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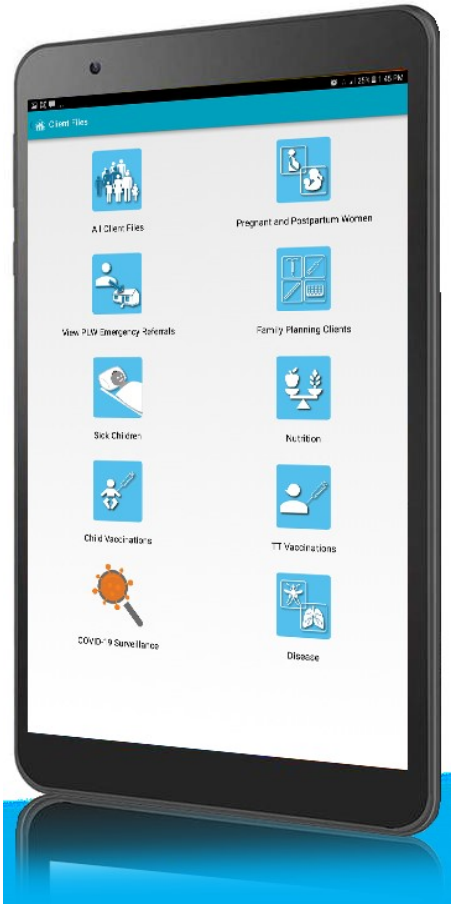
MINISTRY OF HEALTH-ETHIOPIA
የዜጎች ጤና ለሃገር ብልጽግና!
HEALTHIER CITIZENS FOR PROSPEROUS NATION!



eCHIS Implementation Manual

April, 2021

Policy plan Monitoring and Directorate

Addis Ababa, Ethiopia

Contents

FOREWORD

Ethiopia has launched the Health Extension Program (HEP) in 2003 with aim to ensure universal access of primary health care services comprised of health promotive, disease preventive, and basic curative health services at community level. Health extension workers during implementing Health extension program have data recording and reporting tools at health post level, known as Community health information system (CHIS). Currently based on health sector transformation (HSTP) agenda, information revolution was implemented in each facility. According to information revolution agenda one is Digitalizing of health scoters data recording and reporting tools. So the federal ministry of health was implementing electronic health information system (eCHIS) at health post level for community health data since 2019 for digitalizing family folder and service provision of RMNCH at health post level. The Health Extension Program, has called for the reorganization of information systems to collect and use information for action at local levels This in turn drives a need for the careful assessment of what is required for community level data collection, processing, analysis and dissemination, as well as linking to the national health management and information systems. This manual is therefore, prepared in collaboration of Ethiopian Policy, Plan, Monitoring & Evaluation Directorate of Ministry of Health, (MOH), Health Information Technology Directorate and Different Implementing partners , for use principally by the health extension supervisors and health extension workers as well as experts at the M&E unit of the MOH and Regional Health Bureaus furthermore, participants and advisors to such processes expected to use it as a reference for the steps and products to which they are contributing for god implementation of Electronic Community health information system

Finally, it hoped that all Health Information System (HIS) technical experts at national, regional and district levels including the supervisors to the Electronic community health information system.

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Acronyms:

eCHIS:	Electronic Community Health Information System
CHIS:	Community Health Information System
HIS:	Health Information System
HEP:	Health Extension Program
IRR:	Information Revolution Roadmap
HEW:	Health Extension Workers
MoU:	Memorandum of Understanding
ZHD:	Zonal Health Departmen
WDA:	Women Development Aramy
NTD:	Neglected Tropical Disease
NCD:	Non Communicable disease
PNC:	Post Natal care
ANC:	Anti Natal Care
PHCU:	Primary Health Care Unit
HP:	Health Post
MOH:	Ministry Of Health
RHB:	Regional Health Bureau
ICT:	Information Communication Technology
SOP:	Standard Operating Procedure

1. Background

Ethiopia's health information system (HIS) has been one of the transformation agendas of the health system, referred to as the Information Revolution by the Ministry of Health. The Information Revolution Roadmap (IRR) aims to transform the information system to produce timely and reliable data accessible to all concerned while ensuring its optimal utilization. Digitization is one of the three pillars of the information revolution, along with HIS governance and data use. So far, enabling environments such as e-health architecture are designed to strengthen institutional, population based and point of service records and the shared service for facilitating interoperability.

The Health Extension Program (HEP) introduced in 2003, in order to accelerate the Health information collection, use and it is one of the major platforms for the delivery of high impact priority health promotion, disease prevention, and selected curative services to the community. The program was designed to address challenges related to the limited number and uneven distribution of health facilities that highly limited the performance and it is designed to be delivered at household, community, schools, youth centers and health posts by health extension workers (HEWs).

The HEP expanded in geographic coverage, infrastructure development and service delivery. The number of HEWs and HPs increased from 2,737 and 4,211, respectively in 2004/5 to 39,878 HEWs and 17,587 HPs in 2021. In addition to expanding in size and coverage, the program has undergone several changes over time. Pastoralist and urban HEP models were developed, and service packages were expanded from solely promotive and preventive services to a more comprehensive package including selected curative services. The program has been using a family centered information system called Community Health Information System (CHIS) for routine monitoring and management of program performances. Since the CHIS have been successful in many aspects, the Ministry planned to build on top of it when the agenda of the information revolution was drafted.

As one of the digitization agenda items of the information revolution, the electronic community health information system (eCHIS) has been implemented in more than 2800 health posts.

Paper based community health information system was designed to capture health Extension programs, starting from 2004. HEWs have been collecting community based data using a paper based information system. Based on several researches, reports and evaluation, paper based has some drawbacks such as data handling and updating, communication, error in data recording (over-reporting and under-reporting), poor data quality, timeless reporting, and work overload to HEWs. Therefore, with the consultation of stakeholders, MoH digitized CHIS in 2017 to tackle challenges encountered during the implementation of the system. In the support of this effort the government has procured 30,000 tablets with additional accessories, which are distributed to all Regional Health Bureaus in preparation for further scale-up of e-CHIS but currently the system is implemented in five regions.

2. Operational definition

2.1 *What is e-CHIS: The eCHIS digitized for CHIS content in to a mobile platform for use by HEWs around the country.*

2.2 *eCHIS application suite: The eCHIS application is the suite of three mobile applications, with a web based performance monitoring dashboard. The application is in detail described in Section-3.*

2.3 *eCHIS Module: A module is a group of logically interrelated programmatic content. eCHIS has four modules.*

- ***Module-1:*** *Digital Family folder* - contains the following programmatic contents: Household management, WDA management, HEP package implementation, Household properties.
- ***Module-2:*** *RMNCH* - ANC, Labor & Delivery, PNC, Immunization, Family planning, Nutrition, Child health.
- ***Module-3:*** *DPC* - Communicable diseases (TB, Malaria, HIV), NCDs, NTDs.
- ***Module-4:*** *Logistics Supply and Management*

2.4 eCHIS Release: A release is a combination of interrelated programmatic contents that are expected to be deployed together. The whole development of e-CHIS has a total of 5 releases.

2.5 eCHIS Editions: The eCHIS has three editions, namely, eCHIS - Agrarian edition, eCHIS Pastoral edition (eCHISP) and e-CHIS - Urban edition (eCHISU).

2.6 eCHIS Version: Versioning is a way to label unique states of the e-CHIS application as they are released. The eCHIS base android application has a version number. Besides each application in the application suite has its own version number, and a build date

2.7 Household registration: Household registration comprises registration of household information/identification, household member's information including assigning a head for households, household property, household's possession of LLITN, Community based Insurance (CBHI), Women development Army (WDA), HEP packages practice, model household status and competency based training.

2.8 eCHIS services: As per the current implementation status of e-CHIS in the five regions, HEWs are expected to provide the service on the basis of the released version & RMNCH modules in the e-CHIS application.

2.9 eCHIS implementation: Health post implemented eCHIS, when provided eCHIS training, eCHIS devices with installed HEW mobile application, started HH registration as indicated in no 2.7, and also started providing service as indicated in No 1

2.10 Implementation in terms of coverage

a. Blanket coverage: *All HEWs in the woreda received tablets, gets training and started to use e-CHIS application in all health post.*

b. Partial Coverage *at least 50% of the HEWs in the woreda received tablets, gets training and started to use e-CHIS application in all health post.*

2.11 Implementation in terms of HH registration

a. Complete HH registration: A health post that completed all HH registration as per the definition indicated in no 7.

b. Incomplete HH registration: A health post that completed at least 50% HH registration as per the definition indicated in no 7.

c. Inactive HH registration: A health post that completed less than 50% of HH registration and a health post that dropped HH registration for 4 consecutive weeks.

2.12 Implementation in terms of service

a. Active A health post started providing any of the e-CHIS service modules as per the definition indicated in no 4 and submitted at least 5 & above forms weekly basis.

b. Inactive: A health post started providing any of the e-CHIS service modules as per the definition indicated in no 4 and submitted less than 5 forms weekly basis.

2.13 Users

2.13.1 Platform:

- **Mobile workers/user:** These are users which are using tablets with e-CHIS mobile application to provide routine services to client at the community level
- **Web workers/use:** These are users which are using computers to access the e-CHIS web dashboard to manage the day-to-day activities of the mobile workers and generate reports for planning and decision making for bureaus and health facilities.

2.13.2 Services

- **HEW users:** These are users of e-CHIS HEW mobile application helps to provide services to clients at health post level.
- **Referral users:** These are users of e-CHIS referral application helps to create action card/feedback and updates client profile based on the referral cases created at the facility level.
- **Supervisor users:** These are users of the focal person application to provide any supportive supervision related activities to the mobile workers at the health post level.

3. Purpose of the Document

The Purpose of this document is:

- To standardize the overall e-CHIS implementation approaches in the country
- To create common understanding on the eCHIS implementation among all the responsible stakeholders in the health system
- To guide the routine eCHIS implementation process at all levels
- To be used as a reference document for eCHIS implementation
- To introduce eCHIS implementation subsidiary documents guides/manuals.

4. The eCHIS software

The e-CHIS digitize the CHIS content into a mobile platform for use by health extension workers (HEW) around the country. It is a suite of mobile applications with a web based performance monitoring dashboard. It intends to capture electronic data on the Health Extension Program (HEP) and community-level services, as well as utilize this data to improve HEP performance and community health outcomes. Its main purpose is to serve as a job aid to Health Extension Workers (HEWs). It is also intended to improve data quality and assist the limited human resource (HEW) capacity to collect, analyze, and use data, thus promoting a culture of data use at community level.

In general, eCHIS can measure the progress of the program by data collection, analysis and provide for decision making purposes. It can be considered as a database at the community level, which supports local data use to improve service provision.

4.1 The eCHIS modules:

- **The digital family folder**- Households management, WDA management, HEP package implementation practice tracking and module household graduation.
- **RMNCH (reproductive maternal nutrition and child health)** - ANC, labor and delivery outcome, PNC, Immunization, Family planning, Nutrition and ICCM)
- **Disease prevention and control** - Communicable disease, Non-communicable disease, Neglected tropical disease and mental health.
- **Logistic supply and management -** This module helps the HEW to manage the pharmaceutical supply, distribution, requisition and reporting at the health post level.

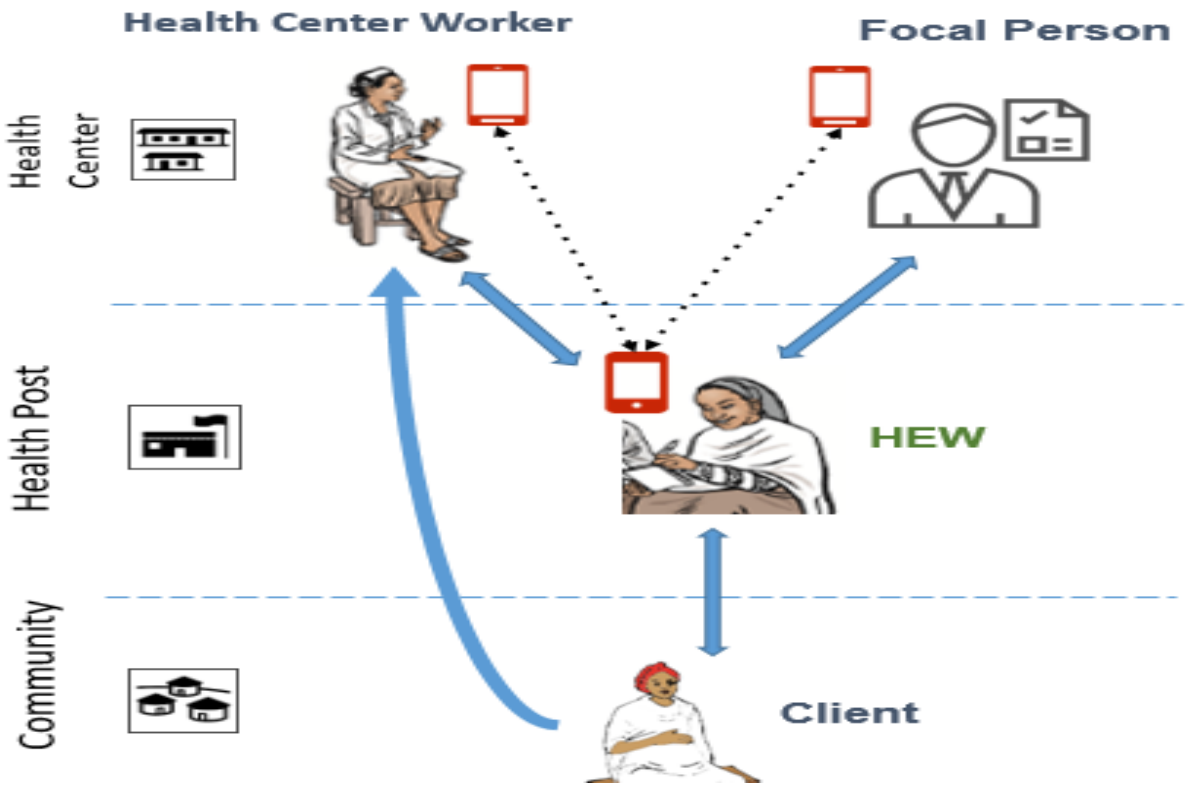
4.2 The eCHIS applications:

1. **The HEW application** – This is the primary application. It is designed to be used by HEWs. The application supports HEWs in Family folder management, service delivery and follow-up.

2. **The Health center referral application** – The referral application supports health center workers (midwives, OPD workers, etc.), to accept referrals from HEWs and provide referral feedback to HEWs. This application is not meant to act as a real time service delivery job aid. Instead, its aim is to capture relevant information about the client's visit at the Health center that can inform the HEW about the client's status and possible follow-up needs.

3. **The Focal person application** – Is designed to facilitate the job of the HEP supervisor (Focal person). It has functionalities that help the supervisor with supervision checklists, device troubleshooting, follow on late program visits, and monitor the progress and performance of the HEW. HEW performance report, health post IDSR report and update health post setting

The following diagram shows how the three applications work together to facilitate client referral and feedback.



4.3 The eCHIS web portal

The e-CHIS dashboard is designed for national, regional, zonal and woreda level users to visualize and manage the performance of the program based on the data submitted from the mobile applications by HEWs. In addition to accessing aggregated data submitted by HEWs, they can also monitor the activities of the HEW. This is possible through individual reports form submission history, users' performance over time and overall project status reports.

4.4 Application version control:

Releases of the application will be shared on an accessible software artifact repository. The repository will maintain the version number and change list of each version of the applications. Whenever there is a new version of a release, MoH will notify regions to update to the latest version.

4.5 Interoperability

The eCHIS is expected to be interoperable with nationally recognized systems such as DHIS2. Interoperability with DHIS2 is aimed at providing the monthly service delivery and disease reports

electronically from eCHIS to DHIS2 without manual intervention. The eCHIS is also expected to base its facility list on the Master facility registry (MFR).

4.5 eCHIS Development process

The eCHIS is being developed in a phase-based approach. The development of each module is based on a requirements document. Standard application development procedures are followed in developing the eCHIS programmatic modules. The programmatic modules fall into different software releases. Each release has a defined scope and contains certain predefined modules. Each release is expected to be pilot tested and implemented independently from the other modules.

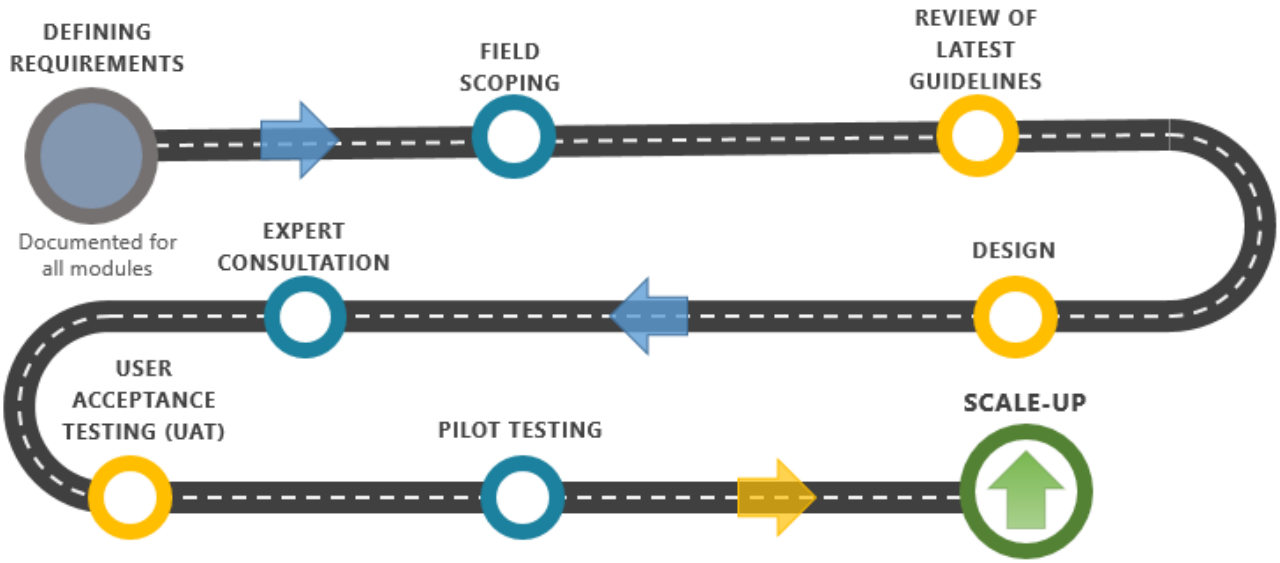


Fig: eCHIS development process

4.6 Programmatic releases of the e-CHIS applications:

A release is a combination of interrelated programmatic contents that are expected to be scoped, contents developed, tested and deployed together. Currently, e-CHIS has the following releases:

- Release-1: Family folder, Maternal health, Family planning, Immunizations
- Release-2: Child Health, Nutrition (GMP)
- Release-3: Communicable diseases (TB, Leprosy, Malaria, HIV)
- Release-4: NTD and Non communicable diseases
- Release-5: Logistic supply and management

5. Governance

MOH has established a governance structure for the national HIS to ensure the implementation of HIS activities, provided leadership, oversees the accomplishment of activities and HIS governance throughout the country.

As part of the broader HIS governance and leadership; eCHIS shall need to be led by an organized and structured way to achieve its goals. Since eCHIS is implemented at community level to support the HEP, it needs close follow up of administrative bodies. ECHIS implementation governance helps to facilitate decision making to support and achieve the desired eCHIS outcomes.

A governance body should be established to oversee and follow the implementation of eCHIS, maintain sustainable financing, strengthen ICT infrastructure, promote inter-sectorial and multi-sectorial collaboration, strengthen monitoring and evaluation at all levels, prompt accountability, responsibility and transparency while implementing the System. Moreover, the established body should perform stakeholder's engagement, establish a budget and systems for expenditures and tracking costs. Prepare action plan/checklist template for implementation.

The below governing structure shows the roles and responsibilities of eCHIS implementation at all administrative levels of the health sector.

5.1 Roles and responsibilities of Government bodies and Partners

In the following section the role and responsibilities of MOH, RHB, ZHD, Woreda Health Office (WorHO), PHCU, Health Post/ (HEWs/Health Extension professional) and implementing partners are stated.

5.1.1 Ministry of Health (MOH)

- Set eCHIS goals, objectives, strategies and major activities.
- Establish a national steering committee and national technical work group.
- Mobilize resources (financial, material and human resources)
- Develop, review the requirement and update the eCHIS application
- Prepare and sign Memorandum of Understanding (MoU) with implementing partners.

- Develops national eCHIS user guides, Implementation manuals, training materials SOPs and other relevant documents.
- Responsible for managing eCHIS user's accounts at all levels until the system becomes mature enough.
- Provide Master TOT to MoH, RHB and implementing partners.
- Ensure the standardization of the eCHIS implementation.
- Conduct supportive supervision and review meetings with regions and partners.

5.1.2 Regional Health Bureau (RHB)

- Lead the eCHIS implementation in the region.
- Establish a regional level implementation technical working group.
- Translate eCHIS application contents, training materials and user guides, implementation manual and other relevant documents to the regional working language.
- Provide Training of Trainers (ToT) to Zones, woreda and implementing partners.
- Support and follow up the cascading training to the end users. .
- Assign regional focal persons to follow and take responsibility towards eCHIS implementation.
- Conduct advocacy and sensitization to RHB and ZHD health managers.
- Distribute inputs (tablets, solar chargers, SIM cards, etc.) and other resources to all health centers and health posts and document the distribution list.
- Ensure standardized eCHIS implementation within the region.
- Mobilize resources from implementing partners (financial, material and human resources).
- Ensure that the server capacity is not compromised by the eCHIS implementation.
- Conduct supportive supervision using a standardized checklist.

- Conduct review meetings and provide feedback.
- Document and disseminate best practices and lessons learned.

5.1.3 Zonal Health Department (ZHD)

- Support the Cascading of basic end user eCHIS training.
- Assign focal persons to facilitate the eCHIS implementation.
- Conduct advocacy at Zonal and Woreda level.
- Mobilize resource and advocate eCHIS implementation at Woreda / community level
- Distribute inputs (tablets, solar chargers, SIM cards, etc.) and other resources to all health centers and health posts and document the distribution list.
- Use eCHIS dashboard and provide feedback to the PHCU and HPs.
- Follow-up timely distribution of implementation resources, and their use for intended purposes.
- Ensure standardized eCHIS implementation modality within the zone.
- Support and follow-up woredas end user training and implementation.
- Conduct supportive supervision using standardized checklists.
- Conduct review meetings and provide feedback.
- Document and disseminate best practices and lessons learned.

5.1.4 Woreda Health Office (WorHO)

- Prepare Woreda eCHIS implementation plan.
- Assign focal persons to facilitate the eCHIS implementation.
- Provide eCHIS training for HEWs, Supervisors and other responsible health professionals.
- Create awareness on eCHIS implementation for woreda and kebele administrations.

- Mobilize resource and advocate eCHIS implementation at Woreda / community level
- Distribute inputs (tablets, solar chargers, SIM cards, etc.) and other resources to all health centers and health posts and document the distribution list.
- Ensure standardized implementation of eCHIS at the woreda level.
- Use eCHIS dashboard and provide feedback to the PHCU and HPs.
- Ensure eCHIS activities are integrated with the WorHO supportive supervision checklist.
- Conduct supportive supervision, mentorship and provide feedback.
- Coordinate implementing partners across the woreda.
- Document and share best practices and lessons learned within the woreda

5.1.5 Primary Health Care Unit (PHCU)

- Prepares a detailed eCHIS implementation action plan.
- Engage the Keble administration throughout the implementation process to support the HEWs.
- Ensure eCHIS activities are integrated with the PHCU supportive supervision.
- Follow up the plan and performance of HEWs and ensure data quality.
- Ensure standardized eCHIS implementation at PHCU level
- Conduct supportive supervision and provide feedback
- Conduct mentorship to the HEWs.
- Confirm household registration completion with kebele administration
- Ensure HC referral application is working properly.
- Ensure that Focal persons use their application to monitor and follow the HEW activity and provide feedback.

- Ensure HEWs are using eCHIS applications to support the HEP.
- Ensure that the management team at the PHCU follows the implementation of eCHIS.
- Ensure proper utilization of resources and devices at the PHCU and health posts.

5.1.6 Health Post (HP)

- Responsible for household information registration and service provision.
- Manage the implementation of paper-based and eCHIS side by side.
- Ensure data quality of CHIS and eCHIS, compile data and generate periodic reports using eCHIS.
- Ensure Synchronize of the data as per the standard (at least twice a day).
- Community mobilization and advocacy of eCHIS implementation with kebele administration and community leaders
- Manage eCHIS hardware including tablet computers, charger, solar charger, power bank, and SIM cards and also responsible to properly utilize resources

5.1.7 Partners

- Provide Resource support (technical, financial and material) for the eCHIS implementation
- Provide technical support on the development, training, mentorship, maintenance & troubleshooting support to implementing sites.
- Participate in supportive supervision, review meetings and provide feedback.
- Participate in the preparation and revision of governance documents, SOPS, user guide, manuals and other necessary documents for eCHIS implementation.
- Ensure the annual and quarter plan is aligned with the MOH and RHB.
- Provide Mentorship to the users of the system.

6. Capacity building

The eCHIS workforce and administration bodies at all levels shall obtain required resources, improve knowledge and retain skills for successful eCHIS implementation.

The eCHIS capacity building entails two components. An infrastructural and a human capacity building component. These components are necessary to support the implementation and building competency of the eCHIS health workforce and health managers. .

6.1 Infrastructural capacity building:

For proper implementation of eCHIS infrastructures (power supply and ICT infrastructure) should be fulfilled at different levels of the health sector.

MoH: The MoH is required to have a well-equipped national data center, with adequate and standard network, storage, computing, security, reliable power supply, backup power sources (UPS and generators), backup & redundancy, and disaster recovery, and monitoring tools to host the back-end services including the database.

RHB, ZHB and Woreda: needs to be equipped with computers, mobile data coverage, internet connectivity, power supply (source), and other necessary ICT infrastructures based on the context of the administrative levels

Health Centers and Health Post: necessary materials such as tablets, SIM cards, power bank, tablet bag, workstation computers should be fulfilled to facilitate usage for service delivery units where tablets are not provided to access the referral and focal person application. The eCHIS User guide and reference materials should be prepared and availed in soft copy or hard copy.

6.2 Human resource capacity building

To capacitate the HEWs and PHCU workers and advance their knowledge towards proper use of eCHIS, the capacity building should enable the implementers, supervisors and managers to monitor HEWs and track the performance of eCHIS and is expected to reach stakeholders and health workforce through training, mentorship, and supportive supervision.

6.3 Training

Providing training will enable users to understand and operate eCHIS. The eCHIS training encompasses Master ToT, regional ToT, and basic end user training led by a comprehensive training manual. The training aims to produce a competent team of trainers that can facilitate the cascading of eCHIS application and end user training. Training users' names are created at MoH.

Whenever a new implementation of eCHIS is started regions will request MoH for a set of training users for each training session. The necessary requirements for conducting training should be fulfilled and details shall be reflected in the training manual.

Training Modality

Master TOT

The eCHIS master ToT will be provided by MoH for the concerned ministry's staff, RHB, and experts from implementing partners. The eCHIS master ToT will be guided using a training guideline and training duration (days/hours) is described below. The training guide will be attached on the Annex section (See Annex *xxx*)

Release-1: Family folder, maternal health, Family planning, Immunizations - 5 days

Release-2: Child Health, Nutrition (GMP) - 3 days

Release-3: Communicable diseases (TB, Leprosy, Malaria, HIV) - 3 days

Release-4: NTD and Non-communicable diseases - 2 days

Release-5: Logistic supply and management - 2 days

Report and Dashboard-2 days

Training of Trainers (TOT) - at Regional City/Town

Following the training guideline regional Health Bureaus are expected to provide the eCHIS TOT to concerned RHB, Zone, woreda experts and partners supporting at zonal level. The ToT is necessary to capacitate the Zonal, woreda experts and partners who provide support for the implementation through training, supervision and mentorship.

Release-1: Family folder, maternal health, Family planning, Immunizations - 5 days

Release-2: Child Health, Nutrition (GMP) - 3 days

Release-3: Communicable diseases (TB, Leprosy, Malaria, HIV) - 3 days

Release-4: NTD and Non-communicable diseases - 2 days

Release-5: Logistic supply and management - 2 days

Report and Dashboard-2 days

Basic end-user Training

The Basic end user training is provided for HEWs and PHCU experts. All HEWs in the Woreda and experts from the Health Center are expected to take the training which is provided by trained Zonal and Woreda experts. The training duration will be determined by the release type and training guideline.

Release-1: Family folder, maternal health, Family planning, Immunizations - 7 days

Release-2: Child Health, Nutrition (GMP) - 4 days

Release-3: Communicable diseases (TB, Leprosy, Malaria, HIV) - 3 days

Release-4: NTD and Non communicable diseases - 3 days

Release-5: Logistic supply and management - 3 days

6.4 Supportive supervision

Providing only eCHIS training may not be enough to understand and operate the system; it is also needed to capacitate the users of the application by providing routine supportive supervision at all levels after training is provided and the system is deployed. The duration of the supportive supervision may vary from level to level, the MoH and RHB shall provide supportive supervision on quarterly; Zonal and Woreda on monthly and health centers on weekly basis for successful eCHIS implementation and to improve the quality of services at the community level.

6.5 Mentorship

Joint problem-solving, communication and knowledge sharing between mentors and the health workforce is important to facilitate smooth eCHIS implementation. The mentorship program should connect people who have specific skills and knowledge (mentors) with individuals who need or want the same skills and advantages to move up in work, skill level necessary for smooth eCHIS implementation and enhance performance. The program to be executed should be structured and has a well-functioning strategy that requires strategic planning and implemented quarterly based to zonal/woreda level and bi-annually form RHB towards building skills for future goals and milestones of eCHIS implementation.

6.6 eCHIS Implementation cost per woreda

Maintaining sustainable financing to the eCHIS implementation programme for Woreda is mandatory, hence establishing a budget and systems for expenditures and a means for tracking costs accompanied by an action plan/checklist is necessary for proper execution and follow up of eCHIS implementation.

The below table lists out the ... ->

7. Implementation Modality

The eCHIS implementation modality is required to guide the successful implementation and institutionalization of the eCHIS application across the country. The modality accesses pre and post implementation activities.

7.1. Pre-implementation activities

- **Readiness assessment:**

  The readiness assessment helps to know the status of eCHIS implementation and optimize the support according to the needs of the health posts. The readiness assessment includes infrastructure (internet connectivity & electricity), CHIS implementation status, availability of HEWs and Health post functionality. There should be a standardized checklist that helps to conduct the readiness assessment.

- **Implementation site prioritization:**

  The eCHIS is expected to be rolled out in all health posts of agrarian settings the implementation should follow a phased based approach and priority settings. The below criteria helps to prioritize a woreda for eCHIS implementation.

  - Woreda with a better network for internet connectivity and access to power supply.
  - Better performing woreda based on the management standard criteria.
  - Woredas with special attention from the government and implementing partners. For instance, woreda's selected for IR, learning woredas, CBMP woredas and other initiatives.

- **Plan and resource alignment**

  The MoH, RHB and implementing partners shall align their plan and resources for the effective eCHIS implementation and efficient resource utilization.

The resource mapping can extend to the woreda level. The Woreda is expected to Identify, align and harmonize resources for the implementation of eCHIS. ,

- **Sensitization:**

  Implementers have to conduct sensitization work to create common understanding among health managers at all levels and mobilize the community. eCHIS implementation at a woreda level is a resource intensive task, which requires the support of the community and Kebele leadership. Hence, the woreda health office should work on sensitization activities to stakeholders for supporting the implementation of eCHIS. This includes, sensitizing the Kebele administrative, WDA groups, any local religious and community associations, to cooperate and support the HEW in Household profiling, and creating awareness within the community in the use of technology by the HEW to facilitate the service provision.

- **Developing action plan for the implementation of eCHIS:**

  Implementers at all levels should develop action plans for implementing eCHIS. The action plan should include resource distribution, implementation sites, training schedule, budget, go-live date, follow up support schedule, monitoring and evaluation. A sample template for the action plan is attached on the annex section. (See Annex *XXXX)*

- **Coordination & Communication:**
  - RHB has to notify MoH whenever a new woreda is going to start implementation.
  - eCHIS implementation status should be tracked both by MoH and RHB on a weekly basis using eCHIS dashboard.
  - RHB is expected to coordinate with the implementing partners' to support the eCHIS implementation.

7.2 Implementation

The implementation process at Health post level comprises Household registration, service provision, and data utilization. It also helps to have common understanding among stakeholders involved in eCHIS implementation.

Household registration: the implementing health post will register all households in the kebele with household members, HEP packages practice, HH properties, WDA and status of model households. The HEW should complete household registration in three months after filling the initial application setup.

Service provision: eCHIS has different modules of service provision. The HEW won't implement all the modules at once. But she is expected to use the module she implements for service provision. In a phased approach service provision will start based on the implementation of eCHIS releases. During service provision, the HEW is expected to update the health cards accordingly. In case the service delivery is provided in outreach or campaign, the HEW can record on health cards/field books and update the eCHIS accordingly.

Data utilization: On an annual basis the HEW is expected to prepare Kebele profile. Periodically the HEW will generate health service delivery reports. She will utilize the eCHIS dashboard to monitor performance

Referral linkage: eCHIS facilitates the link between Health post and health center. In order to create strong information exchange/referral linkage between the health centers and health posts; there should be frequent operation/usage, strong follow-up and support of the eCHIS implementation.

The implementation modality will be blanket coverage at woreda level. That means if a woreda is selected for implementation all PHCU and H Ps have to implement eCHIS.

Paper based CHIS is being implemented in three modalities; ACHIS, UCHIS and PCHIS. The government has decided to digitize these modalities. As a result, eCHIS agrarian edition is developed for the agrarian setting and its adaptation to urban and pastoral settings is underway.

The eCHIS agrarian edition is being implemented in a phase-based approach, which is in the recommended way to implement all modules of eCHIS. Phase based implementation means implementing the different eCHIS releases one after the other. A phased approach to implementation allows time for HEWs to get familiar with one release before implementing another release. Also it allows for a shorter training duration. This is important because HEWs can absorb only limited content in a single training round.

Documents that will going to put on the Annex section

1. *Action Plan template*
2. *Training Guide*
3. *User manual*
4. *The specifications for devices will be annexed. See Annex xxxx.*

8. Monitoring and Evaluation

Monitoring and evaluation (M&E) is an action-oriented management tool that operates on adequate, relevant, and reliable and timely collected, compiled and analyzed digital community health information on program objectives, targets and activities at health post level. The objectives of M&E are to improve the management and optimum use of the resources of a program and to make timely decisions to resolve constraints and/or problems of implementation

Monitoring is the systematic process of collecting, analyzing and using digital community health information to track a programme's progress toward reaching its objectives and to guide management decisions. Monitoring usually focuses on processes, such as when and where activities occur, who delivers them and how many people or entities they reach. Monitoring is conducted after a programme has begun and continues throughout the programme implementation period. Monitoring is sometimes referred to as process, performance or formative evaluation.

Evaluation is a systematic process of data collection, analysis and interpretation about activities and effects of a program or any of its components looking to answer evaluation questions on why and/or how programs succeed or fail to either to be implemented or to bring about desired changes. It does also show the merit and demerits of the project/program too. It includes process evaluation which focuses on the implementation of a program or some of its components and outcome evaluations that focus on attributing observed levels of outcomes to specific interventions or programs.

8.1 The important characteristics of monitoring and evaluation are;

Monitoring	Evaluation

Continuous process	Periodic: at essential milestones, such as the mid-terms of the program implementation; at the end or a substantial period after program conclusion
Keeps track; oversight; analyzes and documents progress	In-depth analysis; Compares planned with actual achievements.
Focuses on inputs, activities, outputs, implementation processes, continued relevance, likely results at outcome level	Focuses on outputs to inputs; results to cost; processes used to achieve results; overall relevance; impact, and sustainability.
Answers what activities were implemented and the results achieved.	Answers why and how results were achieved. Contributes to building theories and models for change.
Alerts managers to problems and provides options for corrective measures.	Provides managers with strategy and policy options.
Self-assessment by program managers, supervisors, community stakeholders, and donors.	Internal and/external analysis by program managers, supervisors, community stakeholders, donors, and/or external evaluators.

8.2 Terms in M&E

- **Evaluation:** - Rigorous, scientifically based analysis of information about program activities, characteristics, and outcomes to determine the merit or worth of a specific

program/project; A comparison of objectives with accomplishments and how the objectives were achieved

- **M&E Plan:** - Relates objectives and activities to problems, and shows how indicators and tools measure achievement of objectives.
- **Monitoring:** - The routine collection and analysis of measurements or indicators to determine ongoing progress toward objectives
- **Outputs:** - Results obtained at the program level following activities (e.g. number of people trained, product availability, improved skills, etc.)
- **Objective:-** Specific statement describing the desired accomplishments or results of an intervention or program. These should be measurable and should address existing problems, program weaknesses, and/or client needs (or build on strengths)
- **Outcomes:** - Results obtained at the population level following activities (e.g., access, contraceptive prevalence, percent of pregnant women receiving antenatal care, etc.)
- **Analysis:** - Convert data into information
- **Inputs:-** Set of resources (e.g., funds, policies, personnel, facilities, supplies, etc.) that are needed to implement a program/activity

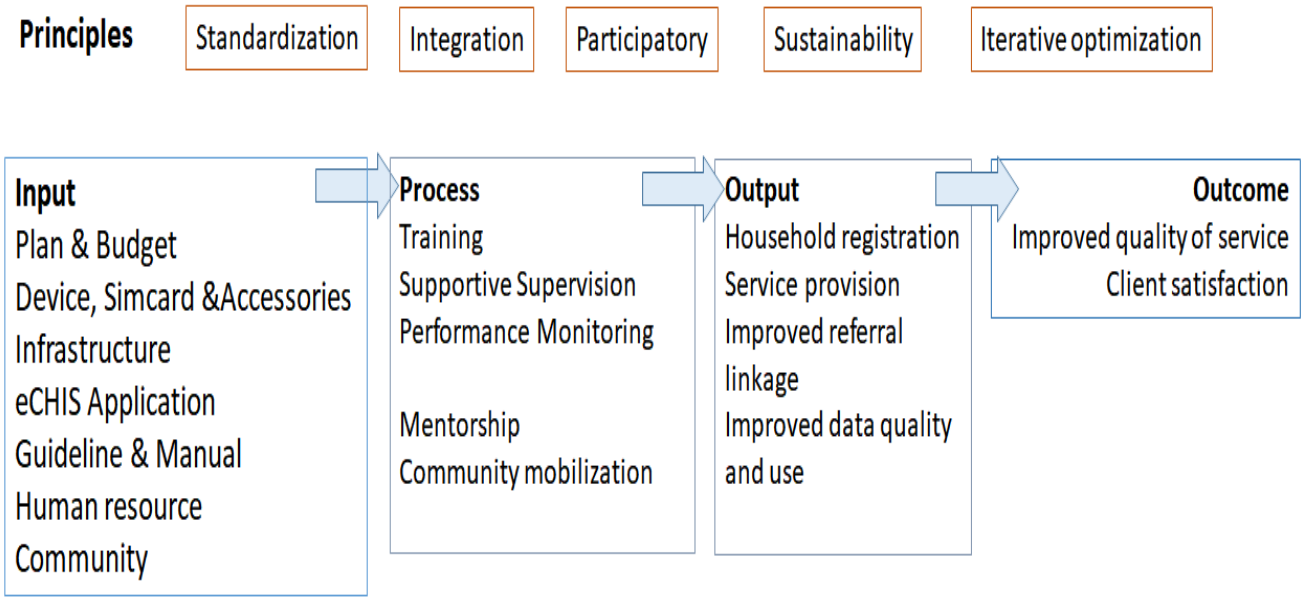
8.3 Objective and Purpose of Monitoring and Evaluation

Objective: is to track implementation and outputs systematically, and measure the effectiveness of programmes. It helps determine exactly when a programme is on track and when changes may be needed. To ensure the implementation of digital community HIS and proper utilization of the system itself

Purpose:

- Serve as a standard reference and guidance
- Enhance quality of data at community
- Avoid duplicative reporting requirements so that data burden on health extension workers can be reduced
- Standardize data collection, analysis and data use tools and procedures

8.4 M&E (FRAMEWORK)



Data source: HSTP2, eCHIS manual and guidelines,

I. Performance review

Is a process where local authorities and health partners are brought together with health institutions' staff to review performance, based on the health institution's own self-assessment. It also determines action needed to ensure achievement of the annual plan. At each health system eCHIS performance monitoring is expected to be conducted based on integrated and pre-scheduled.

MOH: Ministry of health expected to conduct performance review twice a year by gathering RHBs managers, program experts, and external members in an annual Review Meeting. One specific to eCHIS based on supportive supervision and the second integrated with HIS review meeting. Regularly identify performance monitoring indicators and discuss low performed areas, set action items improving low performance areas, share copies of action items to respective RHBs.

RHB: regularly identify performance monitoring indicators and discuss low performed areas, set action items improving low performance areas, share copies of action items to respective ZHO.

ZHB: regularly identify performance monitoring indicators and discuss low performed areas, set action items improving low performance areas, share copies of action items to respective WorHO.

WHO: WorHOs review performance in the presence of woreda program experts, health centers heads and HEWs and staff. woreda HIT can be archived its meeting minutes accordingly.

Health center conducts monthly review meetings with its catchment, specifically on eCHIS or integrated with other program areas. All service delivering health centers are obliged to establish a performance monitoring team and conduct meetings regularly.

Mechanism of Performance Review

- **Self-assessment: -** the act or process of analyzing and evaluating oneself or one's actions. The Health extension workers should conduct self-assessment on the implementation of eCHIS rather than assessed by an external body. This will be conducted by using a standard self-assessment checklist (see the annex).
- **Integrated Supportive Supervision: -** Providing program integrated supportive supervision for the facility which the activities are significant to bring good health service delivery systems. *The supportive supervision checklist format annexed*

- **Performance Review Meetings: -** Meeting conducting for performance monitoring purpose for ensuring that the health service data are properly recorded and collected at HFs and outreach sites
- **Best practices identification and dissemination: -**are a set of guidelines, ethics or ideas that represent the most efficient or prudent course of action, in a given business situation. Best practices may be established by authorities, such as regulators or governing bodies, or they may be internally commanded by an organizational management team.
- **Dissemination:** Is disclosure of knowledge by any appropriate means, such as: publications, conferences, workshops, web-based activities. This disclosure provides information on demographics, health facility and personnel distribution, annual service coverage and disease patterns.

II. **Performance Monitoring Team/Kebele Council Meeting/: -** team represented from each service delivery unit head established for reviewing the performance of the organization

Importance:

- To carry out self-assessment and facilitate informed decisions.
- It enhances performance and quality of data.
- Plays a significant role in achieving the overall organization performance and objectives through team approach.
- Facilitates shared responsibilities among individual team members of the institution

Note: Performance Monitoring team (kebele council): the already established performance review team at Health post level should review or monitor the performance of electronic community health information system implementation, service provision of the modules, and the identified gaps in the implementation. In other ways in HPs level, the performance review team will include kebele councils and other stakeholders at community level.

8.6 Indicators

An indicator is a specific, observable and measurable characteristic that can be used to show changes or progress a programme is making toward achieving a specific outcome. There should be at least one indicator for each outcome. The indicator should be focused, clear and specific. The change measured by the indicator should represent progress that the programme hopes to make. An indicator should be defined in precise, unambiguous terms that describe clearly and exactly what is being measured. Where practical, the indicator should give a relatively good idea of the data required and the population among whom the indicator is measured.

Types of Indicators

- **Count Indicators**
    - Measures the number of event without a denominator
- **Proportion Indicator**
    - Resultant value is typically expressed as a percentage.
- **Rate Indicator**
    - Measures the frequency of an event during a specified time usually expressed per 1000
- **Ratio indicator**
    - The numerator is not included in the denominator

Classification of Indicators

- **Input Indicators: -** These indicators refer to the resources needed for the implementation of an activity or intervention. Policies, human resources, materials, financial resources are examples of input indicators. Example: inputs to conduct a training course may include facilitators, training materials, funds.

- **Process Indicators: -** describe the important processes that contribute to the achievement of outcomes. Monitors activities that are carried out. Examples of process indicators are the quality of training, assessment and needs assessment. These are indirect indicators of merit, and as such do not guarantee the achievement of outcomes.
- **Output Indicators: -** measure the quantity (and sometimes the quality) programme created or provided through the use of input. Measures immediate results of activities.
- **Outcome Indicators: -** measure whether the program is achieving the expected effects/changes in the short, intermediate, and long term. Some programs refer to their longest-term/most distal outcome indicators as impact indicators
- **Impact Indicators: -.** Long-term results of one or more programs over time, such as changes in morbidity and mortality (often also referred to as long-term objectives).

Criteria for eCHIS indicators selection

Validity	**Indicators should measure the condition or event they are intended to measure**
reliability	**indicators should be objective and produce the same results when used more than once to measure the same condition or event, all things being equal (for example, using the same methods/tools/instruments)**
Specific	**indicator should measure only the conditions or events they are intended to measure**
sensitive	**Indicators should reflect changes in the state of the conditions or events under observation.**
operational	**should be measure with definitions that are developed and tested at the programme level and in accordance with reference standards**
affordable	**the cost of measuring the indicators should be reasonable**

feasible	**it should be possible to carry out the proposed data collection under normal programme condition**
measurable	**indicators can be objectively measured**
comparable	**indicators should be comparable over time and across different geographical sites**
Adapted from Development of hea;th program evaluation: report by the director-general, Geneva, WHO, 1978 (documentA31/10)	

Indicators used to monitor the eCHIS implementation

Based on the M & E framework eCHIS indicators are categorized into 4. These are Input, process, output and outcome indicators.

A. Input Indicators
    - Proportion of functional Tablets per woreda
    - Proportion of HITs per woreda
    - Proportion of Health posts with power supply
    - Proportion of Health posts with network coverage and/or internet connectivity
    - Financial effectiveness
    - Number of devices distributed to HEWs
    - Number of Help desks established per region
    - Proportion of administrative staff with access to dashboard, per woreda
B. Process Indicators
    - Proportion of HEWs who are actively using the eCHIS mobile application.
    - Proportion of trained HEW per Woreda.
    - Proportion of trained focal persons per woreda
    - Proportion of trained midwives and experts per woreda
    - Proportion of trained health center experts per Health center

- Number of HCs using the referral app
- Number of HCs using the FP app
- Number of supportive supervisions
- Number of mentorships conducted
- Number of community mobilizations conducted by woredas
- Proportion of administrative staff using the dashboard, per woreda/zone/region/MOH

C. Output indicators
   - eCHIS implementation coverage (eCHIS implementing health posts out of total)
   - Household registration coverage
   - Household member's registration coverage
   - Percent of HPs providing service delivery using eCHIS

D. Outcome indicators (refer HMIS indicator reference manual)

Remark: to see more detailed description see the annex for your reference

8.7 Use of community data for decision making

Electronic community health information systems use a combination of household registration modules, household property, health extension program modules and reporting tools to convert routine community data into useful management information that can be used by health extension workers, local programs, and facility managers. This part is composed of data quality and information use:

A. Data Quality

Data quality is often defined as **"fitness for use." or** data are fit for their intended uses in operations, decision making, and planning or data that reflects real value or true performance data that meet reasonable standards when checked against criteria for quality.

Importance of data quality

- More likely to receive better and safer care if health extension workers and other healthcare professionals have access to accurate and reliable community data to support decision making.
- Access to accurate and reliable family based data such as the results of investigations, allergies, potential drug interactions or past medical history supports healthcare professionals to provide care that is appropriate to assessed needs.
- Service users are more likely to receive better care if performance data used to support quality improvement is of good quality and reflects actual performance.
- Form an accurate picture of health needs, programs, and services in specific areas
- Inform appropriate planning and decision making (such as staffing requirements and planning healthcare services)
- Inform effective and efficient allocation of resources
- Support ongoing monitoring, by identifying best practices and areas where support and corrective measures are needed

Data Quality and its Dimensions

It refers to accurate and reliable information collected through a monitoring and evaluation data management system. The real concern with data quality is to ensure not that the data are perfect, but that they are accurate enough, timely enough, and consistent enough for the organization to make appropriate and reliable decisions.

I. Accuracy; Also known as validity.

Accurate data are considered correct; the data measure what they are intended to measure. electronic community information system (eCHIS) data is affected by:

- Errors (recording or, transcription error,)
- Incorrect data recording and entry into computers data that is not complete, timely and precise. It may also be directly affected by manipulation for other reasons
- Means to overcome the problem in accuracy: Conducting random checks of data that have been entered to check for accuracy.

II. Reliability

The data generated by an electronic community information system (eCHIS) are based on protocols and procedures that do not change according to who is using them and when or how often they are used. The data are reliable because they are measured and collected consistently standardized, written instructions for data collection procedures to correct data errors or deal with missing or incomplete data must be consistent across different sites and time periods. Reliable information implies that it has been collected and measured in the same way (consistently) by all programs during all reporting periods. The reliability of data depends on having an information system with consistent protocols and procedures. Centralized training sessions for staff involved in data collection

- Data are neither valid nor reliable if they do not measure what they are intended to measure and if the data are not collected consistently over time.
- Data may be reliable but not valid if they are collected consistently over time but do not measure what they are intended to measure.
- High quality data must measure what they are intended to measure and they must be collected the same way over time.

III. Completeness

Means that an information system captures all the household registry, household properties and HEP service registries, sites, or other units that it is supposed to measure. The resulting data should represent the complete list of household registry, household properties and HEP service registries, sites, or other units and not just a fraction of the list.

Two types of completeness:

- **Content completeness:** is the completeness of the data elements expected to be included. In eCHIS, it refers to all necessary data elements of the digital family folder and service provision should be filled immediately after provision of the service by the end user
- **Representative completeness**: is the extent to which expected facilities/institutions are included in the report. It refers to the extent to which all data elements on family folders and services are filled properly.
    - To ensure completeness of family/individual data:

- Make sure that all source documents are fully completed with all the relevant information before being reported
- All relevant sites within the program report information about all their services/activities (persons served, services delivered, sites, etc.) not just a fraction of them.

IV. Precision: it means that data have sufficient detail to measure indicators according to the definition. **For example: -**

- A desired indicator could require the number of individuals who received HIV testing by sex of the individual.
- The information system lacks precision if it is not designed to record the sex of individuals who receive HIV testing.
- When data are more detailed, they are more precise.
- Precision will also help answer the questions that are important to different parties
- This requires that the data collection forms are designed to collect precise data and that the appropriate level of detail is reported to higher levels.

V. Timeliness

Data are timely when they are reported to the next level in time to meet reporting deadlines. All expected data collection, aggregation and reports are ready within a specified time frame. All eCHIS users are expected to synchronize data at least twice a day. Also, referrals and feedback must be available within a predefined schedule.

- "On time" implies that the data reported were able to be used in the summary report prepared by the next highest reporting
- To ensure timeliness sites should have:
- The exact dates they are supposed to report to the next level
- Method for reporting (e.g. email, paper)
- As programs become more result-oriented and performance-based, ensuring timely reporting of data must become a priority

VI. Integrity

Data has integrity when the information system is protected from deliberate bias or manipulation for political or personal reasons. An independent review of the data can help determine whether the integrity of the data has been compromised. Knowing that the data will be subject to an independent review may discourage deliberate manipulations of the data.

VII. Confidentiality

This means that clients are assured that their data will be maintained, according to national and/or international standards. This means that personal information is not disclosed inappropriately, and that data in hard copy and electronic form are treated with appropriate levels of security. Another important aspect is to train staff to respect confidentiality and not share confidential information with other clients. These measures protect the privacy of the clients served.

VIII. Accessibility

All necessary data elements recorded on family folders and Cards should be accessible in the digital family folder and service provision modules for decision making purposes. Administrative health experts can access community data through a web-based dashboard. end users HEWs, midwife's focal persons, can access their data on electronic community health information data using tablets.

B. Information Use

The five-step processes that have been used to facilitate the use of information as a part of the decision-making processes guiding program design, management, and service provision in the Ethiopian health sector. Specifically, the steps to information use outlined in this document will help address barriers to using routinely collected data by providing guidance on:

- linking questions of interest to program managers and providers to existing data.
- analyzing, graphing, and interpreting data; and
- Continuing to monitor key indicators to inform improvements.

(see the Information use manual)

8. Annexes

8.eCHIS indicator definitions

I.1. Proportion of functional Tablets per woreda

Definition	Proportion of functional Tablets per woreda/ZHD/RHB/MOH
Formula	Total number of functional tablets in the woreda/ZHD/RHB/MOH**/**Total Number of tablets received by the woreda/ZHD/RHB/MOH
Interpretation	Tablets can be used to eCHIS applications**,** browse the Internet**,** other applications**,** download and read books**,** Charging**,** Call**,** send SMS and etc. The functionality of tablets should be checked for each application properly utilized without any difficulty among health extension workers and health center users.
Disaggregation	by Woreda**,** Zone**,** Regions and MOH
Source	eCHIS dashboard**,** lists of tablets**,** Admin Report
Frequency of report	Monthly

I.2. Proportion of HITs per woreda

Definition	Number of HIT professionals available in the woreda/zone/region/MOH
Formula	Total Number of HIT available in the woreda or zone or Region or MOH/expected HIT in woreda or zone or Region or MOH

Interpretation	Adequate staffing indicates appropriateness and regularity in service provision and also suggests access to services. It can suggest priority areas for increasing staff according to equity standards. HIT is the most important at each level for supporting, troubleshooting of digital activity in the facility and administrative level.
Disaggregation	by Woreda, Zone, Regions and MOH
Source	eCHIS dashboard, lists of tablets Admin Report
Frequency of report	Monthly

I.3. Proportion of health posts have electricity supply

Definition	Proportion of Health post with functional electricity supply
Formula	Total number of health post with electricity supply/ Total Number of health post available in the woreda/ZHD/RHB/MOH
Interpretation	Electricity is the important source of power supply for health post for proper utilization of eCHIS tablets without power interruption. The health post should have a source of power supply will be solar, generator and electricity.
Disaggregation	by Woreda, Zone, Regions and MOH
Source	eCHIS dashboard, lists of tablets, Admin Report
Frequency of report	Monthly

I.4. Proportion of Health posts with network coverage

Definition	Proportion of Health post with functional network coverage
Formula	Total number of health post with functional network/ Total Number of health post available in the woreda
Interpretation	The geographical area covered by the network of a service provider. Within this area, the phone will be able to complete a call,Internet,sending messages, using the carrier's network or a partner network. The network will be 2G,3G and 4G.
Disaggregation	by Woreda, Zone, Regions and MOH
Source	eCHIS dashboard, lists of tablets Admin Report
Frequency of report	Monthly

I.5. Financial effectiveness

Definition	
Formula	
Interpretation	

Disaggregation	by Woreda, Zone, Regions and MOH
Source	eCHIS dashboard, lists of tablets Admin Report
Frequency of report	Monthly

I.6.Number of devices distributed to HEWs

Definition	Proportion of total number of device fully available in the health post
Formula	Total number of health post with full device / Total number of health post available in the woreda
Interpretation	This indicator measures supplies to fully utilization of mobile tablets without any constraint.in terms of items and quantity. Device: - 1. Power bank, 2. Solar Chargers
Disaggregation	by Woreda, Zone, Regions and MOH
Source	eCHIS dashboard, lists of tablets

Frequency of report	Monthly

I.6.Proportion of device with Sim Card (Expected 100%)

Definition	Proportional of mobile tablet with functional SIM card (M to M)
Formula	Total number of health post with functional SIM card /Total number available in the region/zone/woreda
Interpretation	A SIM card is important for Health extension workers for sendi household data recorded on the tablet computer to the server. This SI will be either Machine to Machine reader or Cellular SIM.
Disaggregation	by Woreda, Zone, Regions and MOH Admin Report
Source	eCHIS dashboard, lists of tablets
Frequency of report	Monthly

I.7. Number of Help desks established per region

Definition	Number of help desk established in all administrative unit for eCH support
Formula	Total Number of Help desk established for eCHIS support at eac administrative unit
Interpretation	A help desk is a resource intended to provide eCHIS support or intern users with information and support related to a company's processe products and services. The purpose of a help desk is to provide centralized resource to answer questions, troubleshoot problems ar

	facilitate solutions to known problems. This unit should be established each administrative unit to respond on eCHIS related questions.
Disaggregation	by Woreda, Zone, Regions and MOH
Source	eCHIS dashboard, lists of tablets Admin Report
Frequency of report	Monthly

I.9. Proportion of administrative staff with access to dashboard, per woreda

Definition	Proportion of M&E administrative unit staff fully access to dashboard at each level
Formula	Total number of staff access to dashboard/ Total number of M&E unit staff
Interpretation	Dashboards are a data visualization tool that allow all users to understand the analytics that matter to their business, department or project. ... eCHIS Dashboard allows for various user roles and permissions. One such role is a web user and as the name suggests this user's role will be primarily on the web platform and allows for the user to access/create users, edit/create applications, manage data export and reports.
Disaggregation	by Woreda, Zone, Regions and MOH
Source	eCHIS dashboard, lists of tablets Admin Report

Frequency of report	Monthly

P-1 Proportion of HEWs who are actively using the eCHIS mobile application.

Definition	Proportion of HEWs who are actively using the eCHIS mobile application.
Formula	Total Number of HEWs who are completed CHIS data (HH registry, HH property and HEP practices) using the electronic mobile application in the woreda /expected HEWs in the woreda or zone or Region or MOH
Interpretation	This indicates emphasis on the utilization of eCHIS application among HEWs without any difficulty. This shows the health extension workers use all modules in the application. HEWs should be used in eCHIS applications actively in the past three months for household registration, Household properties,WDA, HEP implementation and service provision .This will be seen on eCHIS dashboard at all levels.
Disaggregation	by Woreda, Zone, Regions and MOH
Source	eCHIS dashboard
Frequency of report	monthly

P2. Proportion of trained HEW per Woreda

Definition	Proportion of trained HEW per Woreda
Formula	Total Number of HEWs who trained in eCHIS in the woreda /expected HEWs in the woreda or zone or Region or MOH
Interpretation	HEWs are community level health care workers in different Ethiopian areas

	such as urban, agrarian and pastoralist. Among this the health extension workers in agrarian areas were implementing a digitized community health information system at health post and basic end user training was provided for the health extension workers on digital family folder and RMNCH services. These indicators will mesures HEWs who are getting the training.
Disaggregation	by Woreda, Zone, Regions and MOH
Source	HRIS or other Training database (New data S)
Frequency of report	Monthly

P3. Proportion of trained focal persons per woreda

Definition	Proportion of trained focal persons per woreda
Formula	Total Number of focal persons who trained in eCHIS in the woreda /expected focal persons in the woreda or zone or region or MOH
Interpretation	Focal person was assigned from the catchment health center supporting Health posts. Supports in providing technical and programmatic support to the HEWs. Each HEW Focal Person has their own device with mobile application. These indicators measure the total number of focal persons trained on eCHIS.
Disaggregation	by Woreda, Zone, Regions and MOH
Source	Administrative, HRIS or other training database
Frequency of report	Monthly

P 4- Proportion of trained midwives and experts per woreda

Definition	Proportion of trained midwives and experts per woreda
Formula	Total Number of midwives and experts who trained in eCHIS in the woreda /expected midwives and experts working at PHCU in the woreda or zone or region or MOH
Interpretation	Midwives was assigned from the catchment health center supporting Health posts. Supports in providing technical and programmatic support to the HEWs. Midwives communicate with health extension workers through referral feedback on RMNCH service using eCHIS application. They have trained on how to use the application and have their own device with mobile application. These indicators measure the total number of midwives trained on eCHIS.
Disaggregation	by Woreda, Zone, Regions and MOH
Source	Administrative, HRIS or other training database (New data S)
Frequency of report	Monthly

P4- Proportion of trained health professionals/experts/ per Health center

Definition	Proportion of trained health professionals/experts/ per Health center

Formula	Total Number of health professionals/experts/ who trained in eCHIS in the woreda /expected health professionals/experts/ working at HC
Interpretation	These indicators measure the number of health workers at facility level trained on eCHIS application to support health extension workers on all applications like, Health extension workers application, Health center referral application and Focal person application. These indicators measure the total number of health professionals/experts/ trained on eCHIS.
Disaggregation	by HC, Woreda, Zone, Regions and MOH
Source	Administrative, HRIS or other training database (New data S)
Frequency of report	Monthly

P-5. Proportion /Number of HCs using the referral app

Definition	Proportion of HCs using the referral application
Formula	Total Number of HCs who refer their clients using the referral application in the woreda /expected HCs implemented the eCHIS application
Interpretation	Supports Focal Persons in providing technical and programmatic support to the HEWs. The eCHIS application has a capacity to monitor the referral feedback. Each HEW Focal Person has their own device with mobile application. These indicators measure the proportion of health centers using referral application.
Disaggregation	by HC, Woreda, Zone, Regions and MOH
Source	Administrative, HRIS or other training database (New data S)
Frequency of report	Monthly

P-6. Proportion of HCs using the FP app

Definition	Proportion of HCs using the FP app
Formula	Total Number of HCs using the FP application in their family planning service in the woreda /expected HCs implemented the eCHIS application in the woreda
Interpretation	Focal Person Application: supports focal persons in providing technical and programmatic support to the HEWs. Each HEW Focal Person has their own device with mobile application.These indicators measure the total number of health centers properly utilizing focal person application.
Disaggregation	by HC, Woreda, Zone, Regions and MOH
Source	Administrative, HRIS or other training database (New data S)
Frequency of report	Monthly

P_7: Proportion of supportive supervisions

Definition	Proportion of supportive supervision visits conducted to Health post from the health Center/ woreda	
Formula	Number of Supportive Supervisions received by the health post	X100
	Number of Supportive Supervisions expected per specified time period	
Interpretation	Supportive supervision performed by a team from the supervisory body on CHIS/e-CHIS recording reporting and data quality status. The number of received supervisory visits is to be reported by the health post.	
Disaggregation	None	
Source	Administrative records: supervisory visit log book/CHIS minute book /	
Frequency of report	Monthly	

P_8: Proportion of Performance monitoring

Definition	Number of Performance monitoring conducted by health post	
Formula	Number of Performance monitoring conducted by health post	X100
	Number of Performance monitoring expected per specified time period	
Interpretation	Performance monitoring is asset of processes and tools to be able to determine how the performance of the origination is going on. These indicators measure the proportion of the facility conducting performance monitoring meetings every month. Every facility expected to conduct every month performance monitoring meetings.	
Disaggregation	None	
Source	Performance Monitoring log book	
Frequency of report	Monthly	

P_9: Proportion of mentorships conducted

Definition	Proportion of mentorships conducted to Health post by the health Center/ woreda	
Formula	Number of mentorships conducted to Health post by the health Center/ woreda	X100
	Number of expected mentorship per specified time period	
Interpretation	It is a system of practical training and consultation that fosters ongoing professional development to yield sustainable high-quality outcomes-WHO It is a process whereby a Mentor guides a Mentee in the development & re-examination of their own ideas, learning, personal & professional development.These indicators measures mentorship given to health posts on the utilization of eCHIS application among health extension workers, this approach can have different face.	
Disaggregation	None	

Source	Administrative records: Mentorship visit log book/CHIS minute book /
Frequency of report	Monthly

P_{10}: Proportion of community mobilizations conducted

Definition	Number of community mobilizations conducted by health post	
Formula	Number of community mobilizations conducted by health post	X100
	Number of expected community mobilizations per specified time period	
Interpretation		
Disaggregation	None	
Source	Administrative records	

Frequency of report	Monthly

P_{11}: Proportion of HEWs who are actively using the eCHIS mobile application, in the woreda per month

Definition	Number of HEWs who are actively using the eCHIS mobile application out of available HEWs in the woreda/zone/region/MOH	
Formula	Number of HEWs who are actively using the eCHIS mobile application in woreda	X100
	Number of HEWs available in the woreda per specified time period	
Interpretation		
Disaggregation	by Woreda, Zone, Regions and MOH	
Source	eCHIS dashboard	
Frequency of report	Monthly	

1. Self-assessment checklist
2. Supportive supervision checklists
3. Data quality checklist