and percent share of the selected indicators. The central dashboard shows a steady decline in HIV testing performance and relative decline in number testing positive. The continuity of treatment across the regions has been stable except in security affected areas. Based on these data, health facilities that contributed to the major reduction in testing performance were identified and tailored support was provided.

4. Conclusions

The use of this electronic system facilitated timely access of health facility data at sub-regional and regional level with enhanced data-based decision making at all levels. The use of an excel platform as a dashboard facilitated the sharing of the monthly dashboard to a wider beneficiary in addition to the ease of making edits as appropriate.

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