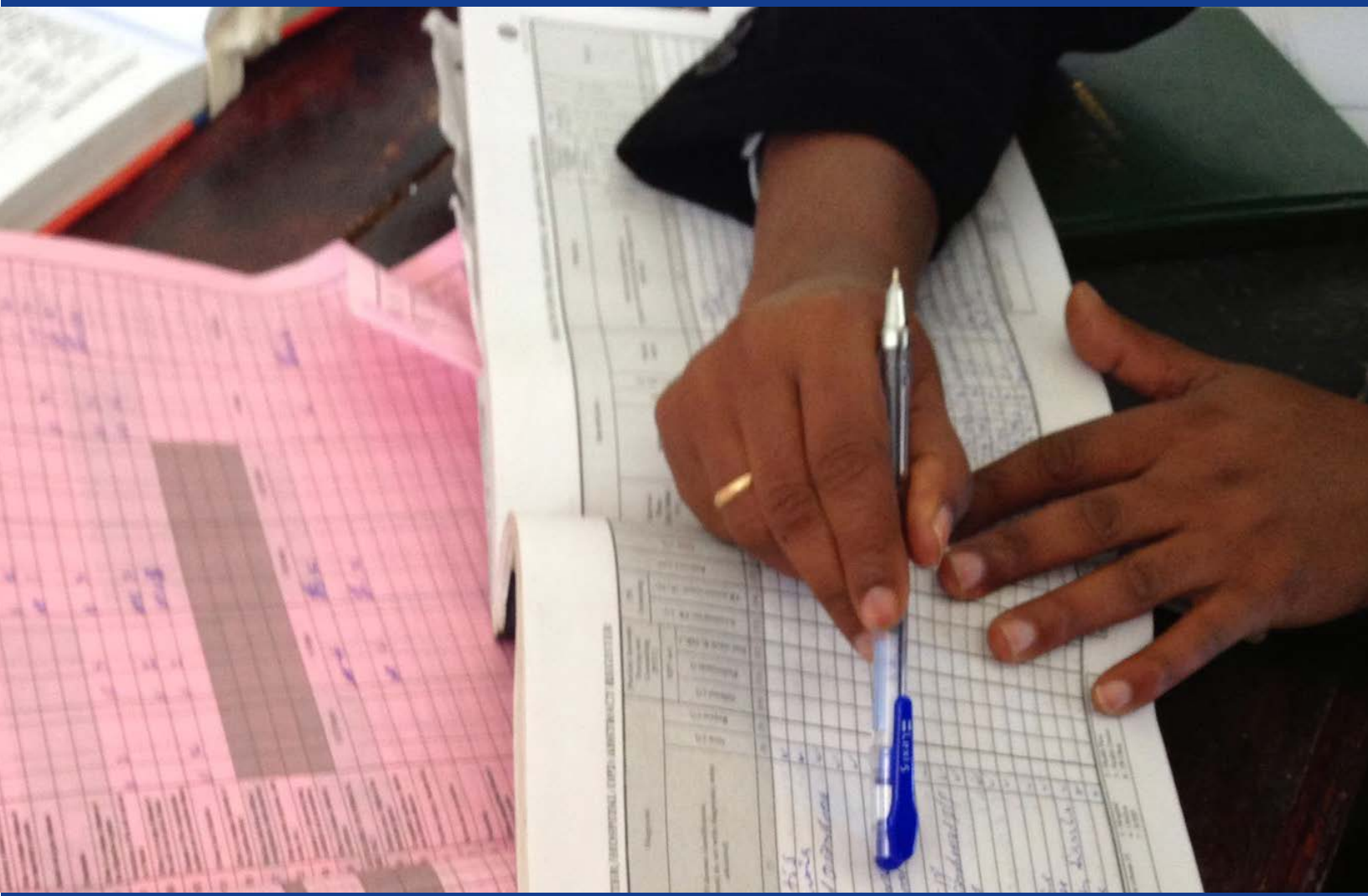
— A Case Study from Ethiopia —

Supportive Supervision in Monitoring and Evaluation with Community-Based Health Staff in HIV Programs



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A Case Study from Ethiopia

Supportive Supervision in Monitoring and Evaluation with Community-Based Health Staff in HIV Programs

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This research has been supported by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) through the U.S. Agency for International Development (USAID) under the terms of MEASURE Evaluation cooperative agreement GHA-A-00-08-00003-00, which is implemented by the Carolina Population Center at the University of North Carolina at Chapel Hill, with Futures Group, ICF International, John Snow, Inc., Management Sciences for Health, and Tulane University. The views expressed in this publication do not necessarily reflect the views of PEPFAR, USAID or the United States government.

August 2014 SR-14-98

Acknowledgements

The authors would like to acknowledge the following people for their guidance and support in the development of this case study.

Jen Curran carried out all key informant interviews and direct observations and collected project documents and photos. She provided valuable information on interviewing methods, participant demographics, and project background. She also reviewed a draft of this report for accuracy.

Fantahun Wale transcribed and translated key informant interviews and provided translation services in Ethiopia.

Tariq Azim served as a valuable resource and proponent of the case study in Ethiopia. He also reviewed a draft of the report and provided helpful feedback.

Heidi Reynolds reviewed a draft report and provided helpful guidance on the results and discussion sections.

MEASURE Evaluation/Ethiopia staff helped to organize the field work.

Finally, the authors would like to thank **the participants** in the study for their time and insights into MEASURE Evaluation's supportive supervision project in Ethiopia.

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Abstract

Background – Supportive supervision is a facilitative approach that promotes mentorship, joint problem-solving, and communication between supervisors and supervisees. In Ethiopia, MEASURE Evaluation trained government managers on supportive supervision as part of a project to scale-up the country's health management information system (HMIS). This report presents a case study of the project that can serve as an example for other programs wishing to use supportive supervision in monitoring and evaluation (M&E).

Methods – A single case study design was used. Data were collected through 12 key informant interviews, four observations of supervision visits, and document review. Participants were sampled purposively from three strata: MEASURE Evaluation staff, government supervisors, and community-level staff. Interview transcripts were coded in NVIVO 10 and compared with direct observation notes and documents using thematic content analysis.

Results – Findings suggest that the project was successful in promoting program ownership, standardizing supervision, and improving data quality. Participants attributed these successes to collaboration among government offices, supervision tools, and feedback and training provided to staff by supervisors. The project was less successful at promoting data use for decision making. While participants had theoretical knowledge, there was little actual use of information at health facilities.

Conclusion – Supportive supervision is a promising approach to improve routine data collection for M&E of community-based programs. Programs that wish to use this approach can adapt best practices and lessons learned from this and other projects. Specifically, programs should work in teams of supervisors, address staff motivation and confidence during visits, promote data demand and use, and create a training plan for M&E staff.

Background on Supportive Supervision

In international health programs, supervision plays an important role in the management of human resources to improve the quality of health care and health service delivery. However, the traditional 'inspect and control' method of supervision limits the performance of basic supervision tasks and demoralizes staff (Marquez & Kean, 2002). Supportive supervision is a facilitative approach to supervision that promotes continuous improvements in the quality of care by providing the necessary leadership and support for quality improvement processes and by emphasizing mentorship, joint problem-solving, and two-way communication between supervisors and supervisees (Marquez & Kean, 2002). In a supportive supervision model, supervision happens continuously as part of a team effort implemented by multiple parties, and focuses on problem-solving to assure quality and meet client needs (Marquez & Kean, 2002). Supportive supervision encounters typically include: performance observation and comparison of actual practices with standards; facilitative feedback on performance; provision of guidelines or technical updates; use of client input and data to ascertain opportunities for improvement; problem solving as a team; and follow-up of previously noted problems (Marquez & Kean, 2002). In a supportive supervision model, staff typically employs job aids such as checklists and assessment forms to facilitate supportive supervision (Marquez & Kean, 2002).

Traditionally, supportive supervision has been used in reproductive health programs to improve health service worker performance and health service quality (Ben Salem & Beattie, 1996). In recent years, however, the monitoring and evaluation (M&E) field has begun implementing supportive supervision in the routine monitoring and evaluation of tuberculosis (TB) and HIV programs (WHO, 2009). In 2009, UNAIDS developed the *12 Components Monitoring & Evaluation System Assessment: Guidelines to Support Preparation, Implementation, and Follow-up Activities* to provide a framework for implementing effective HIV M&E systems in developing countries (UNAIDS, 2010). The tenth component of the tool is supportive supervision and data auditing (UNAIDS, 2010). The guide states that incorporating supportive supervision into an HIV M&E system helps to communicate expectations and standardize procedures, improve or sustain data quality, and strengthen local M&E capacity (UNAIDS, 2008).

While UNAIDS and others have advocated for the inclusion of supportive supervision in M&E, there is a lack of documentation on how supportive supervision has been applied to M&E at the community-level. The purpose of this study was to develop case studies of supportive supervision projects that could be used as examples for other programs wishing to use supportive supervision in M&E. We aimed to illustrate how supportive supervision has been used with community-based HIV program staff and volunteers to strengthen collection and use of routine monitoring information.

Methods

Study Design

This study used a multiple case study design (Yin, 2009) to examine the application of supportive supervision in M&E of community-based HIV programs. Candidate programs for cases were identified through contact with experts in community-based M&E, requests through email and newsletters, and a review of the grey literature. To be selected as a case, candidate programs had to work with community-based health organizations, have an HIV/AIDS-related health portfolio, currently conduct a supportive supervision activity that focuses on data collection and data use, and have a responsive project staff. Ultimately, MEASURE Evaluation's supportive supervision activities in Ethiopia and Haiti were selected as the two cases for examination under this study. Although it was not the original intent to examine MEASURE Evaluation activities, these were the only two programs that met the criteria. An institutional review board at the University of North Carolina at Chapel Hill and local review boards in Haiti and Ethiopia granted ethics approvals for the study. This paper documents aspects of MEASURE Evaluation's supportive supervision project in Ethiopia. The Haiti report is available on MEASURE Evaluation's Web site (Marshall & Fehringer, 2013).

Setting

This study took place in the Southern Nations, Nationalities, and Peoples Region (SNNPR) in Ethiopia (figure 1). According to 2007 census figures, the SNNPR had a population of around 14.9 million, with 90% of the total population living in rural areas (Central Statistical Agency Ethiopia, 2013). Administratively, the SNNPR is divided into 14 zones, 157 woredas (districts), and 3,851 kebeles (villages). The health system in the region is decentralized, whereby responsibility for primary health care delivery and management has devolved from the Regional Health Bureaus to Woreda Health Offices (Center for National Health Development in Ethiopia, n.d.). At the woreda level, the health system comprises a primary hospital, health centers and health posts which form a Primary Health Care Unit (PHCU) (Center for National Health Development in Ethiopia, n.d.).

Figure 1. Map of Southern Nations, Nationalities, and Peoples Region (SNNPR) and other Ethiopian states and self-governing administrations.

Source: Courtesy of Wikimedia Commons, licensed under Wikimedia Creative Commons.

The supportive supervision project in Ethiopia began as a component in the process to scale-up the country's health information system. Ethiopia has developed a Health Sector Development Plan (HSDP), focusing on "prevention and

mitigation of priority health problems" such as HIV/AIDS, malaria, and common maternal and child health problems (HAPCO, 2012). A pivotal component of this plan is the health management information system (HMIS), which includes a community health information system (CHIS) (MEASURE Evaluation, 2011). In this system, Health Extension Workers (HEWs) use a family folder as a data collection and documentation tool to meet information needs for "family-centered health services" at the community level (Lemma et al, 2010). MEASURE Evaluation helped to pilot the family folder concept and now works in the SNNPR and Oromia Region to scale-up the family folder implementation. This scale-up process includes a supportive supervision component in which MEASURE Evaluation carries out training with government managers on supportive supervision and conducts joint supportive supervision visits with government managers to health posts.

Data Collection

In December 2013, a MEASURE Evaluation researcher conducted semi-structured interviews and direct observations with staff that either carried out or received supportive supervision, and collected project documents. Twelve key informants from MEASURE Evaluation and government offices at the regional, woreda, health center, and health post levels were interviewed. Participants were purposively sampled from three strata: MEASURE Evaluation staff, nongovernmental organization (NGO) or governmental supervisory staff, and community-level staff or volunteers (table 1).

Table 1. Participant Demographics

Participant Type	Male	Female	Total
MEASURE Evaluation staff	2	0	2
NGO or government supervisor	2	3	5
Community-level staff	4	1	5

Three semi-structured interview guides were used during the interviews, one for each stratum of participants. Interviews lasted on average 53 minutes each and took place in either the office of the clinic director or in one of the clinic departments. Interviews were conducted in English or Amharic; with the majority conducted in Amharic with the help of a translator. All of the interviews were audio-recorded, transcribed, and translated into English.

During interviews, the researcher requested copies of tools used during supportive supervision visits, data collection tools used by community-level staff, and reports on supportive supervision activities. Participants provided:

- five primary data collection tools (four client registers and one tally sheet)
- two monthly reports
- one supportive supervision tool
- four supportive supervision reports

The researcher also photographed 11 charts and graphs posted on facility walls (photographs are provided in appendix E).

The researcher conducted four direct observations of supportive supervision visits with MEASURE Evaluation staff, government managing staff, and community-level staff to observe supportive supervision in different contexts. Direct observations took place at three different health centers and one health post. Two of the health facilities were peri-urban and two were rural. Direct observations lasted approximately two hours or more each and the researcher was guided through the visit with the help of a translator. Observations made during the interaction were recorded on a semi-structured observation guide developed by MEASURE Evaluation.

Data Analysis

A descriptive framework was used to analyze data for this study. In a descriptive framework, data are organized by topics that reflect the data collected, rather than relying on theoretical propositions (Yin, 2009). Initially, the first author read all transcripts and notes from direct observations, and reviewed collected documents. After reviewing all documents to gain a sense of the whole, a codebook was developed using *a priori* themes from the interview guides. Additional codes were added to cover topics that emerged from the interviews, such as the *HMIS System* and *Supportive Supervision Planning and Organization*. Interview transcripts were loaded into the qualitative data analysis program, NVivo10 (QSR International, 2012), and segments of text were coded using the codebook. Matrices were used to display patterns in supportive supervision visits and direct observations across participants. Next, transcripts, field notes, matrices, and documents were processed through writing about emerging themes, participants' responses, and different aspects of supportive supervision visits.

Results

The results of the case study are presented in five sections below: Participants' Jobs, Education, and Training; History of HMIS and Supportive Supervision Project; Organization of Supervision; Effectiveness of Supportive Supervision; and Challenges and Recommendations.

Participants' Jobs, Education, and Training

Participants were asked to describe their educational background, the work that they do for their organization, and any training that had prepared them for the work.

While job titles varied, all participants were responsible for data collection and reporting. At the health centers and health posts, employees reported that they used three different types of forms to collect and report data: registers, tally sheets, and report forms. **Registers** with individual patient information from each department were aggregated into **tally sheets**, which were then compiled into the **report form** and sent monthly to the Woreda Health Office or health center (figure 2). The HMIS focal person at the health center was in charge of creating these reports. Participants reported that the forms and reports were easy to complete, albeit time consuming. At the Woreda Health Office and Regional Health Bureau, participants' responsibilities included

aggregating and analyzing data from the community-level and writing reports. These supervisors also conducted supportive supervision and provided technical assistance to health workers at the community-level.

Ten participants had received training in HMIS. Both participants who had not received HMIS training were community-level staff, and one of these had attended an orientation to CHIS. While all supervisors had been trained by MEASURE Evaluation, most community-level employees had received on-the-job training from their colleagues.

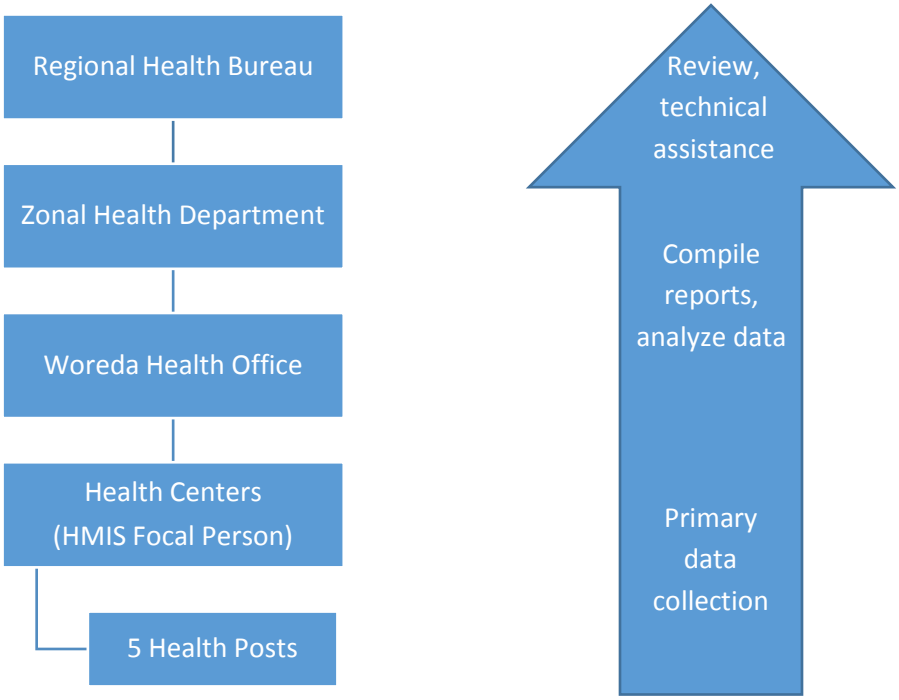

Figure 2. Flow of information from health posts to regional health bureau in a typical woreda.

History of HMIS and Supportive Supervision Project

To provide context for the supportive supervision project, participants were asked to describe the history of the Health Management Information System (HMIS) in Ethiopia. According to staff at MEASURE Evaluation, the old M&E system had a number of challenges in capturing and reporting quality data. At that time, a culture of data use did not exist and staff simply funneled data up to supervisors without examining the data at the local level. Thus, a new HMIS was implemented and piloted in one zone in the SNNPR and then scaled up to the entire region. In the new system, tools and indicators were developed to standardize data collection and reporting throughout the region. In addition, the scale-up project introduced different components for monitoring and evaluation into the system including the CHIS and an electronic HMIS (eHMIS). A train-the-trainer model, administered by MEASURE Evaluation, was used to train government supervisors on the new HMIS and supportive supervision approaches.

Both MEASURE Evaluation employees said that the key to this approach was capacity building and government ownership, as exemplified in this comment by a MEASURE Evaluation staff member, "We do not own a single cent from HMIS. HMIS is a government program so we always say that we are behind the door and they are the one inside. If they push us out of the door, we go but the system does not go." This idea of capacity building and training as central to the work of the project was echoed throughout the interviews and emerged as an important aspect of supportive supervision.

Organization of Supervision

This section describes the organization of supervision of data collection and reporting within the HMIS structure.

Regular Supervision

In order to distinguish between regular supervision and supportive supervision, supervisees were asked to describe any supervision of data collection and reporting that they received regularly at their health facility. Three health center employees reported that the HMIS committee at the health center reviewed their data collection, while one employee said that his data collection was supervised by the a performance review team (PRT). Meetings with these committees or team occurred monthly, and involved examining reports and source documents for agreement and comparing reports against the performance plan. Data use was not mentioned as an aspect that was discussed in these meetings. In contrast, the health extension worker reported that no committee or person regularly supervised her data collection at the health post. The only supervision that she received was from HMIS officers from the Woreda Office and health center, and this was part of MEASURE Evaluation's supportive supervision program.

Supportive Supervision

Participants were asked to describe a typical supportive supervision visit related to HMIS data collection, including who was involved, how often supervision occurred, how supervision was carried out, and what feedback or reports resulted from the visit.

Who Conducts Supervision Visits – MEASURE Evaluation, the Regional Health Bureau, Zonal Health Department, Woreda Health Office, and health centers all conducted supportive supervision in teams of supervisors. The supervisor from MEASURE Evaluation explained that each month they randomly selected health facilities in two woredas to visit. Supervisors from the Woreda Health Office and Zonal Health Department accompanied MEASURE Evaluation on the visit and simultaneously received training in supportive supervision. Regional Health Bureau supervisors also observed data collection at all levels of government in teams that included supervisors from MEASURE Evaluation and the administrative level directly above the one being supervised. At the lowest level of government, the HMIS focal person at the health center supervised one health post twice a week.

Supervisors stressed the importance of carrying out supportive supervision visits in teams of supervisors from all levels of government. As a MEASURE Evaluation employee explained,

"Supportive supervision starts from planning ... when we plan we are building the capacity of health system personnel. So, to do this we plan together, we prepare for supportive supervision logistically, manpower, checklists, and so forth." By conducting supervision visits together, supervisors from all levels of government are given the training and tools to supervise M&E data collection.

Frequency of Supervision Visits – Both supervisors and supervisees were asked how often they performed or received supportive supervision. While participants' responses on the frequency of supportive supervision visits were fairly consistent, some supervisees reported receiving supervision more or less often than others. Regional Health Bureau supervisors conducted supportive supervision twice a year, while the Woreda Health Office supervised health centers quarterly. One health center supervisor reported visiting health posts twice a week, although this seemed to be above average. Health center employees said that they received visits from the Zonal Health Office every quarter, while for others it was twice a year. Most health center staff said that they received quarterly visits from the Woreda Health Office, although one participant said that he was supervised more frequently. One supervisee had not received any visits from supervisors at MEASURE Evaluation or the Woreda Health Office since he had started working at the health center. It was not clear from the interview how long he had been working there.

Content of Supervision Visits – Participants reported that supportive supervision visits involved multiple activities, such as observation of clinic departments, review of PRT meeting notes, training, and follow up on issues identified in the previous visit; however, the majority of the visit was dedicated to data checking. As a supervisor from the Regional Health Bureau explained, "We visit all departments and also we see registers and reports. We check the quality of data by using tools and the Lot Quality Assurance Sampling (LQAS) method. Finally, we discuss the identified gaps with staff and we fill out the register [with notes] on coaching at the [health center]." Other supervisors also emphasized the importance of discussions with community-level staff on topics related to data, along with checking the quality of data by comparing registers and tally forms to monthly reports.

Similarly, community-level staff mentioned that during a visit, supervisors observed different departments, checked registers against reports, and provided feedback. When asked about an interaction that they had with their supervisor, most gave an example of a time when a supervisor had pointed out an error in data. For example, a health center employee explained, "Once we had a weakness in keeping the files. As a result they [zone and woreda supervisors] told us to properly keep the files, and we accepted their idea and improved it." In this quote, the supervisee indicated his willingness to accept and build upon the feedback from supervisors. This comment echoes what other supervisees said about feedback being "important", "necessary", and "supportive".

During direct observations, the majority of the visit involved checking registers and tally sheets against reports for inaccuracies; however, supervisors also used it as an opportunity to discuss with staff the importance of collecting accurate data for funding and decision making. During a visit from the HMIS supervisor to the HMIS focal person at a health center, it was stressed that data collection was important for everything that happened in the catchment area of the health center. Rather than a general discussion of these topics, most supportive supervision visits

addressed specific issues, such as a decrease in health facility births or an increase in malaria cases. For example, during a visit from a MEASURE Evaluation supervisor to a health post, they discussed a decrease in the number of births at the facility and what had been done to address this problem. The observer noted that the tone of the visits was collegial and not condescending, as expressed through the body language and positioning of the supervisor.

Tools Used During Supervision Visits – All supervisors said that they used standardized checklists developed by MEASURE Evaluation during supportive supervision visits, and most supervisees confirmed this. One health center employee reported that his supervisors did not use any checklists but came with reports from the previous visit and health center data. All supervisors used supportive supervision checklists during direct observations.

Supervisors used checklists during supportive supervision "as a quick check for availability of the materials that are supposed to be there" according to a MEASURE Evaluation supervisor. The checklist contained questions about the health facility population and annual plan, PRT, quality assurance, and information use (the checklist is provided in appendix A). It also guided the supervisors through checking data elements at the woreda and health facility levels and comparing data from registers and databases with reports.

During visits, supervisors checked additional documents to observe data collection procedures and assess system functioning. Primarily, they checked source documents against reports; however, they also reviewed health facility LQAS reports[1] to ensure that they were completed on a monthly basis. They visited all service delivery points to observe collection and storage of health information in folders and card rooms (see appendices B and C). Finally, they reviewed the meeting minutes from the PRT to see the actions taken to correct data quality and collection problems.

Feedback after Supervision Visits – Steps that took place after supportive supervision visits included immediate feedback, submission of supervisory reports, and follow-up calls and visits.

All supervisees mentioned that oral and written feedback was a major part of the visit. Supervisors described feedback mostly in terms of discussing gaps in primary data collection and providing training on filling forms, although one mentioned that she provided verbal recognition when employees performed well. In direct observations, supervisors provided a significant amount of on-site training when workers were not familiar with filling forms or assessing data quality. Supervisors also noted comments in the minutes of the visitors' book at each health facility and wrote more detailed notes once they returned to the office. These notes were reviewed at subsequent visits to remind supervisors and staff of the content of the previous visit. Some supervisees said that they received additional written feedback from their supervisors shortly after the visit, while others did not.

Following a visit, all supervisors wrote a report. Most supervisors oversaw multiple health facilities, thus the report served as a summary of findings from all supportive supervision visits

[1] LQAS is a statistical methodology used to check data quality for a group of randomly selected data elements. In Ethiopia, LQAS was done monthly at the facility level and recorded on a report form.

that he or she had carried out (see appendix D). Supervisors reported that they discussed these reports with their supervisors and colleagues, and shared them with other government offices. Supervisors from the Regional Health Bureau also met twice a year with teams from MEASURE Evaluation, the Woreda Health Office, and Zonal Health Department to discuss the findings of supportive supervision.

Both supervisors and supervisees said that supervisors followed up on issues from a previous visit by checking their notes in the visitor's book at the following visit. Supervisors also reported that they followed up by phone; however supervisees did not mention receiving phone calls after a visit. There was no discussion of what supervisors would do if the issues from the previous visit had not been resolved.

Effectiveness of Supportive Supervision

To assess the effectiveness of supervision, participants were asked to describe what changes, if any, they observed in their M&E work before and after the project. Interestingly, the changes mentioned varied by participants' positions. MEASURE Evaluation staff talked mostly about changes in staff and data use, while supervisors cited changes in data quality most often, and community workers were more likely to report changes in data collection and data use. Overall, the two most commonly mentioned changes were in data quality and data use.

Data Quality

Both supervisors and supervisees reported changes in the quality of data on forms and reports as a result of supportive supervision. Supervisees described data quality as when numbers from the report form matched with numbers from registers and tally sheets. Participants explained that standardized data collection tools at the facility level were very important for improving data quality, because they provided an organized way to review data during supportive supervision and allowed staff at all levels to "talk the same language," as a Regional Health Bureau supervisor described it.

Participants attributed improvements in data quality to the feedback and evaluative components of the HMIS project and to the competition that the HMIS project created between health centers to meet performance goals. The new HMIS made it possible to view data from all health facilities, and ranked their performance to create a friendly competition to be the top health facility.

Many participants associated improvements in data quality with better quality services and increased performance at the health center level. A health center employee went even further by stating that better data quality was improving the health of people in the community, although he did not elaborate on this point.

Data Use

Supervisors reported that data use among community staff improved after supportive supervision. Two supervisors said that workers now use data to plan and allocate resources to

address health problems. For example, a MEASURE Evaluation supervisor explained that community workers used the new family folder system to assess the number of households without latrines and plan where to build pit toilets to meet this need. Another reported that because of supportive supervision, workers now have a better understanding of why data were collected and how to use data to take action.

Supervisors attributed changes in data use to a more collaborative supervision approach. Before the project, there was a lack of training among supervisors to provide effective supervision. This resulted in the demoralization of community-level staff because "supervisors were going to find fault, it was not supportive, there was not coaching" according to a Regional Health Bureau supervisor. After the project began, however, supervisors became more diligent and thorough, and relationships between supervisors and supervisees improved, which in turn improved data use and decision making.

While two community workers also mentioned improvements in data use, another had not seen any changes. She attributed the lack of change to high staff turnover. Many community-level staff said that they now used data to monitor service delivery, identify problems with performance, and devise solutions. A health center employee gave the example of using data on health facility births, saying *"If* we found [that] the mothers' delivery in the health center is low based on the information, we make a decision as to how to solve the problem*."* As in this quote, however, most community-level staff gave examples of hypothetical uses of data, rather than actual experiences with using data. Another health center employee offered the example of using data to monitor malaria epidemics; but then admitted, "Actually, we do not have much experience in using those data." Although community-level workers understood the importance of data use, there were few examples of actual decisions that were made based on information gathered at the health facility-level.

Challenges and Recommendations

Participants noted current challenges in the supervision of M&E and gave suggestions on how to address these challenges.

Staff turnover was by far the most frequently mentioned challenge in interviews, and both supervisors and supervisees were aware of this problem. For example, two community-level staff said that their health facilities lacked a trained HMIS focal person and that this caused problems with their data quality. In direct observations, supervisors repeatedly provided training to heath center staff that had not been trained on data collection forms or LQAS reports due to high staff turn-over. Moreover, participants reported that too few Regional Health Bureau and MEASURE Evaluation staff, transportation challenges, and limited resources meant that new staff could not be trained quickly enough on HMIS and CHIS.

To address these challenges, three supervisors and one rural health center employee recommended providing additional training to all staff on HMIS and data use, and one supervisor suggested that those who are trained should teach others on their staff. A MEASURE Evaluation employee recommended including HMIS training in the curriculum of local colleges to reach more people. Additionally, supervisors recommended providing additional staff with computers

to assist with HMIS support and supervision, as most community-level employees currently do not have computers at their facilities.

Participants also made recommendations related to the frequency of supervision and training of supervisors. Most community staff said that they would prefer more regular and scheduled supervisory visits because, as a health post extension worker put it, "It helps to strengthen myself, helps us to strive more and change ourselves and our institution." This quote represents a larger view among participants that supervision is beneficial because it improves health facility performance, and provides an opportunity to learn.

Discussion

The supportive supervision project in Ethiopia achieved some notable successes in M&E of community-based HIV programs. The foremost of these successes were in promoting program ownership, standardizing supervision, and improving data quality. The success of the project can also be measured by how closely it adhered to the principles of supportive supervision outlined in the background section of this paper.

The aspects of supportive supervision that were achieved by the project in Ethiopia included comparisons of performance against set standards, facilitative feedback on performance, and a collaborative, team-based approach. Aspects of supportive supervision that require further improvement are the regularity of visits and follow-up on previously noted issues. Table 2 compares the aspects of supportive supervision that the project did and did not achieve based on the findings.

Table 2. Comparison of Supportive Supervision Elements Observed in Ethiopia to Ideal Supportive Supervision Elements Based on Marquez & Kean, 2002

Elements of Supportive Supervision Achieved	Elements of Supportive Supervision Not Achieved
o Performance observation and comparison with standards o Supervision as a team effort o Facilitative feedback on performance o Use of supervisory tools such as checklists and assessment forms o Emphasis on mentoring and collaboration o Two-way communication between supervisors and supervisees	o Regular and continuous supervision o Follow up on previously noted issues o Support for quality improvements

Supportive supervision in Ethiopia achieved a high level of collegiality and collaboration. Staff at the highest levels of the project emphasized that the purpose of supportive supervision was to build capacity, rather than be punitive, and supervisors appeared to adopt this mentality. This was evident in direct observations, when supervisors engaged in discussions with staff on their M&E work and provided on-site training. Participants also gave a significant amount of positive feedback on supportive supervision in interviews and most supervisees requested more regular

and frequent visits, which further supports this finding. All participants valued the teaching and performance improvement aspects, and appreciated the opportunity to learn. The fact that better relationships between supervisors and supervisees were mentioned as a result of the project is further evidence of its collaborative nature.

Secondly, the project also provided a significant amount of facilitative feedback to supervisees, as shown by the number of times that supervisors and supervisees mentioned this aspect. Most feedback focused on areas for improvement; however, this did not seem to upset supervisees as long as the feedback was constructive. A tendency to remember errors, rather than successes, may have played a role in the examples of interactions given by supervisees. Nevertheless, the project should continue to emphasize to supervisors that feedback must be instructive and useful to achieve this aspect of supportive supervision fully. Rewarding supervisees for good performance may also result in increased staff motivation and confidence and less staff turn-over at the community level.

Finally, the project was successful in comparing health facility performance against set standards. This was most evident during supportive supervision visits; however, it also occurred during regular supervision of data collection and reporting by HMIS committees and PRTs. Supervisors frequently mentioned that the standardized checklists and improvements in the organization of supervision made it easier to check health facility performance. Reports from interviews and direct observations demonstrated that these tools were used consistently. During direct observations, supervisors regularly discussed with supervisees low numbers for particular health services compared to the annual plan. Additionally, the majority of the supervision visit involved checking of data collection forms against reports, which demonstrates that the project met the performance appraisal element.

Two important areas for improvement for the project are in the frequency of supportive supervision visits and follow up after a visit. While supervisors generally followed up on problems with data collection at the next visit, there was rarely any additional feedback provided to staff after the initial visit. Additionally, supervisors did not discuss how they would approach an issue that had not been fixed from a previous visit and often dealt with the same issues multiple times. The regularity of visits also varied and both supervisors and supervisees recommended that supervision occur more frequently. Announcing visits in advance would also be beneficial, as key employees were sometimes out of the office on the day that the supervisor visited. By improving follow-up and frequency, the project would create continuity and reinforce the training and information given by supervisors during the visit.

Additionally, there is room for improvement in data-related aspects of supportive supervision, especially data use and staff confidence and motivation for data-related tasks. Interviews with community workers suggested that they gained theoretical knowledge on how to use data, but were not doing so in practice. Concurrently, there was little mention in interviews and direct observations of staff confidence and motivation for data collection and use in decision-making. Although these are not aspects of supportive supervision per se, they are important to address, as a trained and confident workforce is crucial to a well-functioning M&E system. Human capacity for HIV M&E is the second component in UNAIDS' 12 components M&E system strengthening tool (UNAIDS, 2010). It is also a priority in WHO's strengthening health systems framework

(WHO, 2007), which states that capacity building involves "ensuring that a combination of the tools, skills, staff, and support systems" are available and operational. Therefore, addressing staff confidence and motivation during supportive supervision visits and barriers to achieving these goals are important for any project attempting to build staff capacity for M&E. In order to improve upon these aspects, supervisors should assist in the actual use of data at the community level by holding sessions during their visits to ask community workers to pull out the data, interpret it, and make plans accordingly.

Overall, the project has taken meaningful steps to improve the M&E system in Ethiopia. The consistency and uniformity of the answers of those interviewed underscores the amount of integration of HMIS and supervision into the health system. It also shows the importance of country ownership and train-the-trainer models to ensure sustainability of similar programs. The next step would be to address staff turn-over, as this was the biggest limiting factor in this system.

Recommendations

Future projects using supportive supervision for M&E should take the following into consideration.

1. **Conducting supportive supervision in teams of stakeholders.** One of the keys to the success of this project was in its collaborative approach to supervision and its intent to promote government ownership and build capacity to sustain the project. Other supportive supervision projects should involve stakeholders (government, NGOs, and others) from the outset to increase sustainability and investment. MEASURE Evaluation's Stakeholder Engagement Tool (MEASURE Evaluation, 2011) could be useful to help projects to identify which stakeholders should be involved and how best to engage them.
2. **Mobilizing resources to plan and conduct supervision visits.** While a plan for supportive supervision visits was available, they were often done on an *ad hoc* or monthly basis because of a lack of allocated funds. Additionally, government supervisors frequently paid out-of-pocket for their transportation costs. Thus, supportive supervision projects should have a schedule for visits and mobilize resources to ensure that visits take place as planned. A dedicated budget for supportive supervision would increase the frequency and consistency of visits.
3. **Including questions about staff motivation and confidence on supervision checklists.** This study found that supportive supervision visits were not addressing staff motivation or confidence for data-related tasks. Questions should be added to the supportive supervision checklist to remind supervisors to discuss these issues with their supervisees and additional training should be provided to supervisors on ways to address these deficits. For example, some extracts from the Performance of Routine Information Systems Management (PRISM) tools could be used regularly to address behavioral and organizational factors (Aqil, Lippeveld & Hozumi, 2009).
4. **Creating and pilot testing a plan to train new staff on data collection and use.** One of the greatest barriers to improvements in M&E in Ethiopia was frequent staff turn-over

leading to untrained staff in data collection and reporting positions. Supportive supervision projects should explore why new staff are not being trained and put in place a plan to address this issue. A training plan would reduce time spent re-training staff during visits, and free up additional time for advanced training in data use and demand.

5. **Promoting a culture of data demand and use for decision making.** In this study, changes in data demand after supervision were not evident and changes in data use were minimal. Supportive supervision projects should stimulate data demand and enhance evidence-based decision making. A strong demand for data is important as incentives to use M&E systems are based on the strength of demand. MEASURE Evaluation's *Tools for Data Demand and Use in the Health Sector: Stakeholder Engagement Tool* (MEASURE Evaluation, 2011) could be a useful resource for assessing and building data demand and use.
6. **Allowing supervisees and supervisors to provide feedback on supportive supervision.** It is our hope that this study will not be a one-time exercise, but rather, that supervisors and supervisees will have future opportunities to provide feedback on supportive supervision. Feedback is crucial to program improvement and sustainability and the overall satisfaction of supervisors and supervisees.

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Appendix A. Supportive Supervision Checklist

SNNP REGIONAL HEALTH BUREAU

HMIS SUPPORTIVE SUPERVISION CHECK LIST

Region _____ **Zone** _____ **Woreda** _____			
Health Facility _____ **(Hosp/HC/HP)** **Date** _____			
		Yes	**No**
	Population and Annual plan		
A1	The HF/Office know the total population of the catchment area?		
A2	The HF/Office has population conversion factor?		
A3	The HF/Office have Annual plan document?		
A4	The HF/Office established/have annual target/plan based on health indicators?		
	performance review team		
B1	The HF/Office establish performance review team (as per standard)		
B2	PRT carry out regular meeting?		
B3	The PRT has written documents (minutes, reports, feedback, etc)?		
B4	If the answer is yes for the above question, How many times the meeting conducted in the last 3 months ___		
	DATA QOALITY ASSURANCE		
C1	know procedures used for data quality checking		
C2	Health office/H facility performed data quality check for the last three consecutive months?		
C4	LQAS is performed as per the standard monthly and documented at HF for the last three consecutive months (observe the procedure)		
C5	The Routine Data Quality Assessment (RDQA) is performed as per standard monthly at woreda health office		
C6	The HF/office provided feedback to the lower level on the status data quality? If yes, date of the feedback provided _____		
C7	The HF/office identified the main gaps on data quality?		
C8	The HF/office developed action plan to improve data quality		
C9	Registers are completely filled, timely collected and reported period is written on the register?		

Check for Data consistency

Ser.No	Data Elements checked	Yekatit	Megabit	Miazia	Remark
1	ANC 4+				
2	Skilled delivery (Live birth)				
3	Measles Immunized Infants				
4	Adults ever started ART				

Check for Data accuracy of megabit 2005 data

At Woreda Health office level

Ser.No	Data Elements checked	From HF report	From eHMIS/ Woreda Aggregate	Difference	Remark
1	ANC first visit				
2	Skilled delivery (Live birth)				
3	Measles Immunized Infants				
4	Pentavalent 1				
5	TB cured /3rd quarter/				
6	Adults Currently on ART				

At health facility level

Ser.No	Data Elements checked	From report	From register	Difference	Remark
1	ANC first visit				
2	Skilled delivery (Live birth)				
3	Measles Immunized Infants				
4	Pentavalent 1				
5	TB cured /3rd quarter/				
6	Adults Currently on ART				

	Information Use		
D1	The HF/Office made data aggregation?		
D2	The HF/Office made analyzed & comparison of each core indicators with target?		
D3	The HF/Office made analyzed & comparison of each core indicators with eligible population?		
D4	The HF/Office display all selected information/ minimum set of standard charts?		

D5	If yes, displayed information is updated?		
D6	The HF/Office made discussion & identified bottle necks on their performance/coverage/ quality issues/?		
D7	The HF/Office made decisions & Action was taken to improve performance?		
D8	The HF/Office received HMIS supervision from the higher levels during the last six month time?		

Challenges _____

_____

_____

_____

Appendix B. Health Post Summary Report Form

Name of woreda health office:			
Name of health post:			
Date of current visit:			
Total visits to the HF:			
S.N	**Activity**	**Yes(1);No(0)**	**Remark**
1	**Availability**		
1.1	Shelves		
1.2	family folder		
1.3	Field book		
1.4	MFI		
1.5	TICKLER BOX		
1.6	Tally sheet		
1.7	Reporting format		
2	**Shelves**		
21	Gote numbers labeled at each compartment		
2.2.	Family folders place serially		
3	**Family folders**		
2.4	Tally sheets filed properly		
2.5	Cover page filled complete		
2.6	Training package filled and updated		
2.7	HEWs know type and purpose of health cards		
2.8	All health cards have identification number		
2.9	Health cards used appropriately		
4	**MFI**		
4.1	All gotes have MFI		
4.2	MFI properly filled in alphabetical order and by gote		

5	**Field book**			
5.1	Field books are in use			
5.2	Each HEW has her own field book			
5.3	Data from field book regularly transferred to FF /health cards			
5.4	Specific services given is recorded			
6	**Tickler box**			
6.1	Sections of the box are labeled by month			
6.2	Health cards with appointment are kept in appropriate section			
6.3	Any health card left in the box in the previous month			
7	Tally sheet			
7.1	HH number recorded on the tally sheet			
7.2	Tally sheet maintained for every month			
8	**Reporting format**			
8.1	Last recent three months report copy available			
9	**LQAS**			
9.1	LQAS done on monthly bases			
9.2	Data accuracy check sheet maintained for all LQAS conducted			
10	**Support from PHCU/WorHO**			
10.1	Evidence of written feedback from PHCU/WorHO in the last 3 months			

LQAS								
S.NO	Random # -1	Reference # in the report -2	Reporting elements -3	Source & Figures 4	5	6	Figures in 4,5 and 6 match yes	No
1				FF	Tally	Report		
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
						Total yes/No		

All assessment areas Summary

S.no	Activity (assessment) area	Total Yes	Total No	% of yes	% of Previous visit	Score during the current visit: Improved	Same	Deteriorated
1	All assessment areas							
2	LQAS score							

Appendix C. Health Center Summary Report Form

Name of Zone:			
Name of woreda health office:			
HC/Hospital:			
Date of current visit:			
Total visits to the HF:			
S.N	**Activity**	**(1)if Yes and (0)if NO**	**Remark**
1	**CARD ROOM**		
1.1	Have shelves		
1.2	Have MPI		
1.3	Have two windows		
1.4	Integrated individual folders placed serially		
1.5	Card room workers know how to assign MRV		
1.6	All integrated individual folders placed at one central card room		
1.7	Patient cards returned back to card room on daily basis		
2	**Service delivery point**		
2.1	Registers are available		
2.2	Registers filled properly		
2.3	Tally sheets available		
2.4	Tally sheets filed properly		
2.5	Staffs at OPD department define new and repeat properly		
2.6	Staffs at FP service point define new and repeat properly		

3	**System assessment**		
3.1	HMIS unit available		
3.2	HMIS focal person assigned		
3.3	HMIS focal person full time worker		
3.4	HMIS focal person facilitates data collection from service delivery point		
3.5	Tally sheets maintained for every month		
3.6	The recent last three months report complete		
3.7	HMIS focal person regularly do data accuracy check (LQAS)		
3.8	Data accuracy check sheet of previous 3 months available		
3.9	HC-HP linkage strong		
3.1	Evidence of feedback to catchment area health posts		
4	**Performance review team(PRT)**		
4.1	PRT(Performance review team) established		
4.2	PRT is functional and meeting minutes maintained		
4.3	PRT reviewed Data Before sending to the next higher level		
4.4	PRT discussed data quality		
4.5	PRT discussed performance the facility		
4.6	Evidence of decisions made by PRT based on discussions		
4.7	Evidence of decisions made by PRT based on discussions		
4.8	Evidence of actions taken for decisions made		
4.6	Data displayed (ANC, PNC, Delivery…)		
5	**Supportive supervision**		
5.1	HC received supportive supervision from WorHO or higher levels		
5.2	Supervisors checked data quality		
5.3	Supervisors discussed performance of the facility		
5.4	Supervisors helped HFs in decision making		
5.5	HF received Written feedback		

S.no	Activity (assessment) area	Total Yes	Total No	% of yes	% of Previous visit	Score during the current visit		
						Improved	Same	Deteriorated
1	Card room							
2	Service delivery point							
3	System assessment							
4	Performance review team(PRT)							
5	Supportive supervision							
6	LQAS score							

Appendix D. Supportive Supervision Follow-up Report

Supportive follow up report

[Type the document subtitle]

Name
Date

Supportive follow up report

As it is known the main aim of health management information system is to ensure better decision for improving the health status of the community, through strengthening health information and data management systems that is standardized and ensures better data – better decision –better health systems performance and improved health status. Use of information requires many factors besides the simplicity, standardization & integration. Behavioral, technical & organizational determinants are the key for the sustainability of HMIS. In order to resolve such contributing factors different mechanisms might be done like supportive follow up, review meeting, refresher training, on job training & etc so as to ensure the sustainability of HMIS since it is the back bone of the health system to have informed decision. In general the zone, woreda, health facility should have action for the production of better data-w/c leads to better decision-improvement of the health status of our society. As we have observed during our supportive follow up there is weak support to the HF (HC&HP) on HMIS so it is better if there is HMIS specific support follow up & experience sharing from model HP on HMIS. Finally zone health department should give directive on the way forward to strengthen HMIS implementation in the woreda & facility level. JSI /HMIS Scale up project jointly with ZHD has done supportive follow up from June 11-15/2012 in five (5) woredas & summarized the findings as follows.

Supportive follow up report

Date of visit

Visitors

1. JSI/HMIS SU Project
2. ZHD M&E coordinator

Purpose of visit:

1. To asses HMIS/CHIS implementation status
2. To give technical support on the gaps identified
3. To asses e-HMIS implementation status at woreda level
4. To provide tickler file box

Health facilities visited

1. woreda health office
    - HP
    - HP
2. woreda health office
    - HC
    - HP

1. Woreda health office

Major findings

- Woreda Health office not using e-HMIS data is updated up to Hidar month
- They are using cards (both health & IMCH) but they have shortage of IMCHC
- Not doing data quality
- They are using parallel registers
- Has good knowledge on new & repeat definitions of disease & FP
- FF incompleteness & not updating

Actions taken

- Technical support was given on the gaps identified
- Discussed to update FF& do profile of Keble
- Discussed on basic standard definitions
- Technical support was given on how to do LQAS
- Discussed on use of cards& tally sheets
- Discussed on the benefit of tickler file system & how to use to trace defaulters

2. **Woreda health office**

Major findings

- E-HMIS not updated the data is up to hidar month only
- Profile was done at both HP
- Updating FF (we observe death & new born records on FF)
- MFI done according to the procedure
- They are using field book
- They are using tally sheet

Action Taken

- E-HMIS data was updated up to month of yekatit.
- Orientation was given how to import data from local files/flash/CD/etc…..
- Technical support was given on the gap identified
- Discussed on how to do data quality check

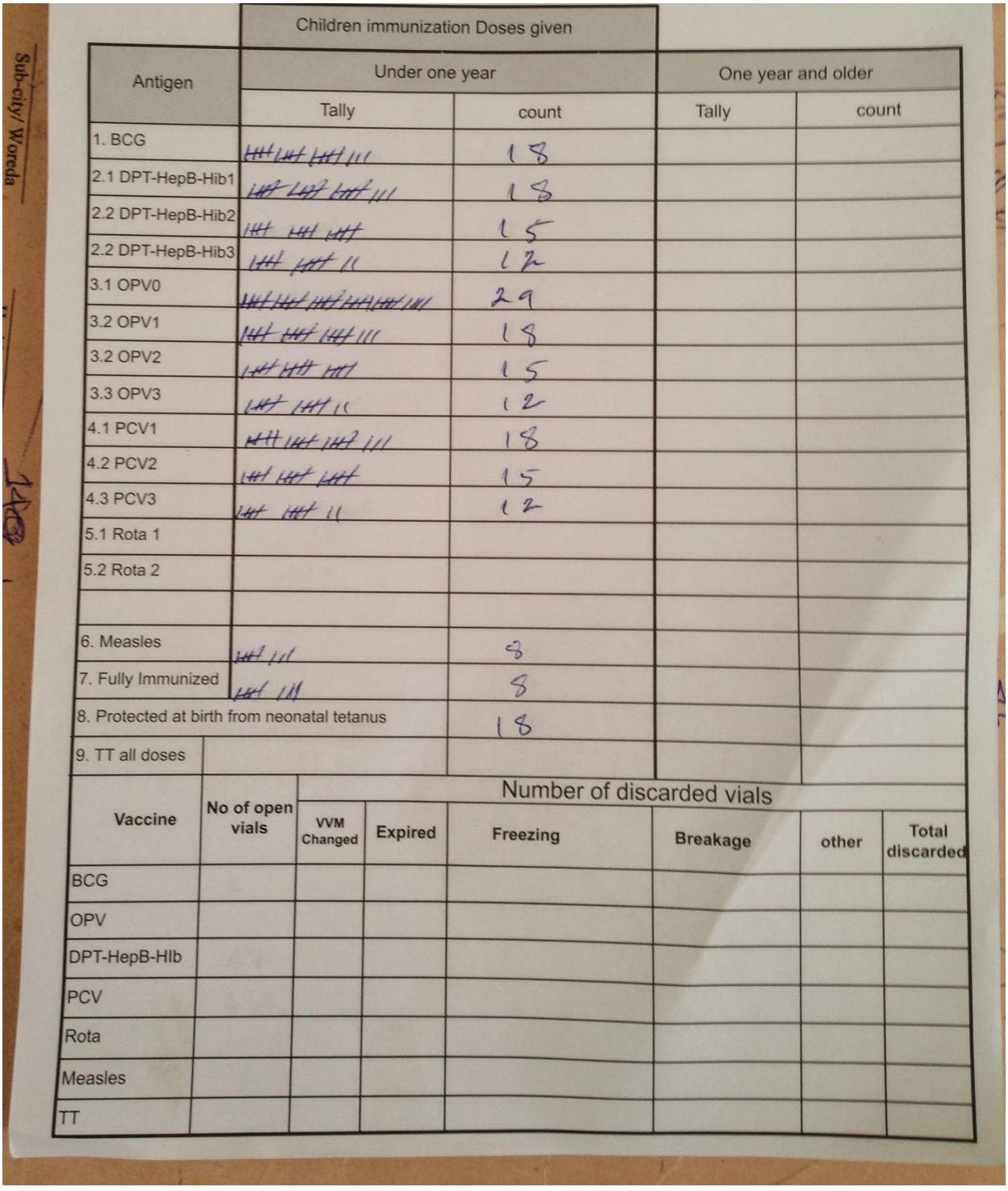
Common challenges

- Shortage of materials both at HC & HP (especially at HP IMCH card shortage leads the HEW to use register since it contains major service)
- Poor supportive follow up to HP on CHIS from Wrho & HC
- Knowledge & skill gap on CHIS at all level
- High staff turnover

Recommendations

- Health facilities should allocate budget for HMIS as the RHB directive.
- HMIS stock management system should be developed and apply for stock management
- Sense of ownership should be developed at all level in order to sustain HMIS implementation as per the standard
- Strengthen self-assessment to carry out result oriented performance monitoring by using key indicators so that they would be able to make informed decision.
- Data quality assurance (LQAS) should be performed as per the standard.

Appendix E. Photographs



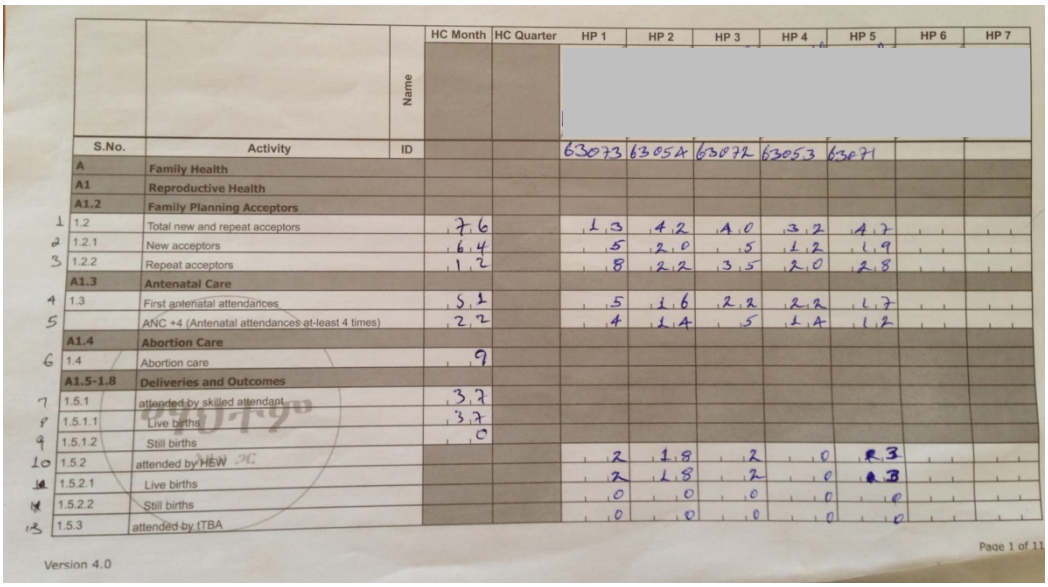
Sub-city/ Woreda

Antigen	Children immunization Doses given			
	Under one year		One year and older	
	Tally	count	Tally	count
1. BCG		18		
2.1 DPT-HepB-Hib1		18		
2.2 DPT-HepB-Hib2		15		
2.2 DPT-HepB-Hib3		12		
3.1 OPV0		29		
3.2 OPV1		18		
3.2 OPV2		15		
3.3 OPV3		12		
4.1 PCV1		18		
4.2 PCV2		15		
4.3 PCV3		12		
5.1 Rota 1				
5.2 Rota 2				
6. Measles		8		
7. Fully Immunized		8		
8. Protected at birth from neonatal tetanus		18		
9. TT all doses				

Vaccine	No of open vials	Number of discarded vials					
		VVM Changed	Expired	Freezing	Breakage	other	Total discarded
BCG							
OPV							
DPT-HepB-HIb							
PCV							
Rota							
Measles							
TT							

Figure 3. Example of a tally sheet.

Note: Photographs are by Jen Curran, MEASURE Evaluation.



			HC Month	HC Quarter	HP 1	HP 2	HP 3	HP 4	HP 5	HP 6	HP 7
		Name									
S.No.	Activity	ID			63073	63054	63072	63053	63071		
A	Family Health										
A1	Reproductive Health										
A1.2	Family Planning Acceptors										
1	1.2 Total new and repeat acceptors		76		13	42	40	32	47		
2	1.2.1 New acceptors		64		5	20	5	12	19		
3	1.2.2 Repeat acceptors		12		8	22	35	20	28		
A1.3	Antenatal Care										
4	1.3 First antenatal attendances		51		5	16	22	22	17		
5	ANC +4 (Antenatal attendances at least 4 times)		22		4	14	5	14	12		
A1.4	Abortion Care										
6	1.4 Abortion care		9								
A1.5-1.8	Deliveries and Outcomes										
7	1.5.1 attended by skilled attendant		37								
8	1.5.1.1 Live births		37								
9	1.5.1.2 Still births		0								
10	1.5.2 attended by HEW				2	18	2	0	23		
11	1.5.2.1 Live births				2	18	2	0	23		
12	1.5.2.2 Still births				0	0	0	0	0		
13	1.5.3 attended by TBA				0	0	0	0	0		

Version 4.0

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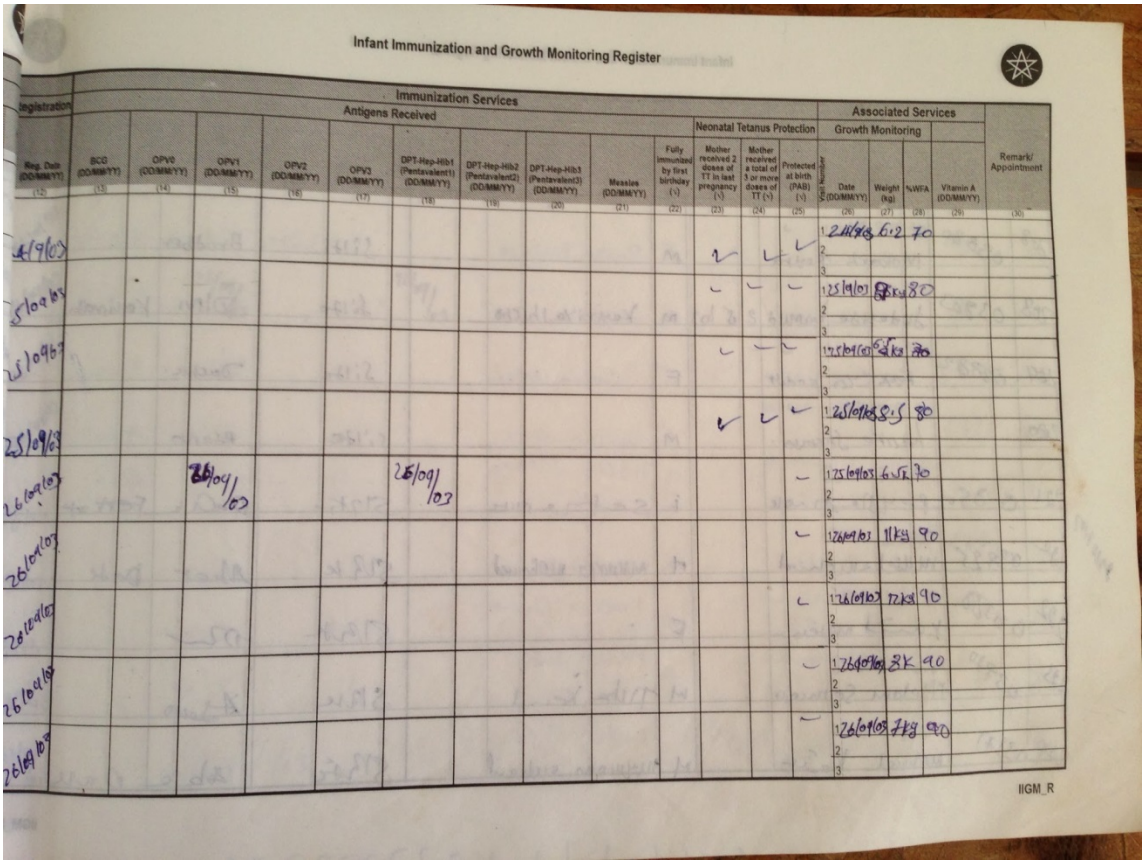
Figure 4. Example of a report form.



Infant Immunization and Growth Monitoring Register

Registration | Immunization Services | Associated Services

Antigens Received | Neonatal Tetanus Protection | Growth Monitoring

Reg. Date (DD/MM/YY)	BCG (DD/MM/YY)	OPV0 (DD/MM/YY)	OPV1 (DD/MM/YY)	OPV2 (DD/MM/YY)	OPV3 (DD/MM/YY)	DPT-Hep-Hib1 (Pentavalent1) (DD/MM/YY)	DPT-Hep-Hib2 (Pentavalent2) (DD/MM/YY)	DPT-Hep-Hib3 (Pentavalent3) (DD/MM/YY)	Measles (DD/MM/YY)	Fully immunized by first birthday (√)	Mother received 2 doses of TT in last pregnancy (√)	Mother received a total of 3 or more doses of TT (√)	Protected at birth (PAB) (√)	Visit Number	Date (DD/MM/YY)	Weight (kg)	%WFA	Vitamin A (DD/MM/YY)	Remark/ Appointment
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)		(26)	(27)	(28)	(29)	(30)
4/9/03											✓	✓	✓	1	2/11/03	6.2	70		
5/09/03											✓	✓	✓	1	25/9/03	8kg	80		
25/09/03											✓	✓	✓	1	25/09/03	8.5kg	80		
25/09/03											✓	✓	✓	1	25/09/03	8.5	80		
26/09/03			26/09/03			25/09/03							✓	1	25/09/03	6.5	70		
26/09/03													✓	1	26/09/03	11kg	90		
26/09/03													✓	1	26/09/03	11kg	90		
26/09/03													✓	1	26/09/03	8K	90		
26/09/03													✓	1	26/09/03	7kg	90		

IIGM_R

Figure 5. Example of a register page.

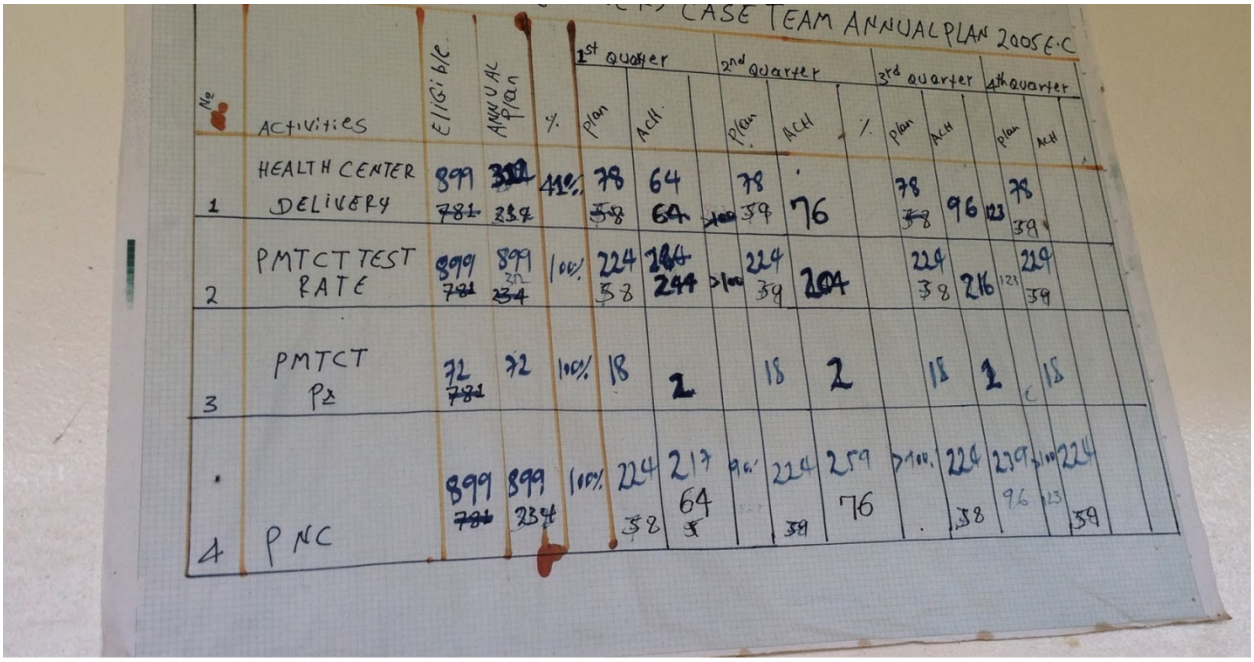


Figure 6. Example of an annual plan.

MEASURE Evaluation

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