ETHIOPIA
DUP | DATA USE PARTNERSHIP

Health Information system (HIS) Effectiveness Studies Dissemination Workshop Proceedings

January 26 – 27, 2021

Adama, Ethiopia

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1. General Info

Objective: the objective of the HIS effectiveness studies dissemination workshop is to share the findings of studies to help create common understanding that would initiate a discussion to develop integrated HIS action plan.

When: January 26- 27, 2021

Venue: Haile Resort, Adama, Oromia, Ethiopia

Participants: The dissemination workshop was attended by close to 60 participants from the Ministry of Health (MOH), Regional Health Bureaus (RHBs), HIS partners, Capacity Building and Mentorship Program (CBMP) universities and Health Informatics PhD students.

Honorable Guest: Dr. Dereje Duguma, State Minister of the Ministry of Health was the honorable guest who made a closing remarks. In addition, Dr. Meseret Zelalem, (Director, MCHN), Mrs. Fatuma Seid, (Director, WYCD) and Naod Wonderad (Director, PPMED) attended the dissemination workshop and provided key messages.

Note Taker: Benti Ejeta

2. Day-One

2.1. Opening Speeches

Wubshet Demboba, delegated as Acting Project Director of DUP, formally welcomed the participants to the HIS effectiveness studies dissemination workshop; and introduced the objective of the workshop. He noted that the studies which were done by DUP in partnership with MOH and RHBs shade crucial insight on the effectiveness of the HIS interventions. Remarking the potential of the studies in informing the current status of HIS interventions, Wubshet reiterated DUP's commitment to continue supporting the implementation of Information Revolution initiatives at different levels of the health system.

Wubshet Welcoming Participants to the Dissemination workshop

Prof. Wakgari Making Opening Remarks representing PPMED's Director

Recalling the fact that this dissemination workshop is organized in collaboration with Policy, Plan, Monitoring and Evaluation Directorate (PPMED), the Delegated Acting Project Director invited Professor Wakgari Deressa to make opening speech representing Mr. Naod Wonderad, PPMED's director. Prof. Wakgari who is advising the Directorate marked that the HIS effectiveness studies will significantly contribute to enhancing the HIS performance which will in turn play crucial role in improving health service deliveries.

Researches such as these are the most effective studies in pointing out intervention progresses and drawbacks. They generate useful evidences to make informed decisions and planning. By congratulating DUP and MOH for conducting the surveys, he expressed his profound belief that if the research findings are used, it will definitely improve the HIS performance.

On the other hand, he noted, DUP's partnership with the six universities to build the IR implementation capacities via innovative approach known as CBMP is an exemplary engagement. Establishing linkage between academic and implementing institutions is one of the unique features of DUP. And by successfully conducting these researches, it once again proved its important role in the implementation of the IR. Despite a painstaking process of conducting study, Prof. Wakgari noted, DUP has managed to produce a number of informative researches.

2.1.1 Presentation and Discussion: Background and Methods of the two HIS Effectiveness Studies.

This topic was presented by Dr. Abebaw Gebeyehu. It focused on the effect of health information system (HIS) interventions on Maternal and Child Health Service Improvement in 11 Demonstration and 8 Learning Woredas. One of the several findings is there is little evidence about the effect of improvement in HIS performance (data quality and information use) on service coverage. ***(For detail, please see attached PPT)***

Wubshet Demboba who was also the Master of Ceremony (MC) for the first workshop day invited Prof Wakgari to lead and facilitate the discussion; and Dr. Abebaw to respond to the participants' feedback. He noted that the surveys showed a linkage between HIS intervention and performance, and service delivery performance. The facilitator recalled the main conclusions and recommendations from the presentations before opening up the forum for participants' reflections, questions and suggestions.

With the invitation of the facilitator, participants raised questions. Some of the major inquiries are:

- What are the intervention? The type of intervention should be listed.
- When studies were conducted? In the research, it was indicated HIS interventions have started since 2019. If so, is it too early to find the effect of the intervention?
- How HIS intervention is considered as the major contributing factor when there are many other possible program interventions?
- What are the similarities and differences between the intervention and comparison?

- What are the demonstration and learning woredas?
- How the methodology addressed the changes within and between woredas?
- How did you select HIS intensive sites which is not supported by DUP? There are many HIS intensive sites support by other regions.
- How can we definitely contribute service delivery improvements to HIS interventions only when there are program interventions?

Some of the points raised were suggestions. Participants wanted the studies to also give pertinent emphasis on the investment cost of the HIS interventions. Lack of investment resource was mentioned as one determinant factor in hindering the implementation. It was also commented that lack of skilled and enough human resource is another HIS intervention bottleneck. In addition, the researches must put contextual varieties or difference into consideration in selecting intervention and comparison sites. For example, in Afar region, the intervention site is totally in different context with the comparison site.

Prof Wakgari thanked the participants for raising important points. He tried to summarize and arrange the points participants raised for Dr. Abebaw to respond to them. Regarding the HIS interventions, Dr. Abebaw said there are four types of HIS interventions. These are:

- ***Providing capacity building training.*** Basic capacity building trainings were provided.
- ***Conducting mentorship***. Mentorship related interventions were offered.
- ***Organizing Performance Review meetings***. Developing performance review meeting standards and conducting standardized reviewing meeting
- ***Providing material support***. Different material supports have been provided as per the need of the health facilities and units.

Regarding the question on the program level interventions, Dr. Abebaw also said that it assumed everything else is similar. There is no detailed data about program level interventions, and therefore, control it only through adjustments of statistical models. In an expanded explanation, the researcher took time to define demonstration and learning woredas. Demonstration woredas are 11 woredas (one each regions) where DUP in partnership with Universities, MOH and RHBs conducted focused support. Learning woredas are 8 woredas where MOH and RHBs provide focused HIS intervention support.

2.1.2. Presentation and Discussion: HIS Performance in Demonstration Woredas, and Trends in HIS performance (comparing baseline & current HIS studies)

HIS Performance in the Demonstration Woredas was presented by Afrah Mohammedsanni. In her presentation, she highlighted that HIS performance is better in the intervention health facilities, and Feedback and data visualization are better among other data processing parameters. ***(For more information, please review the attached PPT)***

Trends in HIS performance (comparing baseline and current HIS studies) was presented by Hiwot Belay. The finding showed that Functionality of PMT in terms of having regular PMT, ensuring data quality and developing action plan need to be improved. ***(For more information please see the attached PPT)***

Like the previous sessions, Prof Wakgari was called back to the stage to facilitate the discussion alongside Afrah and Hiwot to respond to questions and feedback from participants. (Note some questions which are repeated here are cutout)

One participant said studies failed to showcase the HIS intervention status at the community level as there is nothing said about health posts. Yet, health post is the most important facility in terms of users. More importantly, health post is where HIS interventions are supposed to happen. However, it seems community level interventions are overlooked.

Most participants raised inquisitive questions to learn more about the findings of the researches. Some of the questions are:

- Why are similar findings in interventions and comparison woredas? Intervention woredas are supposed show better improvement than the status of the comparison woredas where there is HIS interventions.
- The research showed the feedback score in comparison woredas are higher than the demo sites. Why?
- In the research data burden is considered as one reason for incomplete source document. Where is that data burden? Any specifics.
- When is it we say information use is better? What should happen to say information use is adequate?
- The results of self-assessment using the connected woreda checklist in the intervention is different from the results indicated in this research. Is there any explanation for this?
- Why is it not he results shown in the HIS performance of the demo facilities when PMT functionality is better at demonstration woredas?
- Why the demonstration comparison facilities demonstrated higher performance in source document completeness in majority of the assessed indicators compared to intervention facilities?

HIS Effectiveness Studies Dissemination workshop Participants

Most of the findings of the researches imply lack of skilled and enough human resource. HIS intervention effectiveness is very much affected by the staffing. Turnover is a particular problem. Information is very massive at levels of the health system. Feeding the system with this massive information is very challenging. Besides, there is lack of HIS tools which also affected. Internet inaccessibility is also another problem. For example, VPN availability rate is very low.

With the facilitator's invitations, Afrah and Hiwot responded to the participant's feedback. They noted that PMT functionality is critical for the information use. The better results in the PMT functionality in the intervention woredas were reflected in the better results in information use of the intervention facilities compares to comparison woredas although information use is not optimal and still need improvement in both woredas.

The difference in the PMT functionality in the intervention and comparison woredas is possible as this research is the baseline. It is not a survey to determine the effects of the HIS intervention. The balance could tilt towards either side. With regards to the data burden, though the research found data burden as reasons for incomplete source documents, but unfortunately, it did not go in-depth to determine where the data burden is. In addition, researches have considered HIS infrastructure. However, governance was not considered in the survey.

Health post level data were collected. In the interest of time and relevance, the health post research findings were not prepared for this sessions. It will be disseminated in the future. The research looked at the supervision quality, regularity of the supervision, and use of the checklist. In addition, discussion on the health performance, corrective measures are taken and how feedback are addressed. Feedback score is not better in comparison facilities compared to intervention demonstration facilities. It was found the scores in comparison is weaker than in the demo sites. That needs support.

PMT is considered functional if the meeting is held regularly, appropriate members participate, chaired by heads or anyone with decision making authority, action plans developed and implemented. These are some of the traits that makes PMT functional. As measured via connected woreda checklists, these woredas showed improvement. Similarly, this research found changes. However, it is not the change that would take the woredas to the model classification which is the target. For woredas to become model, more efforts are needed in these woredas.

In Ethiopia, data quality is tolerable if it is in 10+or 10- range of the target. However, agreed standards need to be there. The most frequently mentioned reasons are the reasons prioritized in the researches. The need to study further is another important message.

2.2. Afternoon Session

2.2.1 Presentation and Discussion: Baseline findings of MCH service coverage and associated factors in demo woredas

This survey was presented by Dr. Abebaw Gebeyehu. The survey deals with the current status of MCH service coverages and the effect of health information system interventions on Maternal and Child Health Service Improvement in eleven Demo Woredas. The findings showed that most of the maternal service coverages including antenatal services (ANC1, ANC4+), skilled birth attendance, cesarean delivery and postnatal care are very good. Family planning service and child immunization are also showed an excellent coverage in the study areas (both intervention and comparison woredas). At the baseline survey there is no significant difference in almost all coverage indices between the intervention and comparison woredas. However, Service user related variables including educational status of mother and her partner, wealth index and distance from the household to health facility were significantly associated in most of coverage indices. From HIS performance indices, HIS infrastructure availability and source document completeness were common variables associated with MCH service coverages. ***(Please review the attached PPT)***

Dr. Abebaw Gebeyehu presenting on the dissemination workshop

Participants' Feedback

Once again, Prof Wakgari was invited back to the stage to facilitate the discussion on the presentation. Accordingly, Dr. Abebaw joined him on stage to respond to the feedback from the participants. As usual, Prof Wakgari started by briefly revising the presentations. He affirmed the study indicated the current status of the MCH service delivers in the demo woredas. Before opening up the floor to the general participants, Prof Wakgari gave change to Mrs. Fatuma Seid (Dr. WYCD) and Dr. Meseret Zelalem (Director, MCHN) who joined the workshop in the afternoon of the first day to make reflect on the presentation.

Mrs. Fatuma started her reflections with thanking DUP for conducting this research which has shown the current status of MCH service coverage in the demo sites. She noted that though she is encouraged with improvement reported in the research, she is concerned more with the amount of gap indicated by the study. The report of lack of full immunization for the children is troubling to her. That means children are deprived of their rights. She is considering as one of the top priority that warrants urgent attention.

Findings related to antenatal care (ANC) services is another area where the director paid attention to. The research concluded women pay for delivery services in the government health facilities despite the fact that, in Ethiopia, public health facilities need to provide free maternal service. If this is accurate, she said, it is a mistake. But this should be probed further. Mrs. Fatuma also offered another suggestions. She observed that the research did not studied how marginalized (with disability) women access to the health services. This could have provide very useful input to efforts of ensuring equality and equity in the health sector.

Dr. Meseret speaking while Mrs. Fatuma is taking note during the workshop

Dr. Meseret also expressed her appreciation to the presenter. She is glad to see a survey that focused on areas which has been recently overlooked a bit *(she is saying from her directorate's point of view)*. For example, effective family planning efforts seemed to have slowed down in recent times. There has not been community sensitization on birth control. Many years have lapsed since the last birth control campaign. The findings of the research cannot be surprising to her as she has not expecting any different result. The lack of sensitization has definitely affected different indicators.

Family Planning is a trick area that needs consistent work to get results in sustainable manner. A lax in one period leads to undesired family planning practice. On the other hand, lack of effective communication resulted in creating wrong conclusions. For example, mothers still prefer Implanon to IUCD by larger margin when IUCD is more effective and safe. Even educated and urban women prefer Implanon against IUCD. Why? It is because the ministry has not done balanced and tailored communication. More importantly, Implanon is produced by one company in the world. Image what would happen to us if this company stops production for whatever reason. Therefore tailored and balanced communication campaign is needed.

The director also suggested to do further analysis in clusters as urban, agrarian, pastoralists and agro-pastoralists, it could have come up with specific findings and recommendation. That makes the adaptation of the researches simple. In addition, research showed us that there is huge gap with nutrition. This is an interesting finding. There

is big investment on nutrition (particularly on oral iron and folic acid). However, the intake is very low. Why? This need to be studied.

Undeniably, data quality has definitely affected the data use practice and culture. For example, full immunization is affected by this practice. This is another area that we need to look at in the future. Ensuring access to full immunization and birth control services will be top priority of the MCHN directorate. Generally, the research findings have brought the failures in MCH stream to the forefront. Making mentorship the flagship program of the directorate is the clearest takeaway.

Following the reflection of both directors, Prof. Wakgari invited the participants to reflect on the presentation. Accordingly, underneath are some of the feedback of the participants.

- With regard to immunization, are the newborn babies are linkage with the health facilities? Is this problem related to health accessibility?
- How distance is mentioned as a challenge when health facilities are expected to be in every kebele with short distance from the household? This is the standard.
- Whenever controversial issues were mentioned as the challenge, why didn't you ask for more clarity? That could have helped to get broader understanding, and that would also enable to go into the subject.
- There is no difference in result in the intervention and comparison woredas. Why? What is the possible explanation for this?

Reflection on Participants Feedback

Research tried to measure all targets. For this dissemination workshop, data and results are summarized to meet this specific objectives. As noted from the participation, and commented repeatedly by participants, the results in both study sites are similar. This is because it is a baseline study and a change in the results is not expected as this stage. The survey did not focus on the current HIS interventions and its effect in service delivery. Probably, this will be done after one year. By then, we expect to see different results.

The inputs from Dr. Meseret and Mrs. Fatuma are very important. The research will consider rare population such as persons with disability. On the other note, the research did not evaluate all HIS indicators. It was selective. The study woredas are expected to be model woredas in the given timeline. However, the recent service coverage results do not support this target. Needs concerted efforts.

May be there is a problem in recording with regards of full immunizations. If there is a single component that is not properly filled, it is considered as if the full immunization service has not happened. Source documents, as indicated in the research, have several problems with regards to completeness and other data quality dimensions

With regards to distance, it should be seen from the how far the facility away is. If there is no road to access the facility, even if the facility is close, distance can be considered as a detrimental effect. Inaccessibility of the facility can make the facility distant form the users. In health post, health information management need to be analyzed further. Researches should not be health center or hospital specific. We used to DHS approach for cluster (kebele) and HH selection. And we used the mixed modeling to address the effect of clustering due to the sampling procedure.

The objective of baseline study is not measuring Health Information System (HIS) impact. The current HIS impact is insignificant as it is just starting. The aim is to measure the current status and see the impact of HIS intervention in the future after the intervention. In some areas, political instability and COVID-19 pandemic affected the implementation.

3. Day Two

3.1. Morning Session

The second day of the HIS effectiveness studies workshop started at 9:00am on January 27, 2021. Wubshet Demboba, the Delegated Acting Project Director, welcomed the participants back to the second day sessions. He seized the opportunity to provide further explanation on the demonstrations and learnings woredas – an inquiry repeated raised on the first day. This presentation added more clarity on what demonstration woredas and learning woredas. With this icebreaking presentation, Wubshet handed over the stage to Shemsedin Omer, the day's master of ceremony who introduced the day's agenda, and invited the first presenter of the day.

3.1.1 Presentation and Discussions: Results of HIS effectiveness in Learning Woredas and the Effect of HIS Interventions on the MCH service improvements in 8 learning

Results of HIS effectiveness in learning woredas is presented by Afrah Mohammedsanni. It focused on studying the results of HIS intervention in the learning woredas- 8 woredas in five regions (Tigray, Afar, Amhara, Oromia and SNNP). The study found that the intervention facilities have better HIS performance in almost all parameters compared to controls. ***(For more detail, please refer the attached PPT)***

The Effect of HIS interventions on the MCH service improvements was presented by Dr. Abebaw. It focused on the effect of the HIS intervention on the MCH service improvements in 8 learning. The research found that most of the maternal service coverages are very promising; family planning service and child immunization are also showed an excellent coverage, and however, there are many issues requiring program level interventions. ***(For more detail, please refer to the attached PPT)***

Dr. Kedir facilitating a session while Dr. Abebaw and Afrah Responding to feedback

Dr. Kedir Seid, Senior HIS Specialist and Regional Cluster Lead, DUP, assumed the stage as the discussion facilitators for the second day. Along with him, Afrah and Dr. Abebaw returned to the stage to respond to reflections from the participants. The discussions started with Dr. Kedir summarizing the presentations briefly. Participations were active as usual. Some provided suggestions and other asked questions. Underneath are some of these.

- Why studies did not focus on the program interventions? What are the next steps? When will the next step will start? What are the underlying factors that entailed this research findings?
- How can the research team support us in adapting/contextualizing the findings?
- What are the motivational factors to avert the negligence found by the research? How can we bring the facilities to the expected standard practices?
- Is there limitation to what HIS intervention can do? What are those limitations?

- Why did you fail to go further to explore whenever there are findings that warranted so? Particularly beyond the immediate outcome.

Some commented the quantitative researches alone cannot show everything. There should be qualitative surveys to measure the behaviors and practices. For examples, it was found, as interventions increase, performances are expected improve. Yet, they don't associate positively. This may be explain through qualitative studies.

HIS intervention has been ongoing for a while now. However, findings showed results are somehow similar in both intervention and comparison sites. Similarly, the research pointed out that HIS related supportive supervisions and interventions are low. This is another good reason that informs us the need for stronger mentorship and supportive supervision. In addition, HIS should be integrated in the programs. HIS performance should be viewed from the program performance.

Reflection on the Feedback of participants

Dr. Abebaw said that the HIS intervention model need to change. The current model might be one of the contributing factors for minimal performance. Another factors that deterred performance progress, the research found, political instability and COVID-19 pandemic. Due to these factors, HIS intervention has discontinued in several places throughout the country. Hence, intensive actions and intervention modalities are required in the remaining project time.

Defining the next step is one of the objectives of this dissemination workshop. Next step is, therefore, reaching consensus on the research recommendations and developing common actions plans. In order to improve HIS performance, we need to make rigorous effort to implement the prioritized HIS intervention plans. Then, assess whether the HIS performances are resulted in improved health service coverages or not. By identifying and resolving the implementation bottlenecks, we can meet the end goal of enhancing service coverage. Yet, one should note that effects of HIS interventions can only be observed after one year intervention.

3.1.2 Presentation and Discussions: Qualitative Study on Facilitators and Barriers to Data Use Practices at Health Facilities

This study was presented by Hiwot Belay. The study focused on the drivers and barriers of data use health facilities. Lack of underdeveloped health information system is one of the findings of this quality studies. ***(For more detail, please see attached PPT).*** Following this presentation, with the invitation of the day's master of ceremony, Dr. Kedir (facilitator) and Hiwot (presenter) returned to the stage. As usual, Dr. Kedir recapped the main gist of the presentation and opened up the floor for participants' feedback.

Hiwot Belay presenting on the dissemination workshop

Participants noted that in order to change the performance of the HIS interventions, the current implementation approach need to change. One participant in particular suggested a twin approach where high performing sites work with the underperforming sites. This creates opportunities where low performing sites shares experiences of the best performing woredas.

Another motiving factor could be incentivizing the practice of using data for informed decision making. Studies need to show what incentives encourage data use practices and culture. Similarly, focus need to be given to ensuring the active involvement of the leadership in the data quality and use improvement. However, there is no clear-cut solutions proposed to ensure the leadership participations. Evidence based decisions is one of the motivating factors that entices political commitments.

Others forwarded questions. These are:

- There are many research recommendations. It should get owner who will implement it. And some of the findings and recommendations should be specific. For example, incentive is mentioned in the research. What is this incentive? Etc.
- Data duplication is mentioned in the research. On which key indicator/s data duplication were noticed?

The M&E infrastructure and structure were stated as one of the reasons that contributed to the underperformance. Particularly lack of this structure dwindles further as one goes down the levels of the health systems. Therefore, attention need be given to this matters. The efforts of linking universities with the health sector implementers should be encouraged. Technical capability is needed at the different levels of the health systems. Strengthening health system capabilities need new skilled and enough staff.

Reflection of Participants' Feedback

The Ministry of Health (MOH) developed a national incentive guideline. Some of the DUP sponsored implementation researches focused on the kind of incentive package contributes to improved performance of HIS interventions. This guideline need to be endorsed and shared widely.

Leaders with appropriate awareness support the HIS intervention. But, the findings of the researches do not show health sectors leaders are contributing positively to the HIS implementations. This need to change. One of the methodologies to motivate leadership is through providing training on the different HIS interventions. Integrating HIS training with different program level trainings is very helpful in this regards.

Afrah Mohammedsanni responding to participants feedback on the dissemination workshop

4. Conclusion and Ways forwards

Hiwot Belay presented the conclusion and ways forwards. It is a collection of the major conclusions and recommendations of the research findings related to HIS performance. This presentation is the discussion points.

4.1. Conclusion

- Health information system infrastructure not well developed Limited number of trained staff on HIS tools
- Data analysis capacity gap for both data use and management (for performance review, root cause analysis, HMIS data quality improvement, analytic report production)
- Limited number of trained staff on HIS tools
- Incompleteness of source documents of some indicators especially HIV, FP and malaria
- Reporting accuracy is far from the 90% target – over-reporting is a major issue
- Poor supervision quality (requires supporting staff based on data

4.2. Way Forwards

- Improve mentorship and supervision quality to fill the observed gaps through use of standardized approaches
- Improve functionality of PMT in terms of having regular PMT, ensuring data quality and developing action plan
- Need-based trainings should be planned and provided (to strengthen analytic capacity, data quality assurance & use of eHIS tools)
- Increase leadership commitment and engagement - Encourage leaders to give attention to data
- Strengthen the coordination between RHBs and partner universities to bring the expected change in HIS performance
- design and implement interventions that help to promote a positive attitude and behavior

4.3 Group Discussion and Presentation

After the presentation of the conclusion and way forwards, participants were requested to be grouped to discuss and identify the actions items and plans. Accordingly, participants were grouped into three different groups to discuss on the identified findings and recommendations.

Participants grouped to discuss on the identified gaps during the workshop

4.3.1. Group One

HIS capacity related

- Strengthening infrastructure through ensuring cooperation and collaboration with Ethio-telecom, Ethiopia electric service
- Enhance human resource in partnership with universities and colleges by revising curriculums in addition to on job trainings. HIS courses for all HIS experts and health workers need to developed and shared. Trainings should be need based, and close follow-up of the trained health workers.

- Human resource structure beyond the MOH and RHBs should be reviewed and amended. Functional M&E infrastructure at health facilities and other levels of the health systems should be looked at.

Quality related

- Intensive mentorship/follow up after training on quality assurance and documentation at health facilities.
- Availability of printing documentation and reporting form should be improved
- Motivation of health providers to document their work
- Intentional over reporting should be discouraged
- Incentives should be after checking quality of data
- PMT at lower level should be strengthened. Accountability/ownership should be there.
- HMIS activity should be linked performance evaluation health workers.
- Participatory (human center design) & local solutions
- First define required level of competence (at different levels)
- Prepare standard guides for supervision, mentorship and others
- Monitor HIS performance using dashboards.
- Give incentive after verifications of such performance.
- Hospital and health center reform implementation key Perf. indicators

(For data elements of each key indicator, owners were identified and ownership created) such approaches should recommended to create ownership and accountability on HIS documentation and reporting. This is the best way to share responsibility among different categories of health workers)

Mentorship related gaps

- Guidelines
- Post training assessment should be done and tailored training continue based on the gaps

Leadership Commitment

- Leadership has low commitment/awareness on HIS
- Accountability issues has to be exercised regarding data accuracy and PMT functionality
- Adequate attention for data quality by top leadership
- Strong partnership engagement with clear responsibilities//duties

4.3.2. Group Two

Key gaps and recommendations

- High attrition rate: Planned staff motivation
- Irregular supervision & weak: mentorship/Mentorship as per the standard/
- Low resource allocation/commitment: Improvement in government budget share & resource mapping Partners
- HIS is under supported by HIT: Re-enforce role of universities
- Parallel reports/especially partners interest/: Participatory HMIS revision; there has to be directive/rules

- Functionality of PMT: Build the capacity of HITs through upgrading (universities role); HR capacity building apart from routine training
- HIS infrastructure mapping & gap identification & resource mobilization by different SHs
- HR structure has to consider duties & responsibilities of the unit
- Alternative approaches for capacity building: Post training follow up has to be strengthened, peer to peer experience sharing & arrangements, and HIS specific twinning partnership
- HIS mentorship guide implementation follow up
- HIS curriculum has to incorporation in universities and/or Colleges
- Special strategy has to be designed to tackle data completeness issues in some regions with exceptional conditions
- Problem/Gap based tailored action plan at each level
- Leadership has low commitment/awareness on HIS
- Accountability issue has to be exercised regarding data accuracy & PMT functionality
- Adequate attention for data quality by top leadership
- Strong partnership engagement with clear responsibilities/duties

Intensive mentorship/follow-up after training on quality a

- Prepare standard guidelines for supervision, mentorship and others
- Monitor HIS performance using dashboard
- Give incentive after verification of such performance
- Hospital and health center reform implementation key perf. Indicators for data elements of each key indicator, owners were

4.3.3. Group Three

Data quality and Use

- Medical card unit: Here is where the main challenge is. In most cases, this unit is where staff with discipline issue are assigned. So this behavior need to change. There should be standard. In cases of new facilities, medical card unit should be part of the design from the beginning.
- Using the data and use standard for recording reporting. There should be proper handing over standard
- The health information systems should be fully digitalized. Healthnet need to have ownership; and should be upgrade to 3G technologies
- Power fluctuation is another problem. To avert this challenges, there should be alternative power source. It good if HIS partners invest the HIS infrastructure.
- eCHIS need to be implemented urban, agrarian and other settings.
- Mentorship and supportive supervision guideline need to be developed and shared. It should be standardized.
- There should be a budget line for M&E
- There should be responsibility and accountability for the data use

5. Closing Remarks

5.1 Dr. Dereje Duguma, State Minister, Ministry of Health (MOH)

H.E. Dr. Dereje Duguma, State Minister of the Ministry of Health (MOH) alongside Naod Wonderad, Director, Policy, Plan, Monitoring and Evaluation Directorate (PPMED) joined the dissemination workshop on the second day.

H.E. Dr. Dereje is making closing remaking alongside Mr. Naod

His Excellency noted that Health Information System (HIS) intervention is one of the top priorities of the Ministry of Health. In fact, developing and instituting Information Revolution (IR) as one of the health transformation agendas attests to the strong commitment of the ministry towards HIS intervention. If Ethiopia is to ensure access to its 110 million plus population with limited number of health facilities, HIS plays crucial role.

However, there are still huge gap in data use practice. This needs attention. Conducting PRISM assessments should be strengthened, and its findings and recommendations should be translated into actions. Similarly, researches are very helpful. But, most of the researches are conducted in a fragmented manner. More interestingly, these researches are not shared widely; remain inaccessible, and unused. To address this, MOH establishing a research unit. This unit leads the effort of integration and collaboration in conducting researches. It also ensures researches are shared and made accessible to the mass with wider use.

Through this HIS effectiveness studies, PRISM assessments and other surveys, the HIS intervention gaps have been identified; and recommendations are forwarded. The ministry is committed to translate them to actions. In this regard, partners will play important role. However, interventions and initiatives need to be complementary; and coordination and alignment among interventions and stakeholders need to be insured at all levels of the health system.

Another important point mentioned repeatedly during the discussions is gap at the leadership level in the efforts of improving data quality and use. Ministry is aware of this gaps; and commits to make every effort to make sure the leadership is supportive and cooperative in this assignment. Data quality and use is not no more a fringe agenda of the ministry. Instead it is the mainstream agenda of the health sector. Making PMT functional at all levels is the main responsibilities of the leadership. There should be responsibility and accountability.

HIS intervention is MOH's top priority. Digitalization of health information tools needs focus also. Electronic Community Health Information System (eCHIS) need to start contributing to health service deliveries; in particular, referral linkage should be made fully functional in the soonest possible time. Enabling system interoperability is another area that ministry pays attention. Health system digitalization is incomplete and inefficient until various health systems are able to exchange information.

HIS intervention should not limited only to public or government health institutions. It need to expand to encompass the private health service institutions. MOH must have strong monitoring and inspections mechanism to make sure HIS is implemented in the private sector. It should be aligned with licensing and certification. Yet, its implementation needs huge investment. Complete digitalization of card rooms with EMR needs investment. Therefore, resource mobilization is another attention area for the ministry. Regional Health Bureaus and service facilities need to be self-sufficient.

Organizational and human resource structures, as rightly mentioned in the discussions, is the problem the ministry has already noted. The current structure is wider and complex at the higher (federal) levels and gets thinner and simplistic at the lower tiers – eliminating most upper structure. Structure should be adjusted to successfully respond to the work burden at the lower levels.

Lack of culture of using health data for decision making is deeply troubling. MOH in collaborations partners need to find a way to enhance of data use. For example, supportive supervisions and mentorship contributes significantly to the efforts. There are lessons that can be drawn from the commendable MCH mentorship. This hotel based capacity building practice should be changed to mentorship and supportive supervisions. Therefore, mentorship need to be prioritized. In addition, performance review meeting need to be conducted regularly.

Program interventions need to be led by the ministry. When engagements and activities are ministry-led, it creates opportunities for effective coordination and alignment among stakeholders. MOH should led the practice of defining precisely and concisely the HIS indicators is another important area that needs focus. The number of indicators should be reconsidered accordingly. It should be revised to reflect different contexts, and summarized to reduce the large number of the indicators.

Reports show very limited number of health facilities conduct LQAS. In the absence of this, ensuring data quality and use is very difficult. Particularly, data completeness and timeliness are reported to be the most affected part. Data do not refer to simple numbers. Beyond numbers there are always human being. Use of data should be manifested through improvement of health outcomes. HIS surveillance should be conducted consistently and timely. Case surveillance is the most recommended matters. That surely health service deliveries. Improved performance is the tipping point that motivates donors to invest in Ethiopia's HIS interventions.

In conclusion, Dr. Dereje gave emphasis on the need to have platform where MOH meets with stakeholder to share updates and plans. Such platforms help us maintaining open communication among partners. It has the effect of ensuring collaboration and coordination of the partners and resources respectively.

5.2. Reflection of Naod Wonderad, Director of PPMED in the Ministry of Health

Researches need to inform the policy and planning stream of the health sector. Coordination and collaboration between universities and Ministry of Health plays paramount role to solve the skilled human resource challenges.

Different stakeholders, including PPMED, need to be accountable. At all health system levels, there should be a responsibility. Indicators should be created for data use. The current of PMT at health facilities, including hospitals is not impressive. It need to improve. Dr. Dereje is leading this initiative of mainstreaming PMT at all health systems

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The HIS effectiveness studies dissemination workshop was concluded on January 27, 2021 at 5:45 pm.

Health Information system (HIS)
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