

INFORMATION REVOLUTION NEWSLETTER



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MINISTRY OF HEALTH-ETHIOPIA

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ETHIOPIA
DUP

DATA USE
PARTNERSHIP

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1. INFORMATION REVOLUTION HEADWAY

The Information Revolution (IR) is one of the five agendas of the Ministry of Health (MOH) that are outlined in the Health Sector Transportation Plan (HSTP-II), a five-year strategic document highlighting the roadmap to transform Ethiopia's health sector towards data driven decision making processes and practices. The IR signifies a complete transformation of the way health information has been collected, managed, used, and shared and an institutionalization of active culture of using data for decision-making.

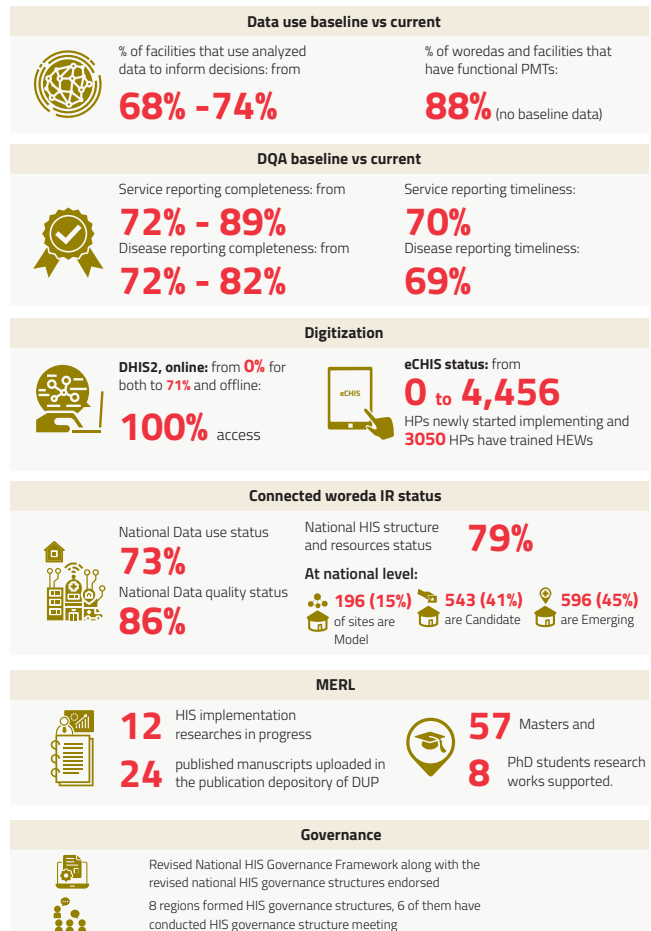
Digital Tools

To realize the IR's goals and objectives, the MOH, in collaboration with development partners, has developed and deployed an extensive range of digital health tools, such as District Health Information Software-2 (DHIS2), electronic Community Health Information System (eCHIS), Ethiopia-Digital Health Apps Inventory System (DHPIS), Electronic Medical Records (EMR), among others. Digitizing data management tools has resulted in enormous progress. For example, DHIS2

– one of MOH's major flagships in Ethiopia's digital health activities – has 71% online and 100% offline accessibility by health facilities. The software has harmonized and standardized previously fragmented electronic routine health data aggregation and transmission, which posed as a significant challenge at the beginning of the IR. Similarly, eCHIS has been implemented in 4456 health posts, and is currently being implemented in more than 3050 health posts.

Improving Quality Data Use

Similarly, the MOH has been actively engaged in improving the use of quality data through strengthening the processes and practices behind evidence-based decision-making. Thanks to the contributions of multiple partners, the MOH reported that health facilities that use analyzed data to inform decisions increased from 68% at the beginning of IR to 74% in June 2021. This accomplishment is associated with improved functionality of the Performance Monitoring Team (PMT), which also increased to 88%.



2. HEALTH INFORMATION SYSTEM (HIS) STRATEGIC PLAN TO ENHANCE EVIDENCE-BASED DECISION-MAKING

Following the development and endorsement of the second Health Sector Transformation Plan (HSTP-II), the MOH prepared a health information system strategic plan (HISSP) for 2020–2025 as a sub-strategy of HSTP II. The document frames and guides all HIS efforts and investment for stakeholders over the next five years.

The HISSP was developed after successive consultations with key stakeholders and details key strategic directions, initiatives, performance measures, collaborative efforts, and investments required. It aims to improve service coverage, quality, equity, and health outcomes by enhancing evidence-based decision-making, while enhancing the use of digital health information technologies for HIS and improve HIS governance and leadership at all levels of the health system.



The strategic plan has identified eight strategic directions that include:

- Improve culture of information use,
- Improve routine data management and quality;
- Improve routine data management and quality;
- Nurture digitalization for data management and use;
- Improve HIS Infrastructure;
- Strengthen vital statistics, Surveillance, Survey and Research;
- Improve HIS financing;
- Improve HIS capacity of Health Workforce; and Strengthen HIS governance

To measure the objectives and performance of the plan, ambitious targets are set that consider previous trends, current-status, resources, and other factors.

TARGETS INCLUDE:



Increase information use index from

52% to 85%



Proportion of health institutions that have functional PMT to

100%



Service data report **TIMELINESS** to

96%



COMPLETENESS to

98%



DHIS2 implementation at private health facilities from

1% to 25%



Increase eCHIS implementation to

**50%
OF HEALTH POSTS**



Increase **BIRTH NOTIFICATION** from

35% to 80%



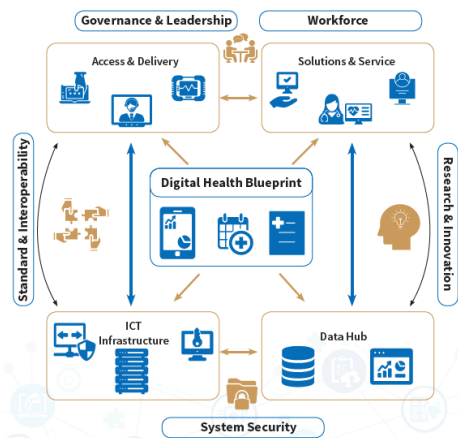
DEATH NOTIFICATION from

3.4% to 35%

HISSP will be cascaded to all levels of the health system and cost 1.28 billion USD to implement. Future investments and annual operational HIS plans will be guided by this strategic plan. Its implementation will be regularly monitored using the indicators and targets set for the plan.

3. LAUNCH OF THE DIGITAL HEALTH BLUEPRINT

In September 2021, the MOH in collaboration with partners prepared and launched the Digital Health Blueprint (DHBp) to strategize and standardize the development and employment of various digital health tools across the country's health system over the next decade. DHBp functions as a governing document of the digitization efforts of the MOH's health information management endeavors.



Conceptual framework of the Digital Health Blueprint

The blueprint is intended to support and speed up the implementation of innovative, reliable, and compatible digital health tools to ensure access to improved quality of care while maintaining pace with advancing global digital health technologies. It envisions putting the health sector on a path towards the ‘Digital Ethiopia 2025’ vision – Ethiopia’s ambitious national strategic plan to build a prosperous and inclusive socioeconomic ecosystem.

Considered groundbreaking by experts in the sector, DHBp establishes a standard that regulates not only implementation, but also what and how partners should introduce new tools in the country’s digital health stream; ensuring the alignment of initiatives, collaboration of stakeholders, and integration of resources. Creating a synergy of action among current and emerging initiatives, the DHBp gives emphasis on mainstreaming digital health

technologies as a major approach to transform healthcare delivery.

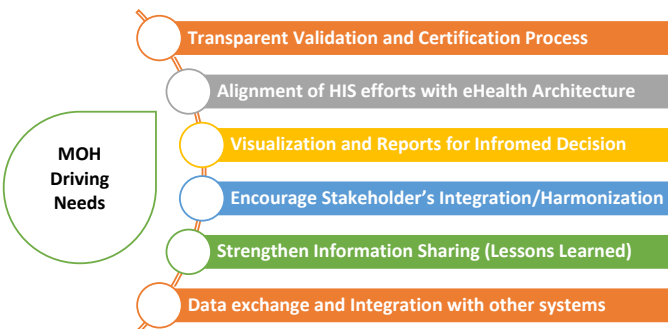
To limit the unnecessary proliferation of ICT in the sector, the DHBp prioritizes intervention in ten highly impactful digital health areas, including Digital Performance Management, Digital Decision-Making Support and Learning, Data Exchange across Systems, Digital Literacy, Digital Health Entrepreneurship, etc. The functional capability of the DHBp rests on four building blocks:

- **ICT infrastructure:** availing hardware, software, computers, networks, etc.
- **Access and delivery:** realizing improved health services informed by evidence based decision-making practices
- **Solutions and services:** developing and deploying innovative digital health tools to contribute to the improvement of health service delivery
- **Data hubs:** ensuring availability of and easy accessibility to quality data, powered by system interoperability.

4. DEVELOPMENT OF DIGITAL HEALTH PROJECTS INVENTORY SYSTEM (DHPIS)

The MOH recognized digital health solutions as both a means and enabler to deliver better health services. For the past ten plus years, the health sector in Ethiopia has given close and serious attention and effort to developing various digital HIS that differ in the scale of implementation, target focus areas, and types of health interventions.

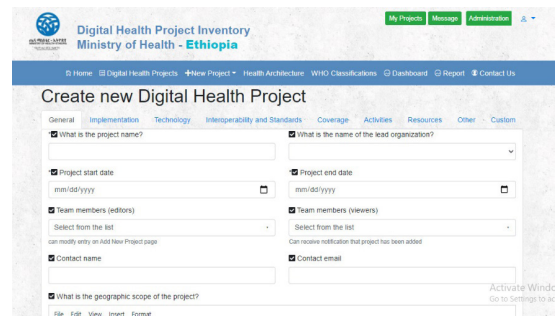
As production of such solutions increases, recognizing their impact and associated costs, sharing knowledge, and utilizing lessons learned becomes difficult. In addition, it is challenging to achieve HIS interoperability to address the health sector needs and attain compliance within national and international standards ensure enhanced health care service delivery. There is a need for an automated platform that registers and validates digital health solutions and aims to guide informed decision-making on future HIS investments by providing reports and visualizations of existing systems by applying different perspectives and contexts.



MoH developed two initiatives – a mobile-based eHealth apps inventory and a customized WHO digital health atlas - to reflect Ethiopian needs and contexts. Both initiatives have their own strengths and weakness that need to be addressed. In assessing the two initiatives, the major identified limitations would have an impact on achieving the objectives of the inventory system, which lead to the development of the inventory system. The following driving

needs are considered for an efficient approach in meeting the needs of building a digital health projects inventory.

Currently, the DHPIS is implemented at the MOH data center with full participation from HITD technical staff. The HITD took the ownership of governing and managing the day-to-day operations of the system. As a major success, the HITD Director formed a dedicated team of experts to lead the curation and validation of the registration and certification processes. In order to support these activities, governance and operational manuals were produced. In addition, knowledge transfer and capacity building trainings in the area of software development processes and configuring minimum data set for registering digital application were conducted for experts who are responsible for supporting the system at a national level.



As a next step, HITD is working to setup a review board that will be responsible for developing guidelines for an approval and certification processes. The DHPIS plays a significant role in making informed decisions by serving as a single source of truth for details of digital health activities on any scale. In addition, integrating the system with MOH's knowledge management system and Innovation Center will improve the overall registration and validation processes.

5. REVISION OF THE NATIONAL HEALTH MANAGEMENT INFORMATION SYSTEM (HMIS)

The MOH, in collaboration with partners, has revised the national Health Management Information System (HMIS) to align it with the new HSTP and to address programmatic shifts and data demand. A series of workshops were organized to conduct the revision which also achieved the following results.



The HMIS indicators reference guide

The 177 indicators selected through the iterative process are described with definitions, formulas, interpretations, data sources, reporting levels and periods. In addition, the document is now graphically designed and ready for dissemination to relevant stakeholders.



The HMIS reporting formats

The HMIS reporting formats with their data elements were finalized and is ready for use and DHIS-2 customization.



HMIS recording and reporting procedure manual

Standard procedures for recording and reporting data elements on each HMIS tool (cards, register, tally sheet, and reporting forms, etc.) was developed.

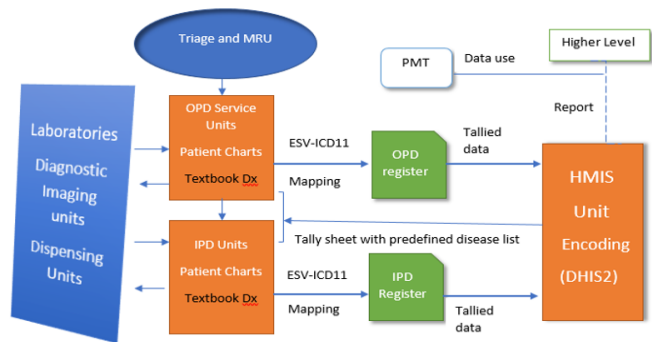


HMIS training manual and training plan

Providing capacity building training to healthcare workers on the revised HMIS is a major time-intensive resource, yet it is absolutely required. Accordingly, training materials and a detailed plan of action were developed and resources are being mobilized for its execution.

6. REVISION OF NATIONAL CLASSIFICATION OF DISEASE (NCoD)

In the second quarter of 2020/21 fiscal year, MOH established a national task force to review the National Classification of Disease (NCoD). The task force facilitated a rapid NCoD gap assessment which discovered that nearly 40% of service units of health facilities (HF) do not use NCoD to prepare their monthly disease reports. The assessment also concluded that inadequate training and irregular mentorship given to healthcare workers are contributing to the observed knowledge and practice gaps. In addition, the assessment indicated design, content, and implementation-related issues. The national task force identified 14 key issues that needed managerial level decisions prior to the execution of the action items.



The content/design-related issues include erroneous use of ICD conventions; redundant diagnoses; missing common diagnoses, such as tetanus and hemorrhoids; misclassification of diseases; and NCoD code variation for the same diagnosis from edition to edition.

NCoD implementation-related challenges were the absence of standardized implementation guides and operational procedures; inadequate training to IPD/OPD clinicians, HITs, and other care providers; lack of integration of disease data use within the performance review meeting platform; and absence of a monitoring mechanism. As subsequent actions, MOH identified actionable items, and developed a revision guide with a comprehensive six-month plan.

Three rounds of evaluative workshops were conducted by applying the Delphi method to rate each ICD 11 diagnosis based on the frequency and public health importance of each disease entity with due consideration of diagnostic capabilities of our tertiary level hospitals. Workshop participants, drawn from different MOH directorates and agencies, RHBs, public and private health facilities, partners, etc., provided valuable feedback that was incorporated into the evaluated draft disease/injury list, implementation guide, and SOP. Currently, MOH is in the process of finalizing the evaluated list of Ethiopian Simplified Version – International Code of Disease (ESV-ICD) 11, implementation guide, and SOP documents while conducting virtual meetings with physicians to continue the evaluation remotely.

7. INAUGURAL DHIS-2 ACADEMY LEVEL TRAINING

MOH conducted the DHIS2 academy level training in two rounds to close to 30 health professionals and leaders from different health facilities. The overarching goal of the academy was to create a national pool of DHIS2 data analytics trainers while promoting the MOH's Digital Health Innovation and Learning Center (DHILC), located in St. Peter's Hospital, as a training hub and incubator for digital health. The DHIS2 Data Use Training was DHILC's first use case. The workshop also was the first high-profile academy experience for the MOH and it paved the way for subsequent international academies at the DHILC.



Currently DHIS2 is used as a standard HMIS tool across all health administration levels and health facilities. DHIS2 has also been extended to other domains, including disease tracking and analysis, public health emergency management (PHEM) and COVID-19, KPI tracking, multisector-based nutrition performance management, and other related initiatives. There have been several capacity building activities performed at national, regional, and HF levels to enable data capturing, reporting, and analysis using DHIS2.



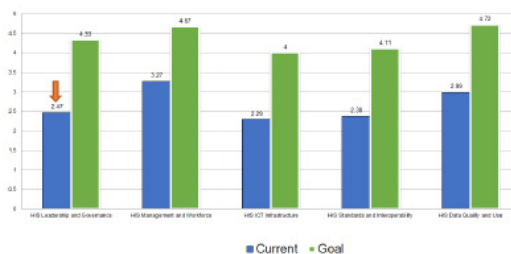
8. COMPLETION OF THE HIS MATURITY ASSESSMENT

MOH, in collaboration with different partners, conducted a HIS maturity assessment to measure the levels of maturity of the digital health systems as a start to help obtain the required level of maturity. The assessment was conducted in two phases: the first being a current status assessment and goal setting meeting that was conducted from January 30–February 2, 2021, and the second as a future state and improvement roadmap setting workshop that was conducted from March 4–6, 2021.

The national HIS maturity assessment was conducted to bridge the information gap and with engagement from relevant MOH directorates, selected RHBs, MOH agencies, CBMP universities, and strategic digital health partners. The current overarching HIS maturity level was measured based on five major domains, 13 components, and 39 sub-components and through an evaluation out of five points based on the HIS Stages of Continuous Improvement (SOCI).



The goals and the roadmap for high-impact interventions were set for each subcomponent up to 2024. The following graphs show the current state (“as is”) and the future state for targets set by the main domains and subdomains. In general, the workforce and data quality and use domains scored higher than the other domains and seem to be on the right track. However, leadership and governance, ICT infrastructure, and standards and interoperability scored the lowest, between 2.29 – 2.47, and were identified as areas that need more concerted investment moving forward.



SOCI ‘As Is’ (End of 2020) and Future State (End of 2024) by the Five Domains

9. ORGANIZATION OF THE CAPACITY BUILDING AND MENTORSHIP PROGRAM (CBMP) ADVOCACY WORKSHOP

MOH organized a Capacity Building and Mentorship (CBMP) Advocacy Workshop on October 9, 2021 in Addis Ababa. The workshop, which drew close to 80 participants including presidents of implementing universities, aimed to review the overall performance and contribution of Ethiopia’s local universities in realizing the IR. Similarly, the advocacy workshop also focused on evaluating the progress and future path of CBMP, an IR initiative that the MoH has implemented in 36 districts in collaboration with six universities, regional health bureaus, and the Ethiopia Data Use Partnership (DUP).



H.E. Dr. Lia Tadesse, Minister of MOH, said the program has recorded impressive accomplishments that enabled several health facilities to use quality data to make evidence-based decisions. Though it started with hesitation on whether universities could make a meaningful footprint in the implementation sector, CBMP has become one of the most successful initiatives that has boosted improvement in data use. It also created a platform for universities to neutralize the doubt on their implementation capabilities by supporting the creation of ten model woredas in the generation, use, and exchange of quality health data.



Importantly, the program was the first of its kind in the country’s health sector and it enabled a cross-sector collaboration that bridged a gap between academia and implementation. Thanks to MOH’s innovative thinking to award the universities a grant to support IR implementation in 36 districts and 214 facilities and its following impressive achievements, stakeholders have agreed to continue and expand the program.

10. ETHIOPIA'S FIRST DIGITAL HEALTH CONFERENCE AND EXHIBITION



From September 15 –16, 2021, MOH organized the country’s first digital health conference and exhibition in Addis Ababa. Aiming to promote Ethiopia’s nascent digital health sector, the conference gathered more than 250 participants from different governmental organizations, partners, donors, regional health bureaus, and higher learning institutions. The event, which also aimed to create a platform for the sector partners to share their experiences, displayed the MOH’s active digital health tools in addition to launching and familiarizing attendees on newly developed digital health strategies and standards.



Ministers and dignitaries from MOH, Ministry of Innovation and Technology, INSA, and MOE also attended the event. H.E. Lia Tadesse, the MOH Minister, gave remarks that underscored the absolute need for Ethiopia to keep pace with the ever-advancing global health ICTs to ensure access to enhanced and quality healthcare services.

During the event, it was noted, that despite being relatively new to health ICT initiatives, Ethiopia has still recorded promising accomplishments in developing and implementing context specific digital health tools to advance access to universal health coverage and meet its 2030 Sustainable Development Goals. The event also served as an opportunity to garner support and reiterate the need for stakeholders’ collaboration and resource coordination in order to meet the targets of the second Health Sector Transformation Plan (HSTP2).



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