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MINISTRY OF HEALTH - ETHIOPIA

INFORMATION REVOLUTION IMPLEMENTATION GUIDELINE

2021-2025



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ACRONYMS

HIS	Health information system
HMIS	Health management information system
MOH	Ministry of health
RHB	Regional Health Bureau
HSTP	Health sector transformation plan
IR	Information revolution
IRR	Information revolution roadmap
HC	Health center
HP	Health post
WoHO	Woreda Health office
CBMP	Capacity building mentorship program
PPMED	Policy, plan, monitoring, and evaluation directorate
eCHIS	electronic community Health information system
EMR	electronic medical record
eHRIS	electronic human resource information system
dhis	district health information software
TOR	Terms of reference
PMT	Performance monitoring team

FOREWORD

The health information system (HIS) is the bloodline of the health system that informs the formulation of policies, design, and implementation of strategies and interventions. The design and implementation of an appropriate information system that generates quality data and fosters evidence-based decision-making have been a challenge to resource-limited countries.

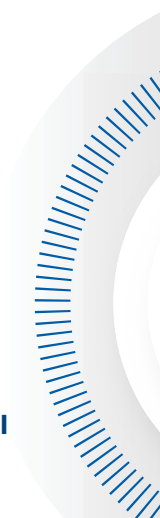
The situation is not different in Ethiopia, where only a tiny portion of the data collected at the facility level has been interpreted and used for decision-making. In addition, the emphasis has been on a one-way transmission of information from facilities to higher levels of the health system, as opposed to using the information for decision-making at the point of care.

Ethiopia has made a significant effort to reform the routine HMIS with the principles of simplification, standardization, and integration since 2008. To build on the gains and advance the progress, the ministry has identified the information revolution as one of the four transformation agendas of the first health sector transformation plan (HSTP I: 2016-2020). The information revolution was devised as a transformation agenda to bring about radical advancement in the data collection, compilation, and analysis processes by focusing on the improving use of information, digitization, and governance of the health system. A connected woreda strategy was designed and implemented during the first HSTP to operationalize the information revolution agenda. It mainly focused on creating model woredas that will give rise to model zones, regions, and a nation.

The information revolution has also been selected as one of the five transformation agendas of the second HSTP (2021-2025). Based on HSTP II, HIS strategic plan has been developed. This Information revolution Implementation guideline has been developed to operationalize the HIS strategic plan. The guideline has been developed through the collaboration implementers at all levels, experts, and relevant stakeholders. The revision has embraced the lessons from the implementation of the previous connected woreda strategy and has been based on the current priorities and targets set in HIS strategic plan.

I believe that the guideline will provide clear guidance on how to operationalize the information revolution agenda at all levels of the health system and will help all of us, the HIS communities, to speak the same language with regards to the implementation of HIS strategic plan. In addition, I hope all relevant stakeholders and implementers will adhere to the guideline with matters related to the operationalization of HIS strategic plan.

SUMMARY



INTRODUCTION

Background

A health information system (HIS) is one of the building blocks of a health system [1, 2]. The design and implementation of an appropriate information system that generates quality data and fosters evidence-based decision-making to inform health programs have been a challenge to resource-limited countries. Fragmentations, little funding, and poor design of systems have been major factors hindering the implementation of effective HIS in resource-limited settings [3-5].

Being cognizant of this gap, the ministry of health of Ethiopia identified the information revolution as one of the transformation agendas¹ during the first health sector transformation plan (HSTP-I) that was implemented between July 2016 and June 2020 with the goal to ensure equitable utilization of quality health services [6]. To stir up momentum to achieve the ambitious targets of the health sector, four inter-related transformation agendas were prioritized and designed to address the most critical systemic barriers in the strategic period [7]. Information revolution was aimed to bring about the radical change on data quality and use by cultivating a data-use culture and leveraging digital information systems and tools. It refers to the phenomenal advancement in the methods and practice of collecting, analyzing, presenting, and disseminating information that can influence decisions in the process of transforming economic and social sectors. Similarly, the second HSTP (2021-2025) has also identified five priority areas; of which the information revolution was one of them [8].

During HSTP-I, the information revolution roadmap (IRR) was developed and elaborated on the detailed activities planned to realize the information revolution agenda within the health sector [7]. The connected woreda program was developed based on the IRR and has been the pathway to realize the information revolution agenda focusing on creating model and connected woredas [9]. It focused on enhancing data quality, data use culture, and digitization of HISs and to enable woredas and primary health care units to access and readily share data among themselves and to inform their decisions with evidence. The program charted a progressive pathway through which health facilities and woreda health offices would pass through to achieve the highest standards in data quality and use. The performance of facilities and woredas used to be measured against parameters focusing on HIS capacity, data quality, and data use.

The program envisaged building upon traditional health information system approaches by focusing on the use of data around the woreda, taking advantage of the unique role the woreda plays in translating policies and goals set at the national level into action within health facilities and kebeles. The Woreda Health Office (WoHO) has been at the heart of this activity, coordinating care and public health programming and providing a systemic backbone for the implementation of the agenda by monitoring its rollout in terms of its impact on service delivery, as well as administrative process improvements. When fully implemented, the Connected Woreda program was supposed to allow the collection, sharing, and use of health data among service delivery points throughout the woreda. It was expected in a bottom-up fashion beyond the woreda to realize similar goals in the “Connected Zone”, “Connected Region”, and “Connected Nation”. In the end state, administrators, clinicians, and community members would know the state of their populations’ health, understand the major causes and risks of ill health in their communities, know how best to intervene, and they can adapt to efficiently and effectively promote good health [9].

¹ A transformation agenda is coined to galvanize momentum and provide a platform to synergize multifaceted efforts of a sector to alleviate the most critical interrelated systemic barriers constraining attainment of the sector’s goal and targets.

The program has been implemented since the beginning of the first HSTP period and in the first year of HSTP-II. To roll out the program, a connected woreda implementation guideline and an assessment checklist was developed and distributed, mentorship was conducted at health facilities and woredas, and the performances of woredas were monitored through self-assessment. Through the support of capacity-building mentorship (CBMP) and implementing partners, about 14 woredas i.e. woreda health office and all health centers and hospitals reporting to the woreda health office, have been reported to reach model level as of January 2022. Similarly about 147 health centers, hospitals and woreda health offices have reached the model level.

During HSTP-II, a Health Information System (HIS) strategic plan was developed with the vision of realizing healthy, productive, and prosperous Ethiopians through evidence-based decision making. According to the HIS strategic plan, the health sector intends to realize a strong culture of evidence-based decision-making to eventually improve health service coverage, quality and equity health outcomes. To realize this goal, three objectives were identified, i.e. improving evidence-based decision making practices, increasing the use of digital health information technologies, and enhancing HIS governance. This implementation guideline was revised based on the goals and priorities set in the HIS strategic plan. The revision has embraced lessons from implementing IR in the first HSTP. As such, the guideline is designed to operationalize the HIS strategic plan at the woreda and the facilities the woreda health offices oversees, hospitals and higher administrative levels.

Rationale

Ethiopia has made a significant effort to reform the routine HMIS with the principles of simplification, standardization, and integration since 2008 [10, 11]. The health sector has taken critical steps in recent years to improve the health information system at all levels. Yet, even though a significant amount of data is collected at the facility level, only a tiny portion of the data has been interpreted and used for decision-making. In addition, the emphasis has been on a one-way transmission of information from facilities to higher levels of the health system, as opposed to using the information for decision-making at the point of care [6-9].

As such, the quality and use of information have been insufficient for supporting effective evidence-based decision-making at all levels of the health system. These issues underscore the need for radical change in the way information is collected, transmitted, analyzed, and used. The role of information in the HSTP-I and HSTP-II has been recognized as paramount for the success of the plan. Systematic use of data for decision-making can yield not just operational efficiencies, but also support the improvement of the quality and equity of care delivered. Decisions made at all levels of the health system will be effective when supported by accurate and timely information.

The health sector has implemented various interventions in previous years to improve health information systems at all levels. The connected woreda program has been implemented over the last six years to operationalize the information revolution agenda at the woreda level and create the model and connected woredas. The program was believed to catalyze the operationalization of the information revolution at the woreda level and upwards. However, its implementation has been limited and the HIS in Ethiopia has been rife with various challenges at the end of HSTP I. The quality and use of information have been insufficient for supporting effective decision-making at all levels of the health system.

Major challenges faced in the past six years of implementing the connected woreda program were related to limited integration of the connected woreda activities with routine activities of the health system at each level, inadequate understanding of people at lower levels about the program, resources constraints, and limited tailoring of the program to different settings. Lack of composite score to track the progress of the woreda as a whole, i.e. woreda health office along with the facilities and design of the checklist that doesn't allow to see the trend of were also raised by implementers as issues that affected the implementation of the program and need revisit.

Consequently, the need for revising the connected woreda implementation guideline has repeatedly raised during various events by experts implementing the program at various levels. The revision has become to embrace lessons and align the new developments in the health strategic plan. Therefore, as a key strategy to push the information revolution agenda, it is imperative to develop a guideline to guide the operationalization of the HIS strategic plan. This guideline will help in breaking down the activities required to implement the HIS strategic plan at each levels of the health system and thereby realize the information revolution agenda. The guideline also details the roles and responsibilities of implementers at each level of the health system.

The strategies and approaches were developed based on the lessons and experiences of implementing the connected woreda strategy in the past six years. Before developing this revised strategy, the ministry has gone through a consultative process to gauge where the strategy stands and investigated the barriers and facilitators to the implementation of the programs at various settings including the interventions, implementation approaches, measurements, and support system.

Scope of the document

The scope of this document is limited to guiding the operationalization of the implementation of the information revolution agenda with a focus on strengthening routine health information systems at all three tiers of the Ethiopian health system and administrative level. It gives due focus to the unique role of the woreda administration as the functional unit of the country's government structure to implement the agenda with the woreda health system.

Objective of the implementation guideline

The guideline was developed to realize three key objectives in terms of implementing the information revolution agenda. The guideline will;

- Guide the implementation of IR at all levels of the health system
- Define the standard package of interventions to implement IR
- Create common understanding regarding measurement and verification

APPROACH TO THE REVISION PROCESS

A collaborative and participatory revision process was followed through to revise the implementation guideline. The process involved five major steps described below.

- 1. Desk-review and concept note development:** a team of experts from the PPMED was established to lead the revision process. The team has conducted a desk review and developed a concept note for the revision process. The concept note clearly outlined the approach and work plan for the revision process. The concept note was shared with members of the national data use technical working group and other experts with relevant experience and expertise that helped to garner comments and inputs to inform the development of revised implementation guidelines.
- 2. Inceptive consultative workshop:** A workshop was conducted with the participation of experts from the PPMED and implementing partners. The concept note was refined and the consensus was reached upon the follow-up steps of the revision process. A brainstorming session was conducted to glean inputs for the revision of the guideline.
- 3. Rapid qualitative assessment:** This rapid assessment was intended to explore the experiences, barriers, and facilitators to the implementation of the program. To this end, a self-administered qualitative interview guide was developed and sent to experts at the regional health bureaus, implementing partners, and CBMP member universities. The findings of the assessment were synthesized and used to inform the development of the revised implementation guideline.
- 4. Draft implementation guideline and workshop tools preparation:** once inputs through desk reviews, consultative meetings, and interviews with experts were obtained, the team of PPMED experts has developed draft implementation guidelines and tools for facilitating the co-creation workshop. Tools for group work and brainstorming activities were developed during this phase.
- 5. Co-creation workshop:** a team of experts from all levels involved in the implementation of the program was drawn from health centers, woreda health offices, zonal health departments, regional health bureaus, and CBMP implementing universities. The draft revised implementation guideline was presented for the participants who were grouped and have conducted a brainstorming session to enrich the draft implementation guideline based on their experiences and insights about realizing the intervention at the ground level. The group's work ended up with presentations and discussions.

The revision focused in most areas of the implementation guideline including the naming of the guideline, the pathways, measurements, monitoring tools and strategies to advocate, motivation mechanisms, mobilize resources and advance the institutionalization of the interventions with routine systems.

NAMING OF THE PROGRAM

The name “connected” has been a source of misunderstanding over the past six years in which the program has been implemented. In most cases, people associate the word “connected” with internet or network connectivity and tend to be inclined to associate the whole program with internet connectivity or networking of health facilities. Whereas, the program has a wider goal that focuses on improving HIS capacities of health institutions, advancing digital health, improving data quality and data use practices. Due to this, it has been a challenge to easily communicate the program’s goal and objectives to the leaders, managers and experts at various levels.

To allow effective advocacy and communication of the program among the HIS community and stakeholders, it has become evident that the name “connected” has to be reconsidered and a term that can adequately epitomize and easily communicate the program needs to be used. Through the revision process, various terminologies and names for the program and implementation guideline were suggested and discussed among participants of the inception and co-creation workshops.

The technical discussions indicated that the name IR, which is one of the transformation agendas, is has been popular. Consensus has been reached that naming of the implementation guideline with an options that comprise name IR would affirm the commitment of the health sector to operationalize the HIS strategic plan or the information revolution agenda. As such a name that contains IR has been proposed and was accepted. Therefore the name for this guideline will be “**Information Revolution Implementation Guideline**”.

TARGETS

Based on the targets set in the HIS strategic plan, we aspire to support 35% of woredas in the country to graduate as model woredas and 15% as digital model woredas. We also aim to support 25% of woreda health offices, hospitals and PHCUs to reach the level of digital model stage. The national targets by the end of 2025 is described in table 1.

Table 1. Targets for 2025 by IR stages of health institutions and administrative levels

Indicator	The proportion of health units and Woredas					
	Woreda	WoHOs	Hospitals	Health Centers	Health Posts	PHCU
Digital model stage	15%	25%	25%			25%
Model stage	35%	60%	60%	60%	60%	
Candidate stage	50%	15%	15%	15%	15%	

PATHWAY: DEFINITIONS, CRITERIA, AND GRADING

The implementation of IR within a health institution or an administrative level mainly targets progressively building a culture of using data for decision making at all levels, where data management, analysis and visualization practices are fully supported with digital technologies. To realize this, it requires enhancing demand for and supply of data with optimum quality within the health system. As such, the implementation of IR activities should be an incremental process that would allow embracing learnings and build on gains as a health facility or institution evolves through stages of IR implementation.

Health institutions will go through incremental tiered stages of performance to eventually reach the end state stage set for the strategic period and eventually become a center of excellence for IR. Accordingly, a health institution will go through five stages in the implementation of IR (figure XX).

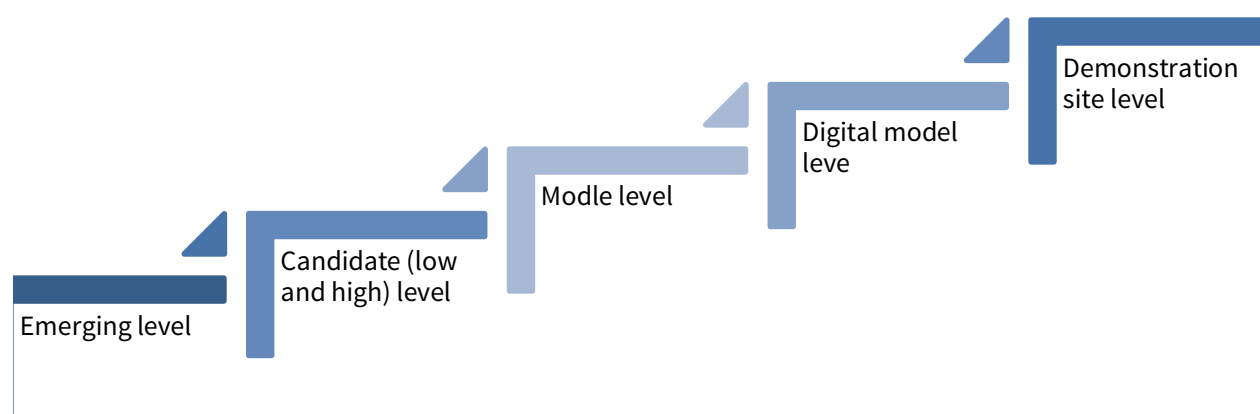


Figure 1. Stages of IR implementation for health institutions

1. Emerging level

A health institution, i.e. a facility (i.e. health post, health center or any type of hospitals) or administrative health office, i.e. woreda health office, zonal health department, or regional health bureau, that scored less than 65% of the assessment criteria specific to each type of health institution or administrative health office is classified as emerging. For a woreda, zone or RHB (the health office and its health facilities), an emerging level is defined as an administrative level that has a composite IR score of less than 65%. Similarly, for a PHCU, i.e. a health center and its satellite health posts, an emerging level is defined as a PHCU that has a composite PHCU score of less than 65%. This level is the lowest in the IR-Model Woreda creation pathway that requires a special focus on HIS strengthening actions. In this level, the major focus will be capacity building to capacitate M&E infrastructure and improve processes.

2. Candidate level

This level is for those health institutions, i.e. a facility or administrative health office that scored 65% to 90% of the assessment criteria. For a woreda, zone or RHB to be classified as a Candidate, it should have a composite IR score of 65% to 90%. Similarly, for a PHCU, i.e. a health center and its satellite health posts, an emerging level is defined as a PHCU that has a composite PHCU score of between 65% and 90%. In this level, the health institutions are expected to have basic M&E infrastructure in place and a room for improvement in data quality and use. The overall focus for interventions at this tier is continued capacity building, particularly in the areas of data quality and use. The interval for this level has been wide and health facilities used to stay in this level for longer time despite the amount of investment they make to improve HIS and progresses they might have made. As such, the candidate level is divided into two stages: as

2.1. Low candidate level: An institution that scored between 65% and 80% of the assessment criteria and

2.2. High Candidate level: An institution that scored between 81% and 90% of the assessment criteria

3. Model-level

This is a stage where the health institution, i.e. a facility or administrative health office has a score of above 90% of the assessment criteria. For a woreda, zone or RHB, i.e. an administrative office and public health facilities in the level, is considered as a model if the composite IR score of the level is more than or equal to 90%. Similarly, for a PHCU, i.e. a health center and its satellite health posts, a model level is defined as a PHCU that has a composite PHCU score of equal to or more than 90%. For model level health institutions, the focus will be sustaining the status, sharing or diffusing best experiences and innovations to other woredas using existing platforms.

4. End-state or digital model for 2025

In the first connected woreda program implementation guideline, the end state for a woreda to attain was developed for 2035. That has been a very long period and it has been difficult for the health system to relate the current performance of health facilities and administration offices and monitor their progress towards a defined goal for the current strategic period. In addition, it was limited to guiding the implementation of IR at the woreda level and it disregards zonal and regional levels.

Thus, defining the end-state for the current strategic period has become relevant and the end-state for 2025 was developed and proposed for further series of discussions. The goal for the end state PHCU, woreda, zone and RHB were re-defined considering the goal of the HIS strategic plan for the strategic period, the current existing situations, opportunities, and threats to the implementation of HIS in the country.

Table 2. End state for zones in the agrarian, urban and pastoral settings

SN	Agrarian setting
1	Zone with 80% of the model woredas with maximum threshold of 80% of model woredas
2	All hospitals under the zone should be model
3	There should be one demonstration woreda
4	ZHD IR with the maximum threshold of 90%
5	A minimum of 70% of all health posts in the zone implement e-CHIS for service provision (Not applicable for cities and minimum value for pastoral regions is 35%)
6	A minimum of 70% of all health centers in the zone implement the health center module of eCHIS (Not applicable for cities and minimum value for pastoral regions is 35%)
7	All health centers and hospitals in the zone implement online dhis-2
8	zone ensures >80% of private health facilities report completeness for the quarter
9	70% of the public health facilities exchange aggregate data online
10	When the woreda and primary hospital (if any) implement the eHRIS-personnel management module and Dagu-eAPTS
11	When the woreda has up-to-date MFR with updated signature and service domain
12	When a woreda implements mBrana for vaccine logistics management

Accordingly, a woreda should be considered to have reached the maximum level when it reaches a model level and where it fulfills the criteria set for the setting under which the woreda is found (see table 2)

Table 3. End state for woredas in the agrarian, urban and pastoral settings

Agrarian setting	Urban Setting	Pastoral Setting
Woreda IR equal to or more than 90%	Woreda IR equal to or more than 90%	Woreda IR equal to or more than 90%
A minimum of 80% of all health posts in the woreda implement e-CHIS for service provision		A minimum of 40% of all health posts in the woreda implement e-CHIS for service provision
A minimum of 80% of all health centers in the woreda implement the health center module of eCHIS		A minimum of 40% of all health centers in the woreda implement the health center module of eCHIS
All health centers and primary hospitals (if any) in the woreda implement online dhis-2	All health centers and primary hospitals (if any) in the woreda implement online dhis-2	All health centers and primary hospitals (if any) in the woreda implement online dhis-2
Woreda ensures >80% of private health facilities report completeness for the quarter	Woreda ensures >80% of private health facilities report completeness for the quarter	Woreda ensures >80% of private health facilities report completeness for the quarter
80% of the public health facilities exchange aggregate data online	80% of the public health facilities exchange aggregate data online	80% of the public health facilities exchange aggregate data online
When the woreda and primary hospital (if any) implement the eHRIS-personnel management module and eAPTS	When the woreda and primary hospital (if any) implement the eHRIS-personnel management module and eAPTS	When the woreda and primary hospital (if any) implement the eHRIS-personnel management module and eAPTS
When the woreda has up-to-date MFR with updated signature and service domain	When the woreda has up-to-date MFR with updated signature and service domain	When the woreda has up-to-date MFR with updated signature and service domain
When a woreda implements mBrana for vaccine logistics management	When a woreda implements mBrana for vaccine logistics management	When a woreda implements mBrana for vaccine logistics management

Similarly, the end state for PHCU in the three settings is defined as follows.

Table 4. End state for PHCUs in the agrarian, urban and pastoral settings

Agrarian setting	Urban Setting	Pastoral Setting
PHCU IR score for data quality and data use is equal to or more than 90%	PHCU IR score for data quality and data use is equal to or more than 90%	PHCU IR score for data quality and data use is equal to or more than 90%
A minimum of 80% of all health posts in the PHCU implement e-CHIS for service provision		A minimum of 40% of all health posts in the PHCU implement e-CHIS for service provision
When the health center implement the health center module of eCHIS		When the health center implement the health center module of eCHIS
Health centers implement online dhis-2	Health centers implement online dhis-2	Health centers implement online dhis-2

A hospital of any level is considered to have reached the end state or will be called digital model when it fulfills the following criteria

- Hospital's IR score of equal to or more than 90% including implementation of online dhis-2, HRIS and Dagu-2 with eAPTS
- Full EMR

NB. The digital model or end-state for Diredawa, where the proper definition and structure of the woreda doesn't apply, we will apply the end-state for a PHCU.

5. Demonstration Woreda

Demonstrating how an excellence or extra-ordinary level of achievement is reached in a particular program is a key learning approach. Establishing a demonstration site has been a highly effective strategy to hasten testing and expand of best practices at scale within the health sector. Demonstration sites in health care are specialized programs within healthcare institutions that supply exceptionally high concentrations of expertise and related resources centered on particular medical areas and delivered in a comprehensive, interdisciplinary fashion—afford many advantages for healthcare providers and the populations they serve. To achieve full value from centers of excellence, proper assembly is an absolute necessity, but guidance is somewhat limited. Successful development of a demonstration site first requires the acquisition of a detailed understanding of the delivery model and its benefits. Then, concerted actions must be taken on a particular series of administrative and clinical fronts, treating them in prescribed manners to afford synergies that yield an exceptionally high level of health system performance. Demonstration woreda serves three main purposes;

1. They are a demonstration center where you try-out innovations,
2. They are learning or training centers where health workforces are training,
3. They serve as model sites for equivalent centers or institutions to emulate.

A digital woreda woreda with the following criteria would make a woreda a demonstration woreda.

- A woreda that is evidence-informed and meets the criteria for the 2025 end-state or which is fully digital IR model woreda
 - Conducted extensive documentation of best practices in data collection, data quality assurance, and data use practices. Extensive documentation includes documentation that shows
 - data quality assurance practices include data quality checks at the health facilities, RDQAs, desk review of data quality,
 - data use practices including minutes of performance review meetings, trend analysis of performance, equity analysis by geography, TOR for PMTs,
 - Semi-annually health profile bulletin
- Have adequate materials and preparations for demonstration of practices that include a facility to demonstrate experiences to visitors, with a person who is assigned to explain to visitors, and has produced a brochure capitulating its successes.
- A woreda that conducted at least one experience sharing visit to other woredas within the last six months

The target for creating demonstration woreda is for bigger regions to have one demonstration woreda.

Table 5. Summary of stages for health institutions and administrative offices

Level	Definition	Criteria
Emerging	A health unit that performed low in HIS performance (<65%)	<65% of the assessment criteria
Low candidate	Medium performing health unit	65-80% of the assessment criteria
High Candidate		81-90% of the assessment criteria
Model	High performing health unit with a score of more than 90%	≥90% of the assessment criteria
End state or fully digitized model stage	High HIS performing health unit and implementing electronic patient level and aggregate level data management systems	≥90% and criteria for end state

COMPOSITE MEASURE

To monitor the progress of the woreda or zone as a whole including the performance of the health offices, primary hospitals, health centers, and health posts, there needs to be a composite score. Similarly, to measure the performance of a PHCU i.e. the performance of the health center and its satellite health posts, there needs to be a composite measure that would allow continuous measurement of the PHCU as a unit. As such, the following composite measures with their weighting and formulae are suggested.

There is a need to use composite continuous measurement to monitor the progress of woredas, i.e., composite measure to track the performance of all institutions in a woreda. The dichotomous type of measurement should be changed to continuous composite measurement to allow measuring the progress of woredas as a woreda health system and PHCU as well. Composite measurement for PHCU should allow measurement for all HPs and HC and there needs to weight.

Woreda IR score: this score measures the performance of the woreda as a whole including the performance of the woreda health office and facilities it supervises. Based on the IR score of each facility, we will calculate the woreda IR score as follows.

Table 6. woreda IR score weights for woredas with primary hospitals

Component	Agrarian woreda	Urban woreda	Pastoral woreda
Health posts	25%		25%
Health centers	30%	45%	30%
Primary hospital	25%	30%	25%
Woreda health office	20%	25%	20%

Table 7. woreda IR score weights for woredas without primary hospitals

Component	Agrarian woreda	Urban woreda	Pastoral woreda
Health posts	30%		30%
Health centers	45%	70%	45%
Woreda health office	25%	30%	25%

Eg. If Woreda X has four health centers and 20 health posts and doesn't have a primary hospital. In a given quarter, if the average health center IR score is 70% and average health posts IR score is 80% and woreda health office's IR score is 75%. Then the values for each level will be calculated as follows.

Woreda health office value= $(75\%)(25\%)=18.75\%$

Health centers value= $(70\%)(45\%)=31.5\%$

Health posts value= $(80\%)(30\%)=24\%$

Thus, the woreda IR score is $15\%+24.5\%+20\%=74.5\%$, which is a low candidate

PHCU IR score: this score measures the performance of the PHCU as a whole including the performance of the satellite health post and the health center. Based on the IR score of each facility, we will calculate the health center IR score as follows.

Table 8. PHCU IR score weights for woredas without primary hospitals

Component	Weight for all three settings		
	Agrarian woreda	Urban woreda	Pastoral woreda
Health posts	50%		50%
Health centers	50%	100%	50%

Zonal Health Department IR score: this score measures the performance of zonal health department as a whole including the performance of the woreda health offices, hospitals, creation of demonstration woreda and ZHD IR score.

Table 9. weight for components of a model zone

Criteria	Weight
Proportion of model woredas*	40%
Hospitals under the zone should be model	20%
One demonstration woreda (one woreda per zone)	20%
ZHD/RHB IR with the maximum threshold of 90%**	20%
Total	100%

*The maximum threshold for the zones will be 80% of model woredas. If a zone has 80% of model woredas, it will get the maximum weight of score.

** The maximum threshold for the zones will be 90% of ZHD IR score. If a zone IR score is 90%, it will get the maximum weight of score.

Eg. Let's assume that zone X has 10 woredas, 2 hospitals administered by the ZHD, has established one demonstration woreda and IR score of 80%. If eight of the woredas and one of the hospitals were model, what would be the IR score of the zone.

Proportion of model woredas=80% [minimum threshold=80%] thus, value=(80%/80%)(40%)=40%

Proportion of model hospital=(50%), thus value=(50%)*(20%)=10%

Demosntation woreda=20%

IR score of ZHD=80% [minimum threshold=90%], thus value=(80%/90%)*(20%)=17.8%

Thus, the zonal IR score is 40%+10%+20%+17.8%=87.8%, which is a high candidate zone

Regional IR score: this score measures the performance of regional health bureau as a whole including the performance of the zones, hospitals, RHB IR score. Thew eight for each of the components is reflected in table 10.

Table 10. weight for components of a model region in HIS

Criteria	Weight
Proportion of model zones*	40%
Hospitals under the region should be model	30%
RHB IR with the maximum threshold of 90%**	30%
Total	100%

*The maximum threshold for the region will be 80% of model zones. If a region has 80% of model zones, it will get the maximum weight of score.

** The maximum threshold for the RHB will be 90% of RHB IR score. If RHB IR score is 90%, it will get the maximum weight of score.

Eg. Let's assume that region X has 10 zones, 20 hospitals administered by the RHB, and IR score of 80%. If eight of the zones and 10 of the hospitals were model, what would be the IR score of the zone.

Proportion of model zones=80% [minimum threshold=80%] thus, value=(80%/80%)(40%)=40%

Proportion of model hospital=(50%), thus value=(50%)*(30%)=15%

IR score of RHB=80% [minimum threshold=90%), thus value=(80%/90%)*(30%)=26.7%

Thus, the regional IR score is 40%+15%+26.7%=81.7%, which is a high candidate region

TAILORED SUPPORT TO HEALTH FACILITIES AND WOREDA HEALTH OFFICES

There will be regular assessment of the health facilities and woreda health offices using the assessment checklist. At the end of the assessment, the status of the health facilities and woreda health offices will be determined and findings will be used to develop tailored action plans to support the facility or woreda health office progress to the next level. The tailoring will be done at every two stages.

Administrative level tailoring of interventions: this will happen when a woreda begins the program in its facilities and the health office or regions begins implementation of the program in selected woredas, and annually afterward. Thus, this tailoring happens at the beginning of the program in a woreda and every year afterward. It will be based on PRISM or extensive HIS performance assessment within the woredas. It largely focuses on major systemic challenges and will inform designing interventions to address key technical, behavioral, and organizational barriers. It will guide the overall plan to support the health facilities and woreda health offices in the upcoming quarters until the next round of such an assessment is conducted. The performance of a woreda or region's in terms of providing tailored support will be reviewed during an annual or semi-annual HIS review.

Facility-specific tailoring of interventions: this tailoring is supposed to happen immediately after each of the routine assessments of facilities or woreda health offices using the IR assessment tool. This happens at the facility or institution level and will be tailored to address the prevailing gaps of the woreda or health facility.

INSTITUTIONALIZATION OF ACTIVITIES

To mainstream the activities of the program, there needs to be the integration of the routine activities of the program with the health system functions.

- **Planning:** the strategy takes the unique role of woreda as pivotal to realize IR nationally. Thus, there is a need to consider the mandate of a woreda to prepare and approve its plan by its council. There is an opportunity for annual woreda-based health sector planning, that is conducted with bottom-up and top-down approaches. To guide the preparation of the woreda-based health sector planning, MOH provides an indicative plan based on an annually revised planning template. Inclusion of activities or indicators in the woreda-based planning template will guide the integration of activities in the plans of woredas. In addition, there needs to be advocacy to include activities of IR at the woreda and facility level whenever there is routine planning or revision of planned activities.
- **Budgeting:** Budget allocation for the program activities
- **Training:** integration with HIS related training
- **Integrated supportive supervision:** inclusion of the program activities in the HIS tool and activities
- **Mentoring:** integrated with routine performance monitoring
- **Monitoring of performance reviews:** Integrated with performance reviews, included in review meeting guides

INTERVENTION PACKAGES

Generally, the intervention packages are recommended to be tailored to the local setting where the woreda and health institutions are located. The following are a minimum set of intervention packages for the implementation of model woreda and institution creation pathway.

Need-based Capacity building training: The universal goal of training is to make a transition from a certain state of knowledge and skill among the health workforce to a state which is defined as superior, improved, and more useful in achieving a pre-defined goal which is the creation of model IR woreda in our context. A health work competency gap could be one reason which constrains effective performance otherwise it could not be the only reason. Hence in-depth analysis of training needs should be accomplished at all levels starting from MOH down to the facility using a standardized assessment checklist. This facilitates the provision of need-based training which could contribute to boosting the expected performance.

Routine performance monitoring: All levels of the health system are supposed to conduct extensive baseline assessment and routine performance assessment using the regular IR assessment checklist. The performance of each level of the health systems should be reviewed by using the existing performance monitoring platforms. In addition to the reviews along with the existing performance monitoring platforms, the implementation of IR should be reviewed using the following platforms.

Zonal level HIS performance review: semi-annual performance reviews

Regional level HIS performance review: semi-annual HIS performance reviews

National level HIS performance review: semi-annual HIS performance reviews

Mentoring and supportive supervision: Technical support to health facilities is critical to capacitate health facilities in implementing IR interventions. Thus, supportive supervision and mentorship are supposed to happen regularly. Standard supportive supervision and mentorship checklists will be used to overall guide the support to be given to the lower levels. The mentorship and ISS supervision implementation guidelines will be adhered to provide support to health facilities. Integration of support to routine activities should be considered.

Regular Data Quality Assessment at All level: Based on the national RDQA manual, RDQA should be conducted regularly.

Strengthening data use platform at all levels: The platforms for data use including monthly, bimonthly, quarterly, semi-annual and annual performance reviews should be used to review performances of the health sector. The performance of IR implementation should be reviewed with integration of performance review.

Implementing behavioral interventions

Behavioral determinants are the key factors that determine the effectiveness of HIS. If a health can address the behavioral determinants of HIS performance, it lays the foundation to address the other factors hindering HIS from driving improvement in health system performance. During the baseline assessments and follow-up UR assessments, due attention will be given to identifying the behavioral factors that influence performance of HIS in a given health institution or health facility. Once the behavioral factors, i.e. those related to knowledge, attitude, skills, values and motivation of health workforce towards implementation of HIS, are optimally explored, that has to be followed by development of tailored innovative intervention to address behavioral factors in a certain health institution.

Table 11. The standard list of interventions at each level of the health system

Level	Package of interventions	Expected deliverables
Health post	<ul style="list-style-type: none"> Tailored action plan preparation based on base-line assessment Capacity-building activities and inputs Need-based training on CHIS and eCHIS Provision of CHIS tools and Shelves Provision of gadgets Ensure internet connectivity Routine IR assessment and action planning 	<ul style="list-style-type: none"> Baseline report Tailored action plan All functions of CHIS in place Household registration Up-and-running eCHIS for service provision IR assessment results
Health center	<ul style="list-style-type: none"> Conduct assessments and prepare a tailored plan Capacity-building activities and inputs Need-based training on CHIS, eCHIS, dhis-2, and revised HMIS Avail HMIS tools and Shelves Provision of gadgets including computers and other connectivity materials Ensure internet connectivity Routine IR assessment and action planning Provide supportive supervision and mentorship to the health post 	<ul style="list-style-type: none"> Baseline report Tailored action plan Revised HMIS implementation IR assessment results
Woreda Health Office	<ul style="list-style-type: none"> Conduct assessments and prepare a tailored plan for the woreda health office Support facilities conduct assessment and prepare a tailored plan Capacity-building activities and inputs Need-based training on CHIS, eCHIS, dhis-2, and revised HMIS, HRIS, EMR, Mobilize resources for HMIS tools, shelves, gadgets, internet connectivity, electricity Provision of gadgets including computers and other connectivity materials to health facilities Ensure internet connectivity Routine IR assessment and action planning Provide supportive supervision and mentorship to PHCUs Inclusion of private facilities in report completeness Implement HRIS and MFR 	<ul style="list-style-type: none"> Baseline report Tailored action plan All functions of CHIS in place Household registration Up-and-running eCHIS for service provision IR assessment results

RESOURCE MOBILIZATIONS

As evidence from different HIS assessments shows that there is no specific budget code for HIS rather than considering HMIS tools printing under printing code. So, to strengthen HIS the Ministry should work in collaboration with the Ministry of finance to have a budget code for HIS.

Once HIS has a budget code, regions, zones, woredas should allocate HIS pool funds to strengthen HIS. Also, resource contribution or matching should be one criterion for measuring the progress of woreda, Strategy is also designed for resource mobilization from different stakes to realize the connected woreda strategy.

MOTIVATION MECHANISMS AND INCENTIVES

The suggested motivation and incentive mechanism consider sustainability as a critical issue. Sustainability of the incentive mechanism requires that the incentive modality be mainly non-monetary and cost-effective, institutionalization, and ownership of the incentive mechanism by health leaders and managers at all levels.

In the Ethiopian health sector incentivizing the best performing woreda and health facilities is a widely practiced norm. However; most of the time HIS related performance which includes data quality and information use is given less attention. On the other hand, it is difficult to ensure programmatic performance and success without the use of good quality data for decision-making at all levels of the health system for policy formulation, programmatic performance, and improving service delivery.

Therefore, instead of recommending separate motivation and incentive mechanisms, this guideline recommends linking recognition of programmatic success with data quality and data use. The evaluation criteria of existing incentive initiatives and others should be revisited to incorporate HIS components.

Strengthening the practice of recognizing the model woreda in public using the regular review meeting platform. Furthermore, the model woreda and model health facilities must be resourced and capacitated to support sharing of best practices to other facilities, such as through compiling audio-visual documents and other methods of dissemination. The woreda health offices in turn have to exercise giving recognition for health centers and health posts that have reached the IR model status. The following are the recommended motivation mechanism for woreda and health facilities:

Motivation for woreda: The woreda that fulfills the end state criteria for the first time are eligible to receive a certificate of recognition from regions as well as at national level events. The woredas that fulfill the end state and sustain it for more than two subsequent years and have adequate documentation practice will receive budget support in the form of a grant, in addition to certificates and trophies that enable them to continue their good practice and serve as demonstration sites.

Motivation for health institution: The health center and health post that reached verifiable IR model status will be recognized at woreda and zonal level organized events by receiving the certificate of recognition. In addition to reaching model status, the health facilities that have well documentation practice of HIS improvement will receive a certificate and trophy. on top of this, the health facility that achieved extraordinary performance levels in HIS can be considered as a learning institution for health facilities found in the same zone.

Motivation for health workers: The health workers that champions the implementation of HIS components by leading continuous assessment, development of tailored action plan, following its implementation and who come up with doable creative ideas and play an instrumental role in making their woreda or health facilities reaching model/digitized status will be eligible to receive a certificate of recognition in public events. Further, they should be given a priority on getting career development training as well as in receiving capacity building in-service training of trainers' course.

COORDINATION MECHANISM

The assessments and brainstorming sessions and series of consultations revealed that there has been limited coordination of stakeholders that was more pronounced at the lower levels, limited engagement of stakeholders, commitment, and support from the leadership. Regional health bureaus haven't assigned focal persons to lead the implementation of IR. As such the ownership from the program, people have been limited so far, and intersectoral collaboration has been limited and regional health bureaus were not effective in engaging other sectors such as ethio telecom Ethiopian electric power corporation and which have a critical role in the rollout of the program. The following key activities are expected to be put in place to strengthen the coordination of stakeholders in the realization of the information revolution agenda.

- Establish coordination platform at different levels
- Advocacy for leadership engagement, accountability
- Increase awareness about the program
- Outline clear responsibilities of partners
- Assign IR focal persons at each levels with clearly defined roles and responsibilities

ADVOCACY

An assessment of the implementation of the program showed that there has been limited awareness about the program at various levels of the health system. In addition, the engagement of political leadership and collaboration with other sectors has been a challenge in the implementation of IR within the last six years. As such, advocacy on the program to the leadership at the regional, regional, and woreda levels is very important. The following major advocacy platforms are proposed to ensure the leadership and stakeholders have the awareness, engagement, and support to the implementation of the program. The launching activities will be integrated with other platforms and should focus on addressing the components, major strategies, and responsibilities at each level.

- National level Launching
- Regional level launching
- Zonal level launching
- Woreda level launching

Besides conducting these launching workshops, the HIS personnel at all levels are advised to seize opportunities to advocate regarding the program. The leadership at the ministry is advised to use the JSC, management meetings, ARM, HIS governance platforms, and national HMIS review meetings to advocate on the agenda and create. The regional health bureaus are advised to use the regional management meetings, regional ARM and regional HIS reviews, and HIS governance platforms. The lower levels of the health system also need to exploit analogous structures to advocate the program. Particular attention needs to be given to engage the ethio-telecom and electric power cooperation particularly by MOH and RHBs.

ACCOUNTABILITY MECHANISMS

Accountability within the implementation of HIS has been one critical challenge that pervasively affected its effective implementation despite the extensive capacity-building and simplifications of the system. There has not been a clearly defined and agreed-upon accountability framework to ensure accountability. The accountability in HIS will be elaborated in the health act.

LEARNING, MONITORING, AND EVALUATION

Steps in the implementing the Strategy

The implementation of IR begins by evaluating and scoring facilities and administrative units against a common set of criteria focused on HIS Structure and resources, data quality, and data use. Additionally, composite scores are used to measure the status of primary health care units and woredas. These health institutions and administrative level health systems (such as woreda as a whole and PHCUs) are then categorized based on score and graded based on the pathway.

The grading process is followed by the development and implementation of action plans tailored to identified hurdles. The tailored action plan includes interventions to address HIS capacities and infrastructure, improve data quality and information use for evidence-based decision-making. The package of interventions from which facilities and administrative units implement to improve their gaps is listed under the intervention packages. Re-assessment and verification follows the implementation of the tailored plan. Health institutions conduct re-assessment every quarterly to monitor their progress. Verification is done for woredas and hospitals that reached IR model status and sustained its status for at least two subsequent quarters through self-assessment score.

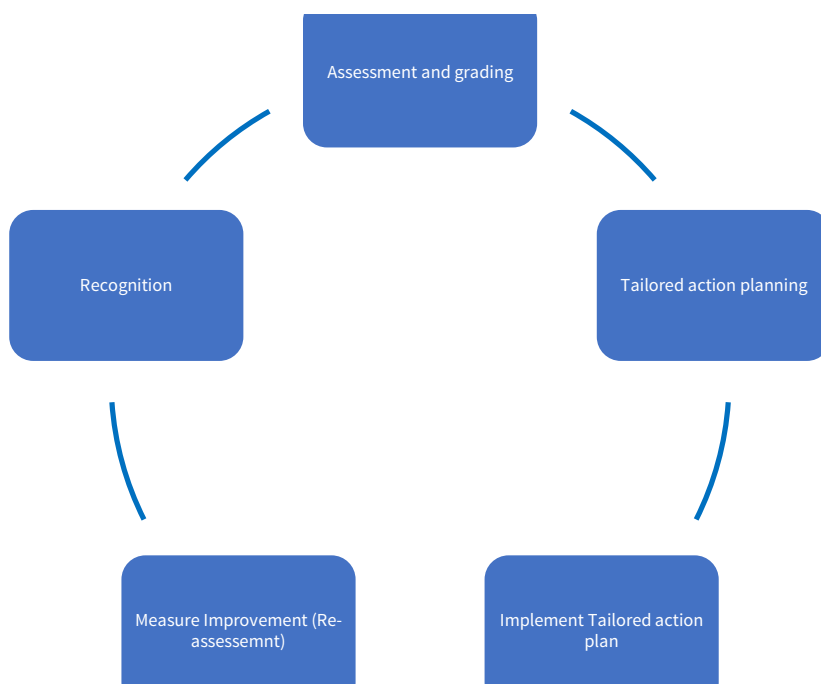


Figure 2. pictorial description of the steps for the implementation of health institutions

Self-assessment (when and who)

The information revolution (IR) agenda performance at the health posts, health centers, hospitals, and woreda health office is monitored by using the assessment checklist prepared for this purpose. Using the lessons learned from the HSTP-I implementation period as an input, the previous IR checklist is reviewed by enriching the digitization and data quality components. Furthermore, a brief instruction sheet was added to enhance common understanding across all levels and trend analysis features are added to the checklist dashboard. The checklist that has been in use during HSTP I period is meant primarily for agrarian settings while it does not perfectly assess the urban and pastoralist setting. Therefore customization of checklists for urban and pastoralist context need to be considered.

The checklist is expected to be filled by the health facilities and woreda health office themselves every quarter. The HMIS unit takes the leadership role in the timely filing of the assessment checklist and presents its findings to the performance monitoring team regularly. The Woreda health office and health facilities report the aggregate scores of HIS structure and resource, data quality, and data use through the DHIS2 platform.

After each assessment, the IR status of the facility or woreda health office is determined and the existing gaps should be identified along with the root causes. A site-specific tailored intervention plan that shows what to do, responsible person, time, and resource required should be prepared and presented for PMT for approval. The action plan implementation has to be monitored regularly monthly by considering it as one agenda during the monthly PMT meeting.

Supportive supervision

Following the implementation of the woreda and facility-level information revolution agenda, performance needs to be part and parcel of routine integrated supportive supervision (ISS) at all tiers of health systems. To institutionalize IR performance monitoring, making sure that the ISS checklist addresses the IR performance well is necessary. Therefore any ISS conducted by MoH, RHB, and zonal health office has to adequately address this issue.

The woreda health offices have to conduct quarterly supportive supervision to all facilities under their catchment area while they conduct the verification component of RDQA. They have to compare their IR assessment score with that of the self-assessment score of health facilities. In case capacity or knowledge, gaps are identified onsite orientation to the facility's PMT members has to be given.

Verification (when and who)

The woreda that reached IR model status and sustained its status for at least two subsequent quarters through self-assessment score are eligible for verification. The RHB along with respective zonal health offices and CBMP University have to conduct verification of IR model woreda twice a year. Based on joint assessment scores to find if the woreda filled the selected criteria, the RHB accredited the woreda as IR model woreda. MOH doesn't need to verify all reported model woreda. However; MOH has to conduct field-level verification at randomly selected woreda that reported reaching IR model woreda status twice a year.

Verification of the hospital's IR scores should be done jointly by MOH and RHB. The hospitals that reached model status by self-assessment score and sustained the status for two subsequent quarters have to officially request MOH and RHB for verification. The MOH and RHBs have to conduct hospital IR verification twice a year.

After verification of the IR model woreda and hospitals close support and follow up have to be made for them to maintain the status since that woreda and hospital can serve as potential learning sites for woredas and hospitals found at their close geographical proximity.

Data analysis and use

The checklist has in-built data visualization features which show change over time. Therefore at the woreda health office and health facility level, this dashboard can be used for monitoring trends over time. A separate interactive dashboard needs to be developed and used at, Zonal health office, RHB, and MOH level to monitor the improvement of HIS structure and resource, data quality, and data use scores. Constructive feedback has to be given by the supervisory unit to the lower level using information obtained from the dashboard.

Dissemination

The quarterly IR status analysis finding should be prepared at the MOH level and inserted as one section of the quarterly analytics report which is circulated to wider stakeholders regularly and can also be presented to the national level data using a technical working group. Furthermore, on an annual basis, at least one lesson from the implementation of the information revolution agenda needs to be documented and published on the ARM special bulletin.

At regional, zonal, and woreda levels the progress or achievement made on the information revolution agenda have to be presented on the HIS governance platform and regular review meetings by integrating with other programs.

ROLES AND RESPONSIBILITIES

The major challenge we faced in discharging the roles and responsibilities to implement the programs at each level of the health system was the assignment of the roles to the office and it doesn't map to each role and responsibilities of the health system. Accordingly, the current guide indicates the assignment of roles and responsibilities to each individual responsible to implement activities of the program at their levels.

Ministry of Health: PPMED and HITD

- Design and support implementation of strategies to realize the goals of the program
- Ensure harmonization and alignments of stakeholders for the implementation of the program
- Revise implementation guidelines when deemed necessary
- Mobilize and allocate resources to support the implementation of the program with a major focus on financing infrastructure for digital systems
- Develop and ensure implementation of standards for verification and recognition of best performing woredas and facilities
- Support implementation of best practices at scale through learning and dissemination
- Provide tailored and continuous technical support to regions according to their settings
- Review the implementation of the program on a semiannual basis
- Implement governance structure and assign focal points at PPMED and HITD to coordinate national efforts to spearhead the implementation of the program
- Design and enforce accountability mechanisms to the implementation of the program
- Design and guide implementation of sustainability strategies
- Support implementation of best practices at scale through learning and dissemination

Regional Health Bureaus

- Develop a unified plan for the implementation of the program in the region
- Lead the tailoring of the program to regional and sub-regional contexts
- Ensure harmonization and alignments of stakeholders for the program in the region
- Request revision of a section or sections of the implementation guidelines when deemed necessary
- Mobilize and allocate resources to support the implementation of the program
- Support documentation and implementation of best practices at scale through learning and dissemination
- Create demonstration woreda to serve as the piloting of new initiatives, learning, and experience sharing center
- Review the implementation of the program within the region on a semi-annual basis
- Implement governance structure and assign focal points at PPMED and HITD to coordinate regional efforts to spearhead the implementation of the program
- Provide technical and financial support to ZHDs and woredas to implement the program
- Facilitate experience sharing among the Model Facility demonstration sites through site visits and documentation
- In collaboration with the zonal health desk, conduct a semi-annual survey of woredas under the region against the criteria and select Model and Connected Woredas
- Deliver semiannual report to the MOH that lists Emerging Facilities, Candidate Facilities, Model Facilities, Connected Facilities, Model Woredas, and Connected Woredas in the region

- Adapt and enforce accountability mechanisms for HIS developed by MOH
- Tailor and implement sustainability strategies

Zonal Health Departments

- Lead and coordinate the implementation of facility and woreda grading in the zone
- Mobilize and allocate the necessary resource for the implementation in the zone
- Provide technical support for woreda and health facilities
- Coordinate the planning process in the zone
- Provide supportive supervision and mentoring every quarter
- Identify Emerging Facilities, Candidate Facilities, Model Facilities, and Connected Facilities selected by Woreda against the criteria
- Conduct a semiannual survey of woredas against the criteria and select model and fully digital Woredas
- Deliver semiannual report to the RHB that lists Emerging Facilities, Candidate Facilities, Model Facilities, Connected Facilities, Model Woredas, and Connected Woredas in the region
- Accredite sites selected by the woreda
- Ensure implementation of accountability mechanisms
- Tailor and implement sustainability strategies

Woreda Health Office

- Lead and coordinate the implementation of facility and woreda assessment and grading in the Woreda
- Assessment and grading of health institutions as Emerging Facility, Candidate Facility, Model Facility, Connected Facility
- Mobilize and allocate the necessary resource for the implementation of connected Woreda assessment as well as support and interventions in the woreda
- Provide targeted support for lower-performing facilities every quarter
- Collaborate with partners and universities to provide supportive supervision and mentoring
- Identify Emerging Facilities, Candidate Facilities, Model Facilities, and Connected Facilities within the woreda against the criteria
- Perform ongoing evaluation to certify progress of Emerging and Candidate Facilities grading based on evaluation
- Support advancement of facilities along Connected Woreda pathway through targeted activities
- Deliver semiannual report to the ZoHO that lists Emerging Facilities, Candidate Facilities, Model Facilities, Connected Facilities, Model Woredas, and Connected Woredas in the region
- Accredite the selected model and connected facilities within the woreda

PHCUs and Hospitals

- Participate in the IR assessments
- Conduct needs assessment and report to the next level on a quarterly base
- Build capacity at the facility level under the guidance of the WoHO
- Mobilize resources to support sharing of best practices
- Develop and update dashboards for routine monitoring of performances
- Mentor and supervise HP's quarterly (for HC only)
- Conduct quarter review meeting and review IR performance along with other programs
- Develop, intervene and follow up tailored intervention

Development partners, universities, or stakeholders

- Participate in advocacy work
- Provide the necessary technical support to health administration units and facilities at all levels, including Model and Connected Facilities including RHB
- Provide capacity building and mentoring for facilities and Woredas under their catchment area
- Capacity building to strengthen HIS infrastructure and supportive supervisions
- Capacity building for data completeness and timeliness, and performance of LQAS
- Capacity building for PMT processes and research/assessment presentation and dissemination
- In collaboration with health administrators at each level, qualify facility grading after comparing against the criteria
- Provide financial support to strengthen HIS infrastructure SS, mentorship, and review meeting
- Provide Capacity building for data management, data quality assurance mechanism, and data use
- Conduct research and provide real-time evidence to strengthen the implementation of HIS Implementation arrangement

Besides clearly outlining the roles and responsibilities of actors at each level of the health system, key strategies need to be designed, clearly stipulated, and implemented down the line. The following key strategies will be employed to cascade the implementation of the program at the woreda and health facilities.

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ANNEX 1, DEFINITION OF TERMS

Demonstration woreda: a woreda that fulfills the end state level and that is used to serve three purposes, i.e., piloting of new interventions or innovations, training center and experience sharing site.

Model woreda is a woreda with model IR score of equal to or greater than 90%. The woreda IR score is the mean score of all IR score of all public health institutions in the woreda.

Information Revolution: is one of the transformation agendas, which was aimed to bring about the radical change on data quality and use by cultivating a data-use culture and leveraging digital information systems and tools. It refers to the phenomenal advancement in the methods and practice of collecting, analyzing, presenting, and disseminating information that can influence decisions in the process of transforming economic and social sectors.

Model health institution: is health institution with IR score of equal to or more than 90%.

Digital model health institution: a health institution that fulfills the criteria set for model health institution and that fulfills the criteria set for end state level.

ANNEX 2, ASSESSMENT CHECKLISTS

Health Post IR Assessment Checklist

Section A: Structure and Implementation of HIS (30%)	
1	The health post has put in place the inputs needed to strengthen HIS
1.1	The HP has the necessary input for Implementing CHIS
	(1) Standard tickler file & Proper use,
	(2) Shelves
	(3) Family folders are properly filed
	(4) Family folders are easily accessible for service provision
1.2	At least two manuals which facilitate the implementation of HIS are in place
	Updated CHIS user guide is available in the health post. A. YES B. NO
	Recent health post NCOD version is available. A. YES B. NO
1.3	Availability of CHIS materials such as family folder, cards and tally sheet in past three months
2	The health facility has implemented eCHIS
2.1	The health post has started house hold registration for the implementation of eCHIS
2.2	The health post has completed house hold registration and started service provision using eCHIS
Section B: Data quality (30%)	
1	Data Completeness and consistency on individual medical records and registers
1.1	Data completeness on the randomly selected family folders(rural HP) or register (Pastoralist HP)
2	Reporting accuracy/ Consistency between reports and records
2.1	In the last three months, the health post has conducted LQAS
2.2	First LQAS score of the health center of the latest month of the reporting period for the monthly service delivery report
3	In the last three months, the health post has produced complete report
3.1	Does the health post keeps a log book/uses electronic system that helps to track their reporting to HCs
3.2	Report submission to health center Calculate as total number of reports the HP sent to health center/Total number of expected reports Total number of expected reports= types of report* period
3.3	Content completeness of service delivery report. Select 12 data elements randomly from the last month Service Delivery report and check the data completeness). Completeness= Data elements with complete data/12
4	Reports in the last three months are submitted in a timely manner
4.1	The health post keeps logbook/uses electronic system that helps to track report submission timeliness
4.2	Reports are submitted to the next level according to the national reporting schedule <i>Calculate as total number of reports sent timely to the Health center/total number of expected reports</i> <i>Total number of expected reports= Types of report* period</i>
Section C: Data use (40%)	
1	The health post has developed annual action plan. A. YES B. NO
2	HEW(s) participates in the kebele cabinet meeting: A. Participated three times in the last quarter – 3 points B. Participated two times in the last quarter – 2 points C. Participated one time in the last quarter – 1 points D. Never participated in the last quarter – 0 point
3	Health Program performance was discussed in the kebele cabinet meeting A. Health program performance was discussed three times in the last quarter – 5 points B. Health program performance was discussed twice times in the last quarter – 4 points C. Health program performance was discussed Once times in the last quarter– 2 points D. Health program performance was never discussed in the last quarter – 0 point

4	Review of key performance indicators	
	4.1	<p>Plan versus achievement based on the key indicators</p> <p>A. There is documented information that shows comparison was made between what is planned and what is achieved on the key indicators for all of the three months in the quarter- 9 points</p> <p>B. There is documented information that shows comparison was made between what is planned and what is achieved on the key indicators for two months in the quarter- 6 points</p> <p>C. There is documented information that shows comparison was made between what is planned and what is achieved on the key indicators only for one of the months in the quarter- 3 point</p> <p>D. There is no documented information that shows comparison is made between what is planned and achieved based on the key indicators - 0 points</p>
	4.2	Performance gaps are identified by comparing achievement against target (At least once in 3 months)
	4.3	<p>Action plan is prepared for the identified priority problems/challenges</p> <p>A. Action plan (with roles and responsibilities, resources and timeline) is prepared for all the identified priority problems/ challenges – 4 points</p> <p>B. Action plan is prepared for some of the identified priority problems – 2 points</p> <p>C. Action plan is not prepared at all – 0 points</p>
	4.4	<p>The action plan is being implemented</p> <p>A. There is documented evidence for actions taken – 4 points</p> <p>B. No action is taken– 0 points</p>
5		<p>The health post has a program performance monitoring chart (demographic profile, kebele resource mapping, school health profile and kebele HHs environmental sanitation profile)</p> <p>A. All Key performance monitoring charts) are displayed – 10 points</p> <p>B. At least half of monitoring charts are displayed-7 point</p> <p>C. Few key performance monitoring charts are displayed – 5 points</p> <p>D. No monitoring chart is displayed – 0 point</p>

Health Center IR Assessment Checklist

Section A: HIS structure and resources (30%)		
1	Medical record Unit	
1.1	The health facility has the inputs necessary for medical record unit:	
	1) Adequate space as per the standard? A. YES B. NO	
	2) Adequate number of shelves? A. YES B. NO	
	3) Adequate number of medical record unit staff? A. YES B. NO	
	4) Availability of individual medical records (central register, Folder, service ID, patient card etc)?	
	1.2	Proper procedures /processes in the medical record unit
		1) Centralized /unified medical record system/unit? A. YES B. NO
		2) Medical records are filed based on the label given on the shelves? A. YES B. NO
		3) The MRU is assisted by the use of an electronic system (Electronic Medical Record System)? A. YES B. NO
		4) Individual medical records are easily accessible for retrieving (Randomly take two samples and check if record easily (within three minutes for each) retrieved)? A. YES B. NO
5) Completeness of central register? A. Complete B. Incomplete		
2	HMIS Unit	
2.1	The health facility has a well-organized HMIS unit.	
	1. Dedicated desk/office? A. YES B. NO	
	2. A functioning computer dedicated for DHIS 2 is in place? A. YES B. NO	
2.2	3. The HMIS unit has HIT or a personnel dedicated for the implementation of HMIS? A. YES B. NO	
	At least five currently updated manuals which facilitate the implementation of HIS are in place	
	1. HMIS procedure/data recording and reporting? A. YES B. NO	
	2. HMIS Indicator reference guide? A. YES B. NO	
	3. HMIS disease classification (NCoD)? A. YES B. NO	
	4. Data quality manual? A. YES B. NO	
5. Data use manual? A. YES B. NO		
2.3	Availability of registers and tally sheet in past three months <i>Calculate as (Registers and tally sheets that were available all the time during the reporting period/ number of applicable registers and tally sheets)</i>	
3	The health center has running cost for strengthening and implementation of HIS? If the facility had budget to conduct any of the HIS activities such as printing, supervision, review meeting, then give YES. A. Yes B. No	
4	A supportive supervision with corresponding time frame is in place and is being implemented?	
4.1	The health center conducted CHIS/integrated supportive supervision* to health posts in the past three month <i>Calculate as (Total number of visits conducted/expected number of visits during the period)</i> <i>(Expected number of visits equals= # of times HPs are visited* Number of months). A health center is expected to visit a health post monthly.</i>	
	Supportive supervision is done using a checklist? A. Yes B. No	
	Written supportive supervision report/feedback provided to the health posts <i>Calculate as (Total number of feedback provided/ Total number of visits conducted during the period)</i>	
	Action plan with responsible person and time table prepared and tracked implementation to facilitate follow-up? A. Action plan developed and previous actions monitored B. Action plan developed but previous actions not monitored C. Action plan not developed	

5	<p>There is a documented evidence that shows HIS capacity building needs assessment is done (on data management, data quality, and data use) for the staff in the past 6 months.</p> <p>A. HIS capacity needs assessment was conducted and took action/communicated to the next level in the last six months</p> <p>B. HIS capacity needs assessment was conducted but didn't take action/was not communicated to the next level in the last six months.</p> <p>C. HIS capacity needs assessment was not conducted in the last six months</p>
6	Digitization
6.1	<p>The health facility has a functional DHIS-2?</p> <p>A. Yes and it is online</p> <p>B. Yes but it is offline</p> <p>C. No DHIS-2</p>
6.2	<p>The health facility has an internet connectivity (functional HealthNet, 3G/4G etc)</p> <p>A. Yes</p> <p>B. No</p>
Section B: Data quality (30%)	
1	Data Completeness and consistency on individual medical records and registers
1.1	<p>Data completeness of the registers.</p> <p><i>Calculate data completeness of the register</i></p> <p><i>If register completeness check is not conducted, the facility gets 0</i></p>
1.2	<p>Data consistency between register and individual medical records for the indicator selected above during the last audit :</p> <p><i>Calculate the consistency between register to individual medical record</i></p> <p><i>If consistency of data on register is not checked against individual medical record, the facility gets 0</i></p>
1.3	<p>Data completeness on the individual medical records for randomly selected MRNs from the central medical register:</p> <p><i>Calculate data completeness of the individual medical records</i></p> <p><i>If register completeness check is not conducted, the facility gets 0</i></p>
1.4	<p>Data consistency between individual medical records and register for the selected MRNs from the central medical register:</p> <p><i>Calculate the consistency between register to individual medical record</i></p> <p><i>If consistency of data on register is not checked against individual medical record, the facility gets 0</i></p>
2	Reporting accuracy/ Consistency between reports and records
2.1	<p>The facility conducts data verification (reporting accuracy ratio) of reported and recounted data at department level before reporting to the HMIS unit</p> <p>A. Yes</p> <p>B. No</p>
2.2	<p>In the last three months, the health facility has conducted LQAS:</p> <p><i>Calculate as total number of LQAS conducted/expected number of LQAS</i></p> <p><i>Expected number of LQAS= Number of months * Types of reports</i></p>
2.3	<p>First LQAS score of the health center of the latest month of the reporting period for the monthly service delivery report:</p> <p><i>If the health facility has not conducted LQAS, it gets 0.</i></p>
3	Completeness of reports (Representative and content)
3.1	<p>The health facility keeps a log book/uses electronic system that helps to track completeness and timeliness of reports</p> <p>A. From both health posts and case teams</p> <p>B. Only from one of the two</p> <p>C. Never</p>
3.2	<p>Completeness of reports (Representative) from health posts (Reports received from health posts)</p> <p><i>Calculate as total number of reports received from HPs/Total number of expected reports</i></p> <p><i>Total number of expected reports= Total number of Health posts * types of report* period</i></p>
3.3	<p>Completeness of reports (representative) from the health center/Primary health care unit (Reports sent from the health center)</p> <p><i>Calculate as total number of reports sent from the Health center/PHCU/Total number of expected reports</i></p> <p><i>Total number of expected reports= Types of report* period</i></p>
3.4	<p>Content completeness in the previous quarter</p> <p><i>(Select 12 data elements randomly from the last month Service Delivery report and check the data completeness). Completeness= Data elements with complete data/12</i></p>

4	Timeliness of reports
4.1	Health center has received reports from its health posts according to the national schedule <i>Calculate as total number of reports received timely from HPs/Total number of expected reports</i> <i>Total number of expected reports= Total number of Health posts * types of report* period</i>
4.2	Reports are submitted to the next level according to the national reporting schedule <i>Calculate as total number of reports sent timely from the Health center/PHCU/Total number of expected reports. Total number of expected reports= Types of report* period</i>
Section C. Data use (40%)	
1	PHCU annual Woreda based plan: A. The PHCU has annual plan which is cascaded to case team and Health post B. The PHCU has plan but not cascaded to case team and health post C. The PHCU doesn't have a plan at all
2	Performance monitoring team (PMT) is in place and established according to national standard A. PMT is in place and the members are put together based on the national standard B. PMT is in place but the members are not put together based on the national standard C. PMT is not established at all
3	PMT is convening on monthly basis with 50%+ members <i>Calculate as total number of PMTs held with 50%+ of its members/ Total number expected PMT meetings</i> <i>Total number of expected PMT meetings equals the total number of months in the reporting period as it is expected to happen on a monthly basis</i>
4	PMT is chaired by the head/delegate of the health facility as per the national standard <i>Calculate as total number of PMTs chaired by head/delegate of the health facility/ Total number PMT meetings conducted</i>
5	PMT is reviewing key performance indicators:
5.1	The health facility tracks performance/ indicators of all types (Coverage, quality and equity)
	5.1.1. Tracked key HMIS indicators (Plan versus Performance for key indicators) <i>Calculate as total number of months where plan versus performance for key indicators is done/total number of months in the period</i>
	5.1.2. Evidence of analysis by any form of disaggregation (Age, sex, geography etc) A. YES B. NO
	5.1.3. Quality of health care (Content of care, standard of care etc) are measured and monitored by conducting clinical audit in the quarter? A. YES B. NO
5.2	Performance gaps are identified A. YES C. NO
5.3	Root cause analysis is done for low performing key prioritized indicators A. Root cause is identified for all of the prioritized low performing key low performing indicators B. Root cause is identified for only some of the prioritized low performing indicators C. Root cause is not identified for all the low performing indicators
5.4	Action plan/QI project with roles and responsibilities, resources and timeline is prepared for the identified priority problems/challenges A. Action plan is prepared for all the identified priority problems/challenges B. Action plan is prepared for some of the identified priority problems C. Action plan has never been prepared at all
5.5	The action plan/intervention/QI projects is being implemented A. There is documented evidence that previous action plan is monitored during the current PMT B. No action is taken
5.6	PMT action plan/meeting minutes (Hard and/or soft) copy were shared to case teams <i>Calculate as total number of times that case teams actually received the PMT meeting minute /[Number of case teams * number of months PMT meetings conducted]</i>
6	Updated DHIS-2 dashboard for health centers selected key indicators A. The health center has an updated DHIS-2 dashboard for selected key indicators B. The health center has a DHIS-2 dashboard for selected key indicators but it is not updated C. The health center has never created a DHIS-2 dashboard for its key indicators

7	<p>Written feedback was given to lower level supervisory units (Health Posts) on the performance and data quality issues based on the routine report?</p> <p><i>Calculate as total number of written feedback given on performance and data quality issues / [total number of months in the period* total number of health posts]</i></p>
8	<p>The health center practice Case team level performance review system</p> <p><i>Calculate as total number of times case teams conducted performance review/ Expected number of case team level performance and data quality review</i></p> <p><i>Expected number of case team level performance review: [2 case teams (MCH and Disease)* 3 month =6]</i></p>
9	<p>Service delivery units (EPI, OPD, Family planning, ANC/delivery/PNC, ART, TB) that have an updated program performance monitoring chart</p> <p><i>Calculate as total number of service delivery units that have a performance monitoring chart / total number of service delivery units in the facility</i></p>
10	<p>The health facility has displayed information in the form of table, chart, etc. based on selected indicators in the health facility compound</p> <p>A. Information (Performance related) is displayed in the health facility compound B. No information (Performance related) was displayed in the health facility compound</p>
11	<p>Health facility held participatory performance review meeting with the community/stakeholders quarterly?</p> <p>A. Yes B. No</p>
12	<p>Health facility conducted review meeting (health Facility staff and health post staff)</p> <p>A. The health facility conducted review meeting (any type: HIS/other program based) three times in the quarter B. The health facility held review meeting (any type: HIS/other program based) twice in the quarter C. The health facility held review meeting (any type: HIS/other program based) once in the quarter D. The health facility did not held performance review meeting in the last quarter</p>
13	<p>Presence of any gap addressed (Gap in performance, quality, equity)</p> <p>A. Yes B. No</p>

Hospital IR Assessment Checklist

Section A: HIS structure and resources (30%)		
1	Medical record Unit	
	1.1	The hospital has the inputs necessary for medical record unit: 1) Adequate space as per the standard? A. YES B. NO 2) Adequate number of shelves? A. YES B. NO 3) Adequate number of medical record unit staff? A. YES B. NO 4) Availability of individual medical records (central register, Folder, service ID, patient card)
	1.2	Proper procedures /processes in the medical record unit 1) Centralized /unified medical record system/unit? A. YES B. NO 2) Medical records are filed based on the label given on the shelves? A. YES B. NO 3) The MRU is assisted by the use of an electronic system (Electronic Medical Record System)? A. YES B. NO 4) Individual medical records are easily accessible for retrieving (Randomly take two samples and check if record can easily (within three minutes for each) be retrieved)? A. YES B. NO 5) Completeness of central register? A. Complete B. Incomplete
2	HMIS Unit	
	2.1	The hospital has a well-organized HMIS unit. 1. Dedicated desk/office? A. YES B. NO 2. A functioning computer dedicated for DHIS 2 is in place? A. YES B. NO 3. The HMIS unit has HIT or a personnel dedicated for the implementation of HMIS? A. YES B. NO
	2.2	At least five currently updated manuals which facilitate the implementation of HIS are in place 1. HMIS procedure/data recording and reporting? A. YES B. NO 2. HMIS Indicator reference guide? A. YES B. NO 3. HMIS disease classification (NCoD)? A. YES B. NO 4. Data quality manual? A. YES B. NO 5. Data use manual? A. YES B. NO
	2.3	Availability of registers and tally sheet in past three months <i>Calculate as (Registers and tally sheets that were available all the time during the reporting period/ number of applicable registers and tally sheets)</i>
3	The hospital has running cost for strengthening and implementation of HIS? A. YES B. NO	
4	The hospital conducted HIS alone/integrated supportive supervision/mentorship* to health facilities in the past three months <i>Calculate as (Total number of visits conducted/expected number of visits during the period) (Expected number of visits equals= # of times centers are visited* Number of months)</i>	
5	There is a documented evidence that shows HIS capacity building needs assessment is done (on data management, data quality, and data use) for the staff in the past 6 months. A. HIS capacity needs assessment was conducted and took action/communicated to the next level in the last six months B. HIS capacity needs assessment was conducted but didn't take action/was not communicated to the next level in the last six months. C. HIS capacity needs assessment was not conducted in the last six months	
6	Digitization	
	6.1	The hospital has a functional DHIS 2? A. Yes and it is online B. Yes but it is offline C. No DHIS-2
	6.2	The hospital has an internet connectivity (functional HealthNet, 3G/4G etc) A. YES B. NO
	6.3	The hospital has implemented an Electronic health record (EHR) system A. Full EHR B. Partial EHR (Any of the service units except MRU) C. None

6.4	The hospital has implemented HRIS A. YES B. NO
Section B: Data quality (30%)	
1	Data Completeness and consistency on individual medical records and registers
1.1	Data completeness on the registers for one randomly selected data element from data elements listed on the most recent LQAS: <i>Calculate data completeness of the register</i> <i>If register completeness check is not conducted, the facility gets 0</i>
1.2	Data consistency between register and individual medical records for the indicator selected above during the last audit : <i>Calculate the consistency between register to individual medical record</i> <i>If consistency of data on register is not checked against individual medical record, the facility gets 0</i>
1.3	Data completeness on the individual medical records for randomly selected MRNs from the central medical register: <i>Calculate data completeness of the individual medical records</i> <i>If register completeness check is not conducted, the facility gets 0</i>
1.4	Data consistency between individual medical records and register for the selected MRNs from the central medical register: <i>Calculate the consistency between register to individual medical record</i> <i>If consistency of data on register is not checked against individual medical record, the facility gets 0</i>
2	Reporting accuracy/ Consistency between reports and records
2.1	The facility conducts data verification (reporting accuracy ratio) of reported and recounted data at department level before reporting to the HMIS unit A. YES B. NO
2.2	In the last three months, the health facility has conducted LQAS: <i>Calculate as total number of LQAS conducted/expected number of LQAS</i> <i>Expected number of LQAS= Number of months * Types of reports</i>
2.3	First LQAS score of the hospital for the last month of the reporting period for the monthly service delivery report: <i>During verification: Take two data element from the sample data elements in the LQAS and check for correctness</i>
3	Completeness of reports (Representative and content)
3.1	The HMIS unit keeps a log book/uses electronic system that helps to track completeness and timeliness of reports from departments/case teams A. YES B. NO
3.2	Service Report completeness of the hospital (Reports sent- Representative completeness) <i>Calculate as total number of reports sent from the Hospital /Total number of expected reports</i> <i>Total number of expected reports= Types of report* period</i>
3.3	Disease Report completeness of the hospital (Reports sent- Representative completeness) <i>Calculate as total number of reports sent from the Hospital /Total number of expected reports</i> <i>Total number of expected reports= Types of report* period</i>
3.4	Content completeness in the previous three months <i>(Select 12 data elements randomly from the last month Service Delivery report and check the data completeness). Completeness= Data elements with complete data/12</i>
4	Timeliness of reports
4.1	Service Reports of the hospital are sent according to the national reporting schedule (Service reporting timeliness) <i>Calculate as total number of service reports sent timely /Total number of expected reports</i>
4.2	Disease Reports of the hospital are sent according to the national reporting schedule (Disease reporting timeliness) <i>Calculate as total number of disease reports sent timely /Total number of expected reports</i>

Section C. Data use (40%)	
1	<p>Availability of an annual hospital plan:</p> <p>A. The hospital and each directorate has an annual plan</p> <p>B. The hospital has an annual plan but targets not cascaded to directorates</p> <p>C. The hospital doesn't have a plan at all</p>
2	<p>Performance monitoring team (PMT) is in place and established according to national standard</p> <p>A. PMT is in place and the members are put together based on the national standard</p> <p>B. PMT is in place but the members are not put together based on the national standard</p> <p>C. PMT is not established at all</p>
3	<p>PMT is convening on monthly basis with 50%+ members</p> <p><i>Calculate as total number of PMTs held with 50%+ of its members/ Total number expected PMT meetings</i></p> <p><i>Total number of expected PMT meetings equals the total number of months in the reporting period as it is expected to happen on a monthly basis</i></p>
4	<p>PMT is chaired by the head/delegate of the health facility as per the national standard</p> <p><i>Calculate as total number of PMTs chaired by head/delegate of the health facility/ Total number PMT meetings conducted</i></p>
5	<p>PMT/Quality improvement team is reviewing key performance indicators:</p>
5.1	<p>The health facility tracks performance/ indicators of all types (Coverage, quality and equity)</p>
	<p>5.1.1. Tracked key HMIS indicators (Plan versus Performance for key indicators) A. YES B. NO</p>
	<p>5.1.2. Evidence of analysis by any form of disaggregation (Age, sex, geography etc) A. YES B. NO</p>
	<p>5.1.3. Quality of health care measured and monitored (Content of care, standard of care etc)- Clinical audit</p> <p><i>Calculate as total number of clinical audit conducted /Total number of expected clinical audits</i></p> <p><i>Total number of expected reports= Departments/case teams eligible for audit* period</i></p>
	<p>5.1.4. The hospital conducted regular Perinatal/maternal death review</p> <p><i>Calculate as total number of times perinatal/maternal death review is conducted /Total number of expected reviews</i></p>
5.2	<p>Performance gaps are identified</p> <p>A. YES B. NO</p>
5.3	<p>Root cause analysis is done for low performing key priority indicators</p> <p>A. Root cause is identified for all of the prioritized low performing key low performing indicators</p> <p>B. Root cause is identified for only some of the prioritized low performing indicators</p> <p>C. Root cause is not identified for all the low performing indicators</p>
5.4	<p>Action plan with roles and responsibilities, resources and timeline is prepared for the identified priority problems/ challenges</p> <p>A. Action plan is prepared for all the identified priority problems/challenges</p> <p>B. Action plan is prepared for some of the identified priority problems</p> <p>C. Action plan has never been prepared at all</p>
5.5	<p>The action plan/intervention/QI projects is being implemented</p> <p>A. There is documented evidence that previous action plan is monitored during the current PMT (Complete, partially complete and not implemented)</p> <p>B. No action is taken</p>
5.6	<p>PMT action plan/meeting minutes copy were shared to case teams</p> <p><i>Calculate as total number of times that case teams actually received the PMT meeting minute / [Number of case teams * number of months PMT conducted]</i></p>
6	<p>Updated DHIS-2 dashboard for hospital's selected key indicators</p> <p>A. The hospital has an updated DHIS-2 dashboard for selected key indicators</p> <p>B. The hospital has a DHIS-2 dashboard for selected key indicators but it is not updated</p> <p>C. The hospital has never created a DHIS-2 dashboard for its key indicators</p>
7	<p>Written feedback was given to service departments/directorates on the performance and data quality issues?</p> <p><i>Calculate as total number of written feedback given on performance and data quality issues / [total number of months in the period* total number of departments/directorates]</i></p>
8	<p>The hospital practices Case team level/Directorate level performance and/or data quality review system</p> <p><i>Calculate as total number of times directorates conducted performance and data quality review / Expected number of directorate level performance and data quality review</i></p> <p><i>Expected number of directorate level performance and data quality review: [Number of directorates* months]</i></p>
9	<p>Directorates have a program performance monitoring chart</p> <p><i>Calculate as total number of directorates that have a performance monitoring chart / total number of directorates in the hospital</i></p>

10	The hospital has displayed information in the form of table, chart, etc. based on selected indicators in the health facility compound A. Information (Performance related) is displayed in the health facility compound B. Information (Performance related) is not displayed in the health facility compound
11	The hospital has developed and disseminated analytic(brochure and/or newsletter and/or leaflet and/or report and/or presentation etc) in the quarter A. YES B. NO
12	The hospital held performance review meeting with the community quarterly? A. YES B. NO
13	The hospital conducted review meeting in the quarter A. The health facility conducted review meeting (any type: HIS/other program based) three times in the quarter B. The health facility held review meeting (any type: HIS/other program based) twice in the quarter C. The health facility held review meeting (any type: HIS/other program based) once in the quarter D. The health facility did not held performance review meeting in the last six months
14	Presence of any change in performance, quality, equity as a result of use of data for action A. YES B. NO



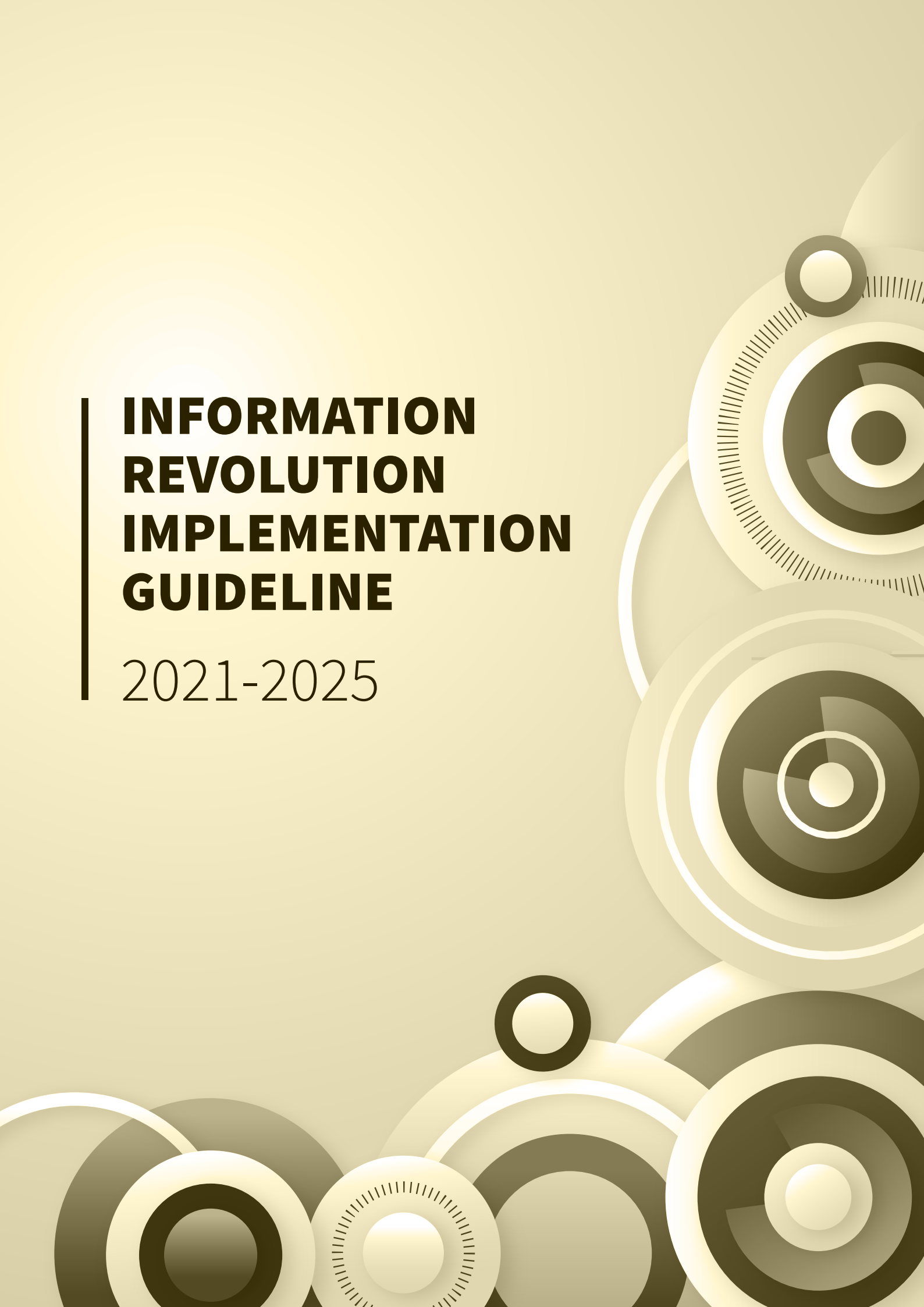
Woreda Health Office IR Checklist

Section A: HIS Structure and Resource (30%)	
1	The woreda health office has put in place the inputs needed to strengthen HIS
1.1	<p>The woreda health office has a well-organized monitoring and evaluation/planning unit or sub-unit</p> <p>A. The woreda health office have adequate staff for planning, HMIS or M & E Unit as per the structure? A. YES B. NO</p> <p>B. Dedicated office/Desk for planning/HMIS unit? A. YES B. NO</p> <p>C. Presence of dedicated computer for HMIS/M&E unit? A. YES B. NO</p>
1.2	<p>At least six currently updated manuals which facilitate the implementation of HIS are in place within the Woreda Health Office (accessibility should be indicated, either hard or soft copy)</p> <p>A. HMIS procedure/data recording and reporting? A. YES B. NO (0.5)</p> <p>B. HMIS Indicator Reference Guide? A. YES B. NO (0.5)</p> <p>C. All HMIS disease classification booklets (NCoD)? A. YES B. NO (0.5)</p> <p>D. Data quality Manual? A. YES B. NO (0.5)</p> <p>E. Data use Manual? A. YES B. NO (0.5)</p> <p>F. CHIS manual? A. YES B. NO (0.5)</p>
2	Does the woreda health office has budget for any of the below activities
A	Supportive Supervision? A. YES B. NO
B	Review meeting? A. YES B. NO
3	The Woreda Health Office has a system for timely supportive supervision with fixed schedule
3.1	<p>Previous action plan reviewed before conducting next supportive supervision</p> <p>A. YES</p> <p>B. NO</p>
3.2	The Woreda Health Office conducted supportive supervision in the last quarter.
3.3	<p>Was the Supportive supervision done using checklist that address HIS components?</p> <p>A. Yes the check list addressed major components of HIS</p> <p>B. Yes the check list addressed partially HIS</p> <p>C. Checklist was used but it does not address HIS at all</p> <p>D. Checklist was not used at all</p>
3.4	Written supportive supervision report/feedback provided to the health facilities (observing written document is required)
3.5	<p>Action plan with responsible person and time table prepared to facilitate follow-up?</p> <p>A. YES</p> <p>B. NO</p>

4 Capacity building and mentoring to strengthen the HIS in the past three months	
4.1	Woredal health office capacity for mentorship for HIS A. There is trained mentors in the woreda B. There is no trained mentors in the woreda
4.2	The Woreda Health Office conducted mentoring at least once in the past three months- A. YES B. NO
4.3	Action plan with responsible person and time table prepared to facilitate follow-up of gaps identified? A. YES B. NO
4.4	Does the woreda conducted HIS capacity need assessment in the past six months? A. YES, Observed B. NOT Conducted
4.5	Does the WorHO addressed the HIS capacity gap based on the findings? A. YES, all are addressed B. YES, Partially addressed C. NOT addressed
5 Digitization of HIS	
5.1	DHIS2 functionality during the past three months? A. YES functional, online B. YES functional, offline C. DHIS2 not functional at all
	WorHO practice backup storage of data monthly from DHIS2? A. YES B. NO
	WorHO staff have access to DHIS2? A. YES B. NO
	WorHO ensured the entry of denominator, baseline and target in DHIS2? A. YES B. NO
5.2	Access to eCHIS dashboard by WorHO office head and woreda HMIS focal person A. YES B. NO
5.3	The WoHO has a functional internet connectivity during the past three months? A. YES B. NO
5.4	The WorHO regularly update master facility list A. YES B. NO
6 Governance and leadership	
6.1	Does WorHO establish stakeholder or partner forum? A. YES B. NO
6.2	Does WorHO level established stakeholder or partner forum meet regularly and monitor overall HIS performance A. YES B. NO

Section B: Data Quality (30%)	
1	The woreda health office conducted RDQA
1.1	The woreda health office had conducted verification component of RDQA in the last three months?
1.2	In the last three months, to what extent the woreda has met the data accuracy target? Calculate as total number of indicators whose data verification is b/n 0.9 and 1.1 / Total number of indicators for which data verification was done
1.3	Data quality gaps improvement action plan was prepared based on data verification findings? A. YES B. NO
2	Report Completeness
2.1	The woreda Health Office keeps a log book that helps to track reporting completeness? A. YES B. NO
2.2	Completeness of woreda administrative reports
2.3	Completeness of reports (representative) from the Primary health care unit (Reports sent from the health center & health post)
3	Report timeliness
3.1	Timeliness of woreda administrative reports
3.2	Health facilities in the woreda has submitted report according to the national schedule
4	WorHO conducted report completeness, timeliness and consistency analysis on monthly bases A. YES B. NO
5	WorHO provide written feedback on report completeness, timeliness and consistency analysis monthly to health facilities.
Section C: Data Use (40%)	
1	The Woreda based health sector (WBHS) plan: A. The woreda has annual WBHS plan which is cascaded to health facilities and WorHO case team B. The woreda has annual WBHS plan and cascaded the plan to either health facilities or WorHO case team C. The woreda has WBHS plan but not cascaded to health facilities and WorHO case team D The woreda doesn't have a WBHS plan at all
2	Performance management team(PMT) is in place and established according to national standard A. PMT is in place and the members are put together based on the national standard B. PMT is in place but the members are not put together based on the national standard C. PMT is not established at all
3	PMT is convening on a monthly basis with (50%+) members
4	PMT is chaired by the head of the Woreda Health Office or delegates as per the national standard
5	PMT is reviewing key performance indicators

5.1	The WorHO is tracking key coverage, quality and equity indicators
	5.1.1 The WorHO tracked key HMIS indicators (Plan versus Performance for key indicators) Calculate as total number of months where plan versus performance for key indicators is done/total number of months in the period
	5.1.2 Evidence of analysis by any form of disaggregation (Age, sex, urban/rural etc)? A. YES B. NO
5.2	Performance gaps are identified by comparing achievement against target (At least once in the quarter)? A. Yes B. No
5.3	Root cause analysis is done for low performing key indicators, at least once in the review period for priority indicator A. Root cause is identified for all low performing key priority indicators B. Root cause is identified for only some low performing indicators C. Root cause is not identified for all the low performing indicators
5.4	Action plan is prepared for the identified priority problems/challenges with roles and responsibilities, resources and timeline A. Action plan is prepared for all the identified priority problems/challenges B. Action plan is prepared for some of the identified priority problems C. Action plan is not prepared at all
5.5	The action plan is being implemented (previous action plan reviewed before convening the subsequent PMT meeting and what has been done and not done is reviewed) A. There is documented evidence for actions taken B. No action is taken
5.6	PMT action plan/meeting minutes/feedback were circulated to case teams: (written minutes with formal letter, can be made using social media platform or in person by hardcopy)
6	Updated DHIS2 dashboard for the woreda's selected key indicators A. The woreda has an updated DHIS-2 dashboard for selected key indicators B. The woreda has a DHIS-2 dashboard for selected key indicators but it is not updated C. The woreda has never created a DHIS-2 dashboard for its key indicators
7	Written feedback was given to lower level supervisory unit on the performance of Key indicators in the past three month
8	The Woreda Health Office has presented or disseminated analytic report A. Every Quarter B. bi-annually C. Annually D. None
9	Woreda health office case team practiced team level performance and data quality review
10	The Woreda Health Office has displayed information in the form of table, chart, etc. based on selected indicators in the office compound using local language A. Updated Information is displayed in the WoHO compound in local language B. Updated Information is displayed in the Woreda Health Office compound in English C. No information was displayed in the Woreda Health Office compound
11	The Woreda Health Office held performance review meeting with community in the last quarter? A. YES B. NO
12	The Woreda Health Office held performance review meeting with health facilities in the last quarter? A. YES B. NO
13	Presence of any change in performance, quality, equity as a result of use of data for action A. Yes B. No



**INFORMATION
REVOLUTION
IMPLEMENTATION
GUIDELINE**

2021-2025