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MINISTRY OF HEALTH - ETHIOPIA



Cover photo: DHA staff using the Master Facility Registry (MFR) Dashboard

DIGITAL HEALTH ACTIVITY

ANNUAL REPORT

OCTOBER, 2019–SEPTEMBER, 2020

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Acronyms

CBMP	Capacity Building and Mentorship Program
CoE	Center of Excellence
DHIS2	District Health Information Software 2
DHA	Digital Health Activity
DUP	Data Use Partnership
eCHIS	Electronic Community Health Information System
eHA	Electronic Health Architecture
eHMIS	Electronic Health Management Information System
EFDA	Ethiopian Food and Drug Administration
EMR	Electronic Medical Record
EPHI	Ethiopian Public Health Institute
EPSA	Ethiopian Pharmaceutical Supply Agency
ERIS	Electronic Regulatory Information System
GTIN	Global Trade Item Number
HEW	Health Extension Worker
HIT	Health Information Technician
HMIS	Health Management Information System
HRIS	Human Resources Information System
HSC	Health Science College
ICT	Information and Communication Technology
IR	Information Revolution
IRR	Information Revolution Roadmap
IT	Information Technology
JSI	John Snow, Inc.
LAN	Local Area Network
LMIS	Logistics Management Information System
MDR-TB	Multidrug-resistant Tuberculosis
MFR	Master Facility Registry
MOH	Ministry of Health
NPC	National Product Catalog
OS	Occupational Standard
POE	Port of Entry
TVET	Technical and Vocational Education and Training
USAID	United States Agency for International Development
VPN	Virtual Private Network

Message from the Chief of Party

It is a pleasure to share with you the major achievements of the Digital Health Activity (DHA) in its first year, October 2019 to September 2020. The DHA is a five-year, USAID-funded Activity implemented by John Snow, Inc. (JSI) to support Ethiopia's Health Information Revolution (IR) Agenda. While the team worked to implement our approved work plan, we are proud to say that the DHA (also referred to as the Activity) was in place to provide supplemental support to the Ministry of Health's (MOH) efforts to fight the COVID-19 pandemic.

One of the pressing challenges of the health system in Ethiopia has been recording and accessing high-quality data for decision making. In response to this challenge, the MOH determined and launched the IR as a critical transformative agenda of the health system.

The DHA is designed in response to and in support of the IR Agenda.

To this effect, the Activity has been supporting the MOH in digitization, data use, and governance of the health information system. The DHA team is building on JSI's prior experience in supporting health information systems (HIS). Our staff partner with talented local and international experts to achieve results.

During the first Activity Year, DHA, in collaboration with the MOH:

- Scaled up the implementation of the electronic Community Health Information System (eCHIS) in 270 health posts.
- Piloted an electronic medical record (EMR) system.
- Built the capacity of thousands of health professionals on the second edition of the District Health Information Software (DHIS2).
- Developed new systems and added features to existing systems used by the MOH, the Ethiopian Pharmaceutical Supplies Agency (EPSA), and the Ethiopian Food and Drug Administration (EFDA).
- Developed dashboards and trained health managers and health service providers to promote data-driven decision making.
- Drafted policies, strategies, and guidelines to create conducive legal and policy environments for the rollout of the IR agenda.

In response to the consequences of the COVID-19 pandemic on the country as a whole and specifically our activities, the Activity developed and implemented various digital tools to manage the public health response by tracking COVID-19 cases and their contacts; informing the public about the disease; and summarizing surveillance and epidemiological data using dashboards for decision makers.

At the heart of DHA is sustainability and local ownership of gains.

We established and financed ten youth grants to help sustain the DHA’s interventions. The youth grants train staff, provide troubleshooting support and ensure smooth functionality of digital tools used by health facilities within their designated catchment areas. The long-term vision is for the youth groups to provide paid services to health facilities. In the subsequent years of the Activity, we plan to provide an additional 40 youth grants. Moreover, to ensure sustainability of DHA’s capacity-building efforts, we revised training curriculums for last-mile health workers and trained academic staff in selected Health Science Colleges (HSCs).

While we celebrate the achievements of Year 1, I would like to take this opportunity to thank USAID for its technical and financial support to implement the DHA. I thank the MOH, regional health bureaus (RHBs), Ethiopian Public Health Institute (EPHI), EPSA, EFDA, and the Data Use Partnership (DUP) for their unreserved support and collaboration. Our subcontractors (Dimagi, Websprix, Intrahealth, and OrbitHealth) and the DHA staff also deserve our gratitude for their diligence and creativity in delivering results. We are committed to engaging more with MOH, RHBs, federal agencies, and other stakeholders to overcome challenges and achieve even greater results in the years to come.

Loko Abraham, MD
Chief of Party

Background

The IR is one of the transformational agendas of the national Health Sector Transformation Plan. The IR agenda is driven by diversified and increased demand for health information and opportunities presented by advancements in information and communications technology. Digitization of the HMIS and promoting data use culture are two pillars of the IR.

DHA with the Government of Ethiopia and other donors aims to develop a suite of electronic health management information systems (eHMIS) that the MOH, EPSA, EFDA, and designated partners will maintain and manage beyond the life of the Activity.



Health professional using the Dagu software to dispense, track & record medicine & patient history.

The DHA supports the IR under the following areas:**DIGITIZATION**

In collaboration with the MOH and other relevant partners, DHA has been designing, developing, deploying, operationalizing, maintaining, and growing different electronic HISs and building the capacity of public sector staff to use them through training, supportive supervision, and mentoring.

DHA has set up Helpdesk centers to triage system problems and transfer actionable issues to MOH's innovation lab. The innovation lab is a center established at Saint Peter Hospital to serve as a center of excellence for developing new systems and maintaining and updating existing HISs in Ethiopia.

DATA USE

Once the health information system is digitized, quality data must be made available, accessible, and usable to MOH staff in particular and the public in general. DHA has been strengthening MOH and affiliated agencies (EPSA, EFDA, and EPHI) and regional structures (Regional Health Bureaus, woreda health offices, hospitals, health centers, and health posts) for flexible and adaptive management. Data use activities include building staff capacity through training, mentoring, and supervision. DHA has been building the data visualization capacity of the MOH to help staff easily interpret and use data for decision making.

GOVERNANCE

To create an enabling policy environment for the rollout of the Information Revolution Roadmap (IRR), DHA has been working with the MOH in producing different policy and strategy documents to build HIS capacity and ownership at all levels, targeting the most critical barriers to developing and scaling HIS within the health sector.

COVID-19

The Activity quickly pivoted its work to help Ethiopia respond to the COVID-19 pandemic. DHA supported the development and operationalization of the national COVID-19 surveillance and tracking system, which expedited dissemination of laboratory results and facilitated performance monitoring of the COVID-19 follow up and tracking system.

This brief report covers DHA's major achievements in these four major areas of support during its first year.



Digitization

Digitization is the process of converting information into a computer-readable format. In the past year, DHA supported the digitization of the following.

1 Electronic Community Health Information System (eCHIS)

The eCHIS is an application that digitized the paper-based family folder and service workflows to record and report household health data. The eCHIS is primarily a mobile-based application that works in an offline environment and allows electronic referral and feedback. It also enables health centers to monitor and support the effective use of eCHIS at the health post level. During the reporting year, DHA:




Supported the MOH to deploy eCHIS in almost **270** health posts in six regions.




Trained almost **1,000** health extension workers to use eCHIS.




Supported 65 health posts to submit household and individual records electronically through eCHIS.



Undertook **more than 50 platform-level enhancements and stabilizations** covering a range of updates.



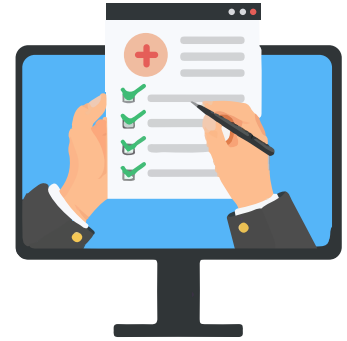
Set up a national eCHIS technical working group.



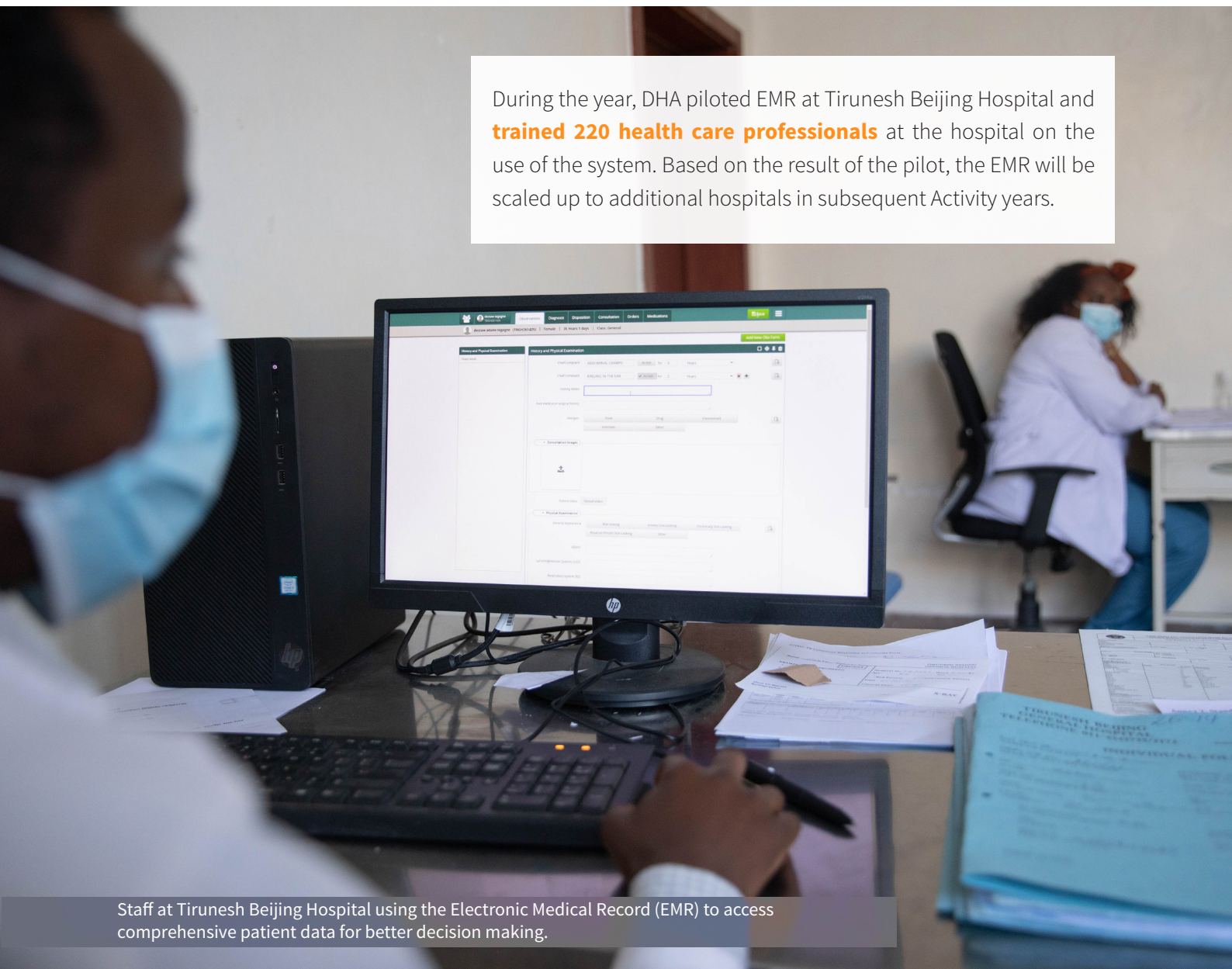
Built MOH staff capacity to ensure eCHIS performance at current and future scale.

2 Electronic Medical Record (EMR)

The EMR is a computerized system that captures, stores, and shares patient information enabling the delivery of quality health services to patients. It improves health care service quality by improving workflows, reducing medical errors, and minimizing cost and waiting time; and improves patient care by creating linkages among all caregivers, reducing the need for file space and supplies and for workers to retrieve any records physically.



During the year, DHA piloted EMR at Tirunesh Beijing Hospital and **trained 220 health care professionals** at the hospital on the use of the system. Based on the result of the pilot, the EMR will be scaled up to additional hospitals in subsequent Activity years.



Staff at Tirunesh Beijing Hospital using the Electronic Medical Record (EMR) to access comprehensive patient data for better decision making.

3 District Health Information Software 2 (DHIS2)

DHIS2 is an open-source software used by the HISs of many countries around the world. Ethiopia uses it to transform the way health data is collected, validated, analyzed, and visualized.

In its first year, DHA:



Provided supportive supervision to over **3,000 health facilities**, woreda health offices, and RHBs.



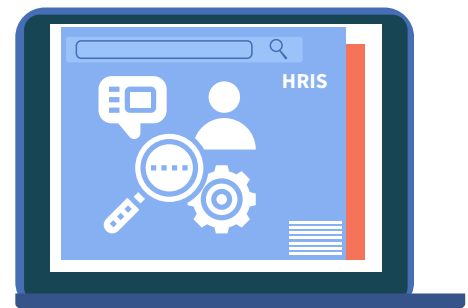
Provided on-the-job DHIS2 training to more than **1,100 health professionals**.



Developed and implemented a COVID-19 case tracking system and piloted a web-based multidrug-resistant tuberculosis tracking tool using the DHIS2 platform.

4 Human Resource Information System (HRIS)

In collaboration with the MOH, DHA has been working to replace the existing HRIS used by MOH by developing and implementing a system that is interoperable within Ethiopia's eHealth architecture and meets international standards. The new HRIS enables users to manage human capital and track the health system workforce. This includes the use of information and communication technology for the efficient and effective management of the human capital of MOH, its agencies, and MOH's regional structures including health facilities. The system enables MOH and its various health institutions to gather, store, and analyze information about its human resources dynamics.



5 Vitas

EPSA uses Vitas to control inventory. The software helps monitor pharmaceuticals from procurement to distribution, and manage movement and storage within the agency and its regional hub warehouses. During the year, DHA:



Added new features to ease and accelerate putaway, procurement, restocking, distribution, and finance and fleet management. *‘Putaway’* refers to the process of moving incoming inventory from the receiving zone to an optimal location for storage.



Trained
147
EPSA staff on Vitas.

Following the training, EPSA IT staff were able to support end users at all branches of the agency.



Developed an online ordering system that lets health facilities process orders through a website without any paperwork, reducing time and use of other resources.

6 Dagu 2.0

Dagu in Afar language means “information.” The Dagu software was developed for supply chain management and inventory control for hospitals and health centers. Previously, the first version of the Dagu software (Dagu 1.0) was used in hospitals and health centers. With Dagu 2.0, health facilities can produce aggregate inventory reports for decision-making. Health facilities can also produce report and requisition forms electronically.



Dagu 1.0 was upgraded to Dagu 2.0 in




126 health facilities and

130 Health Information Technicians (HITs) were trained in its use.

7 Electronic Regulatory Information System (eRIS)

The eRIS is a set of systems that are used by EFDA and the general public. The EFDA is the national regulatory body responsible for ensuring the quality, safety, and/or efficacy of medicines, food, cosmetics, and medical devices; the standards of health and health-related institutions; the health care practice; and health professionals' competence and ethics.

DHA supported the following eRIS activities:

	<p>Added new features into the i-Register, an application that allows importers to apply for market authorization and certification, to help users access information about their application process.</p>
	<p>Added a new feature to i-Import, which allows importers to apply for and receive permits to import medicines and medical devices, to allow EFDA and clients to access most product types in the same place.</p>
	<p>DHA, in collaboration with EFDA, developed and deployed i-Verify, a mobile application designed to track and trace health commodities from the manufacturer to the point of issue and verify product authenticity at any point in the supply chain.</p>



Gave eRIS access to
10,334
 new users. **38,000** logins were reported.



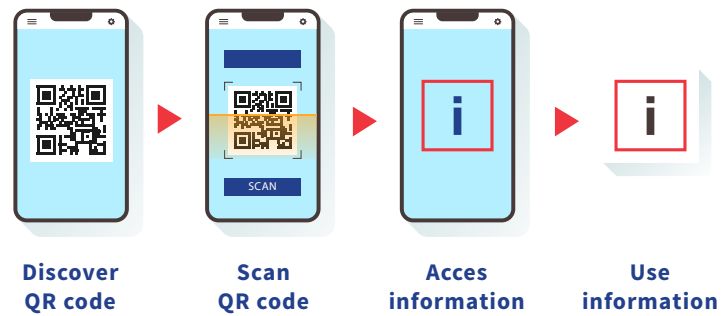
Provided refresher training to
114 staff of the five EFDA branch offices in Ethiopia.



EFDA staff logging into the eRIS system on a tablet.

8 Track and Trace

EFDA, in collaboration with the MOH, led the pharmaceutical traceability project to combat counterfeit pharmaceutical products by increasing visibility of the status of stock en route and ensuring secure transactions of products throughout various systems and processes. Track and trace activity monitors products entering the country and traces product transaction processes throughout different parts of the supply chain.



DHA is developing the National Product Catalog (NPC), a single repository of products, pricing, and data applicable across all product categories, to support the need for standardized, supplier-managed data across the whole health care value chain - to ensure accuracy and efficiency.

The development of the NPC will help Ethiopia start using a global standard for product registration and identification, based on learning from the experiences of other countries. The NPC ensures that Ethiopia uses a global standard for product registry and identification. This makes data exchange for pharmaceutical and other products easier at a national and global scale.

During the year, DHA started developing a mobile-based NPC to help scan barcodes and identify if a product is available in the NPC to guarantee authenticity. In addition, DHA collected products with a Global Transaction Identification Number (GTIN), a unique key used to identify trade items from warehouses across the country.

A total of 340 products with GTINs were found

144 unique GTIN products were identified.



EFDA staff using the iVerify application on a phone.



Data Use

Without data, we are usually guessing.

One of the pillars of the national IR agenda has been to promote data use. To transform the culture of data use in planning, performance management, and decision making, DHA built capacity of leaders at all levels of the health system through training; availing tools for data visualization and analytics; and conducting supportive supervision to improve availability and accessibility of quality data for data driven decision making. Moreover, DHA supported the implementation of the IR by supporting the creation of model digital wordas and hospitals.

The following are major activities and achievements of DHA's first year.

Rollout of data use strategies:

The health system is producing a growing volume of data that is receiving increased attention, particularly since the emergence of the COVID-19 pandemic. The Activity conducted a desk review on data use strategies and based on the findings, identified critical steps to improve data use strategy rollout at different levels of the health system.

To generate real-time data, DHA has been working in collaboration with the MOH and other implementing partners at national and regional levels. The Activity worked with the national data use technical working group and helped analyze current and historical data.



Tirunesh Beijing Hospital staff using Improved Patient Registration.



A total of

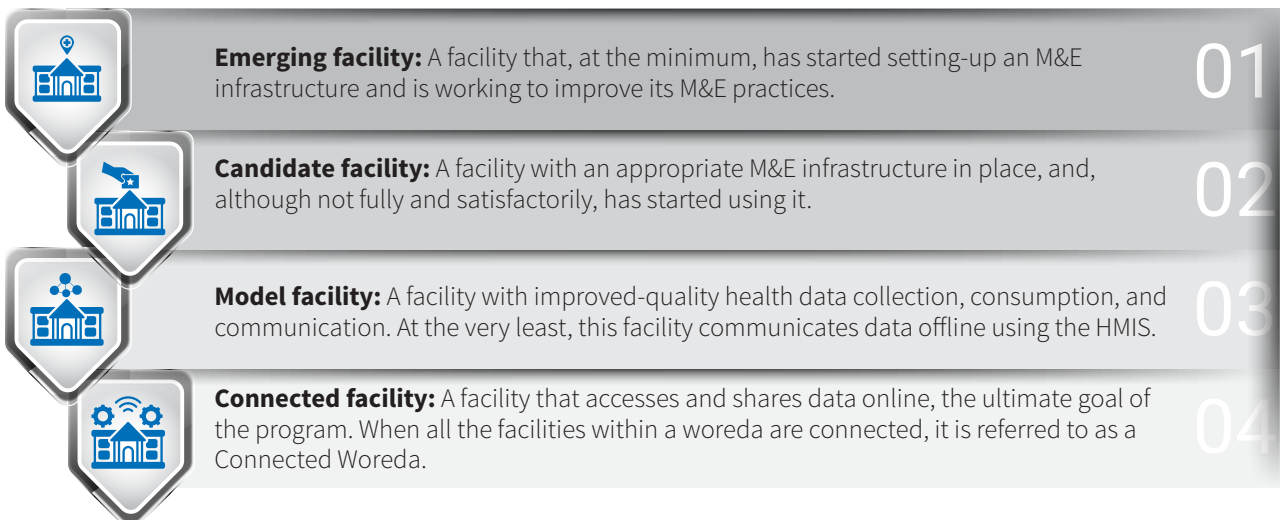
21

indicators from maternal and child health, communicable diseases, and supply chain were analyzed, updated monthly, and shared on a regular basis with the MOH to inform decision making.

Health Management Information System (HMIS) data quality assessment:

DHA conducted data quality assessment on selected HMIS indicators (TB, skilled birth attendance, and immunization) covering several regions. DHA shared assessment results on site and with the respective RHBS and made recommendations for improvement.

Connected Woreda: The Connected Woreda program is a way of translating the IR into operational and measurable goals, with a focus on the lower-level of the health system. The program aims to transform woredas into data hubs by enabling health facilities to generate and use quality data through the use of electronic health information systems. A Connected Woreda is achieved when health facilities have attained better data quality and use practices and progressed and matured through the following well-defined levels:



HRIS-HRA testing session with FMOH staff.

During the reporting year, DHA conducted baseline assessments in 17 of the 20 woredas. A costed intervention plan was prepared to support the 20 woredas. Gap-filling support included procurement and distribution of furniture and computers; capacity-building training; and supporting data use review meetings and mentorship. By the end of the reporting year, eight woredas became Connected Woreda candidates.

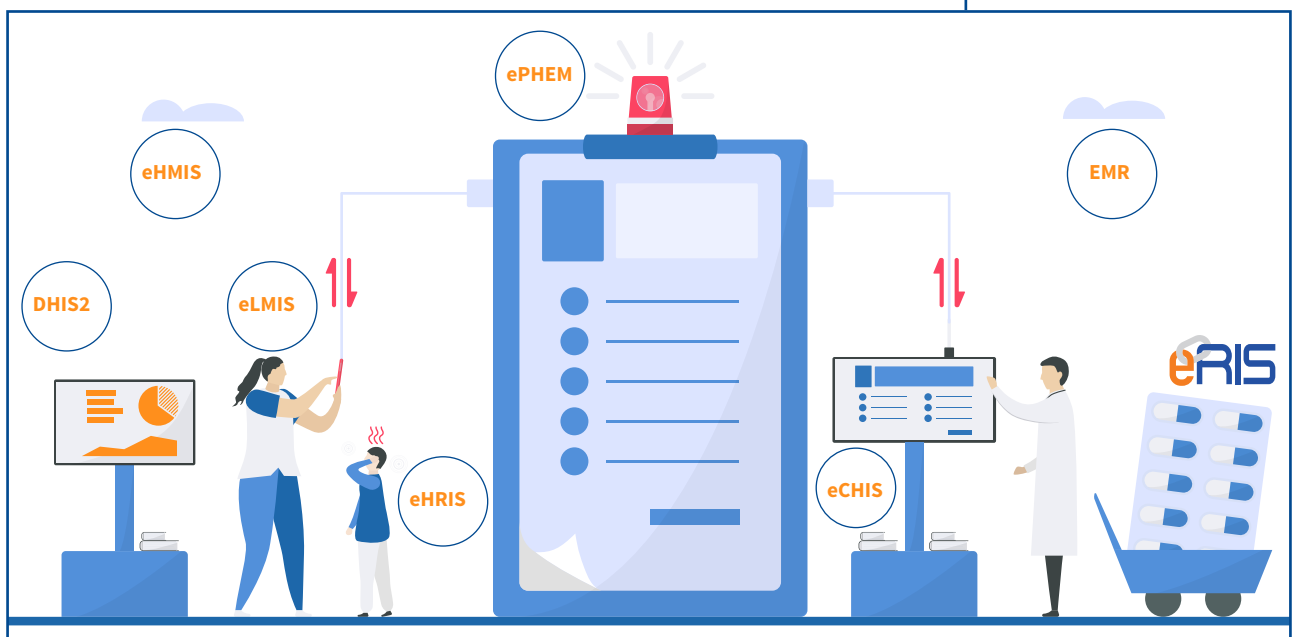
DHA, with MOH, uses the Connected Woreda dashboard to monitor progress along the Connected Woreda pathway. The DHA uses geospatial data to identify adjacent woredas that can serve as cross-learning sites. Dashboard content is shared continuously with MOH and RHBs for monitoring progress along the Connected Woreda pathway.

Information Revolution model hospitals:

DHA, in close consultation with RHBs, established 10 model hospitals to serve as role models for IR implementation for the remaining health institutions in Ethiopia. The hypothesis behind the IR model hospitals is that

“When fully supported by the woreda health office and sufficient mobilization of resources, model hospitals can be a key component to achieving the Connected Woreda strategy.”

During the reporting year, eight IR hospitals were identified and baseline assessment was conducted. In the following year, DHA will provide gap-filling support to make them model hospitals.





Capacity Building

DHA has been working to make the HMIS up and running in a sustainable manner. This included:

Capacity building of Health Science Colleges



The Activity worked with the federal Technical and Vocational Education and Training (TVET), MOH, RHBs, and universities to build the capacity of the HSCs to support the IR through pre-service training to prospective health care managers and service providers; training for academic staff; improving the HSCs training approaches; and reviewing pre-service training curriculums. The support is aimed at improving the health system's capacity to collect, interpret, share, and use quality data in a digitized health ecosystem. The capacity building mainly focused on last mile-health care providers such as health extension workers, and pharmacy and health information technicians. Accordingly, DHA, in partnership with DUP, supported the MOH and the federal TVET in the review of health information technician occupational standards, which MOH and the federal TVET endorsed and approved.

Incorporate blended learning approaches into pre- and in-service training



To equip HSCs with blended learning tools, DHA, in collaboration with MOH, TVET, HSCs, and DUP developed blended learning for specific subsystems. The priority subsystems identified are DHIS2 and Dagu. The modules will be used for pre-service training at the HSCs and for in-service training for health care workers.

Capacity building and mentorship program



Framed within the context of the Connected Woreda initiative, the MOH established a capacity-building and mentorship program (CBMP) and formed partnerships with six universities (Addis Ababa, Haromaya, Hawassa, Jimma, Mekelle, and Gondar). The universities are expected to become centers of excellence for different HIS subsystems and provide technical assistance to RHBs and zonal health departments by creating model health facilities and woredas. The CBMP builds upon the universities' experience in training, mentorship, and research services to build a sustainable digital health system. To support CBMP, DHA provided grants to Mekelle and Jimma Universities in electronic Health Architecture and interoperability and eCHIS, respectively.



Governance

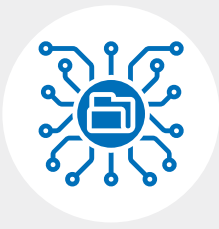
Governance for digital health aims to strengthen the capabilities and skills for countries to advocate, innovate, and scale-up digital health technologies. DHA supported the health system to establish and operationalize HMIS governance at all levels, including development and approval of overarching and subsystem-level governance policies, guidelines, protocols, and standard operating procedures.

This included work on:



Governance documents developed by MOH with the support of DHA.

Health data access and sharing policy



The DHA, in consultation with DUP, drafted the health data access and sharing policy to establish procedures for accessing health-related data (clinical, financial, administrative, and demographic) by users. It stipulates that data be anonymized and made available to users to benefit decision making and addresses conditions and manners in which data files may be released to users for research and policy making while maintaining confidentiality. The draft policy is under review by MOH. Upon completion and endorsement, the document is expected to accelerate achievement of IR objectives.

Information Technology Infrastructure Management Guideline



This guideline is drafted to help manage IT infrastructure to ensure appropriate resource utilization. This guideline contributes to proper management and maintenance of information technology (IT) infrastructure across the health sector making it reliable, robust, secure, and consistent through facilitating efficient and effective business processes.



National Health Information Act

The DHA, DUP, and other stakeholders supported MOH in the development of the National Health Information Act to establish a minimum national standard that sets out the rights and interests of a patient or health service user, and the associated national health care systems that support the health system.



Support to the innovation lab

DUP in collaboration with MOH established the innovation lab at Saint Peter Hospital as a center of excellence for developing new systems and maintaining and updating existing HMIS. During this reporting year, the innovation lab was inaugurated. The lab is a place for building implementation and support capabilities to ensure government ownership of the systems. DHA supported the development of the lab’s creative strategy and developed two infographics that depict the maturity and transformation path the innovation lab should follow and major steps to help it evolve. The infographics also promote systematic creativity to turn insights into customer values; incorporate basic components for value realization and adaptability purposes; play a crucial role in transforming the innovation lab culture; and position the lab as an incubation center to implement sustainable digital health solutions.

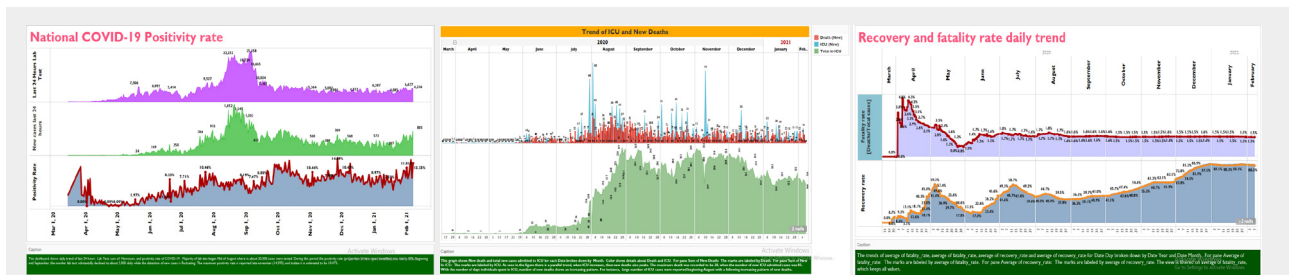


HRIS-HRA Dashboard review discussion with MOH staff.

COVID-19 Response

After the first COVID-19 case was reported on March 13, 2020, the government’s response was swift, and DHA has been applying its expertise in digital health and supply chain to support that response ever since. Across the globe, digital health has been brought to the forefront as a crucial tool to combat the COVID-19 pandemic. The use of digital tools such as contact-tracing apps to monitor outbreaks and online communication of cases are some of the ways that the potential of digital health was tapped.

DHA helped MOH and EPHI analyze data on surveillance performance, and identified gaps in surveillance and made recommendations to fill them. The Activity produced information on the effect of COVID-19 on program service coverage and utilization. Dashboards were prepared to display results in ways that are easy to interpret and use. The Activity also organized a workshop on the national status of essential services before and after COVID-19, at which lessons from high-performing woredas were shared with low-performing woredas fostering cross-learning among the woredas. DHA, in collaboration with DUP, also supported the development and implementation of the following critical digital tools to mitigate the effects of the pandemic:



Sample COVID-19 monitoring dashboard developed with the support of DHA.



Hand sanitizer quality control

The Activity developed a system to allow EFDA to monitor and control hand sanitizer quality. Manufacturers that received a temporary license to produce alcohol-based sanitizer now use DHA’s quality control system to track the quality of their products in accordance with World Health Organization standards.



Expedited product registration

Previously, it took manufacturers three or more days to obtain licenses from EFDA. Thanks to DHA’s intervention, an app that expedited the product registration and licensing, alcohol-based sanitizer manufacturers can now get their license the same day they apply for it.



COVID-19 surveillance and tracking system

EPHI and MOH use this DHIS2-based application, which supports the enrollment and tracking of suspected cases; captures symptoms, demographics, risk factors, and exposures; creates lab requests; links confirmed cases with contacts; and monitors patient outcomes. It is intended for health facility users, lab users, and national and local health authorities. The application also supports active case detection through contact-tracing activities, such as identification and follow-up of contacts of a suspected or confirmed COVID-19 case.



Surveillance follow-up app

This application builds on the case surveillance and tracking system of COVID-19 and facilitates registration and follow-up of suspects and contacts of confirmed cases who will be followed for 14 days.



Health facilities reporting app

Health workers use this app to report suspected cases at health facilities to the rapid response teams.



137

rumors reported from health facilities.



Port of entry health declaration

This is an app that travelers use to record personal identification information including phone number, travel history, illness symptoms, and place of residence. The form is generated via QR codes at all ports of entry to provide unique traveler identification. Screeners from EPHI digitally record travelers' temperature and attach it to their digital record for 14-days monitoring and follow-up. This application automates the Travelers' Health Declaration Form for COVID-19 that all passengers are required to complete upon entry to Ethiopia.



1,070,911

travelers screened and registered on this application.



Toll-free recording app

This app records and stores data from individuals who call 8335 and 994 short codes to report their COVID-19 status and/or concerns.

9,228

rumors reported through this app.

Provided COVID-19 health information to

1,261,229

callers of the hotline.



Community house-to-house screening app

This is a mobile app for Health Extension Workers that help in data collection and serves as a job aid for nationwide door-to-door COVID-19 screening campaigns.



The app is being used by

173

health workers in Addis Ababa alone.

Data analytics and visualization for COVID-19

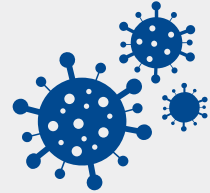


This is a dashboard for EPHI and MOH to monitor the COVID-19 situation in the country. The dashboard visually presents epidemiological information to inform preparedness and response measures. DHA's support included preparing a daily report on COVID-19 for the general public. The Activity also improved Dagu 2.0 software to adapt and produce a customized report to assist in the distribution of personal protective equipment and related products in response to the pandemic.



29,896

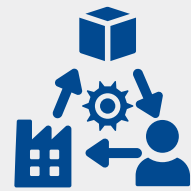
COVID-19 cases captured through the application which have been added on **DHIS2**



Supply chain dashboard



The dashboard gives data visibility across the distribution center from EPSA to a service delivery point. It enhanced visibility of stock levels and consumption, and data flow from all EPSA branches, EPHI, and health facilities in Addis Ababa. The dashboard aggregates reports from different administrative units for monitoring purposes.



WhatsApp helpline



In collaboration with Praekelt.org, DHA and DUP developed a WhatsApp-based helpline to support users on health queries or concerns and direct them to accurate information sources. It provides automated information responses with answers to most frequently asked questions. This helped relieve traffic to call center helplines that were already overwhelmed. The application uses machine learning and natural language understanding to enable automatic triage helping to manage conversations at scale.

Rumor and suspected cases reporting and investigation



This application was developed for community members to self-report COVID-19 symptoms. It also provides information about where people can volunteer, request help, learn more about the pandemic, and report rumors. Communities can report their COVID-19 status on WhatsApp and via SMS as well.



9,228

rumors were reported using this application.

Improving functionality of HealthNet Ethiopia

HealthNet Ethiopia is a VPN system that has been instrumental in providing a communication network for health professionals throughout Ethiopia. The main goal of HealthNet program is to provide a functional infrastructure and connectivity for all health institutions in Ethiopia to allow real-time data transfer within the health system. It facilitates data use at each level while improving quality and timeliness of care by improving referral and other linkages across the continuum of care to help achieve the Connected Woreda vision.

DHA's support on malaria

Through the use of mBrana, a system used to track distribution of bednets in malaria-prone areas, DHA supported data capturing for insecticide treated bednet distribution campaigns in 49 Woredas and three regions (Afar, Benishangul-Gumuz and Gambella).



DHA conducted a HealthNet functionality assessment in 300 facilities, of which 150 (50%) did not have a functional system, mainly due to installation problems. DHA installed new LANs and provided maintenance support for 35 of the health facilities, and developed several health IT infrastructure management and operation documentations.

Staff at Tirunesh Beijing Hospital using Improved Patient Registration.

Local youth grants

DHA recruited, trained, and provided grants to 10 youth enterprises to provide sustainable and readily available HMIS support to health facilities. The enterprises are run by new university graduates who participated in a nine-month internship program at DUP. DHA assessed the youths' interests and capacities and trained them in grant writing and entrepreneurship. DHA will continue to monitor and support the youth grants until they are self-sufficient.

Success Stories



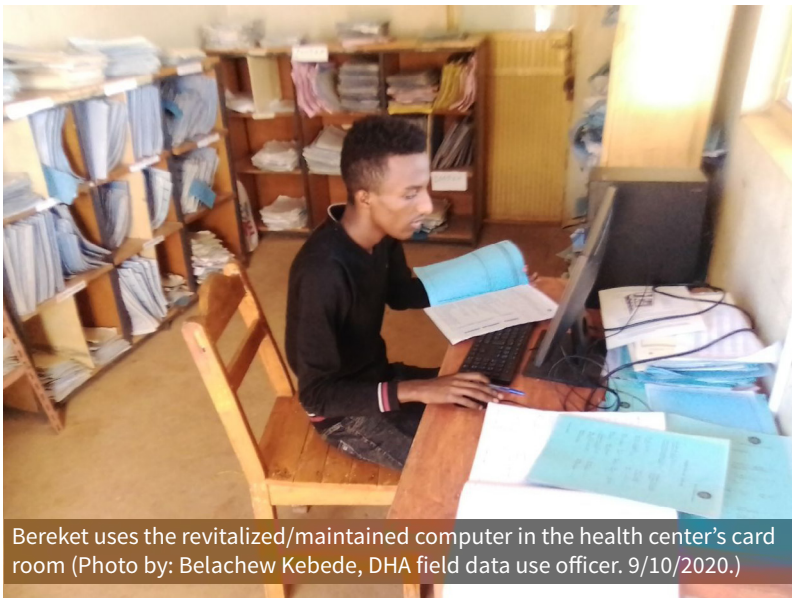
Going the Extra Mile: The Case of Michael Health Center

During our regular supportive supervision, one of our data use field officers visited Michael Health Center. Although the health center had a dedicated computer, it did not have the proper technology setup. No staff, including the health center director, had received training on DHIS2, the software used at health centers and hospitals for data capturing, storing, transmitting, and analyzing. The computer produced incorrect results, which the director perceived as a software malfunction.

The director had hired a local IT professional to solve the problem, but just before the consultant was scheduled to arrive, a DHA field officer arrived at the health center to conduct regular supportive supervision. After being briefed on the issue, the field officer repaired the computer, installed DHIS2 offline version 2.30 and trained the team to use it, which saved them the expense of a consultant. Subsequent monitoring visits at the health center showed improvements in report quality. In gratitude, the director said,

“The support you provided was crucial, and allowed me to use DHIS2, which improved my health center’s report timeliness and completeness. Additionally, the support has saved the health center from extra costs of computer troubleshooting. Thank you and keep up your good work.”

Transforming customer service, saving staff time: the case of Wada Health Center



Bereket uses the revitalized/maintained computer in the health center’s card room (Photo by: Belachew Kebede, DHA field data use officer. 9/10/2020.)

“I am very happy to be able to serve my clients with better customer service, with speed and in an organized manner,”

said Bereket Anteneh, one of the many HITs who benefitted from DHA supportive supervision. During the visit to his health center, DHA staff identified a medical catalogue system failure, which had led Bereket and his colleagues to return to manual registration. This incurred additional cost, staff time, and client wait time.

DHA field officers re-installed the application and conducted proper troubleshooting, which allowed the system to start working. They also trained Bereket to troubleshoot. After these interventions, the health center

staff were able to resume online client registration, which reduced waiting time significantly and allowed staff to spend more time with clients and less on administrative tasks. As Bereket remarked, “My work does not exhaust me anymore.”

Dagu 2.0: Digital innovation brings remarkable change to hospitals

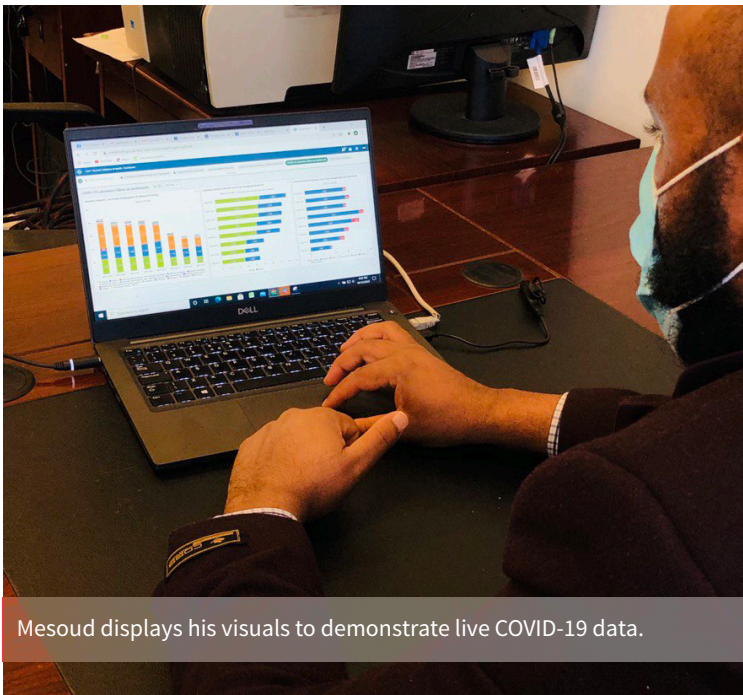
Mr. Shushay has been head of the pharmacy unit at the Ayder Comprehensive Referral Hospital for about three years. Having 10 years of experience in various positions, he has seen the highs and lows of the hospital’s performance. Ayder, the only comprehensive referral hospital in the Tigray region, provides services to hundreds of thousands of people.

Dagu 1.0 software was introduced to improve the record-keeping at the hospital. Dagu is a revolutionary and cost-effective digital system that helps facilities manage daily commodity transactions. In 2020, DHA upgraded the system to Dagu 2.0 at Ayder and more than 15 other hospitals in Tigray, but because of skills gap, staff workload, and lack of a clear process for all dispensing units, Ayder was unable to use all the critical features of the upgraded system so resorted back to Dagu 1.0.

In response, DHA provided training, mentoring, and technical assistance to the hospital’s pharmacy staff. As a result, all pharmaceutical operations—inventory control, logistic management, scheduling, and reporting systems—improved.

Since the relaunching of Dagu 2.0, Mr. Shushay’s frustration in the use of data from the manual logistics management information system has subsided. Dagu 2.0 has helped him produce faster and more accurate reports of supply chain data, which he uses to prevent stockout of health commodities. “Dagu 2.0...has simplified the life of our pharmacy and logistics staff. It is a quality software program that enables our hospital to see all the very important reports,” said Mr. Shushay.

Ethiopia’s Digital Health Response to Combat COVID-19



Mesoud displays his visuals to demonstrate live COVID-19 data.

Mesoud Mohammed Ahmed, the COVID-19 Emergency Operation Center Digitization lead, is at the heart of the national COVID-19 response in Ethiopia. As he explained, “When this pandemic hit, there was an immediate need to look within the MOH to identify the best way to respond.”

Since reporting the first COVID-19 case on March 13, 2020, the EPHI, one of the technical agencies under the MOH, has been taking steps to contain the pandemic. The pandemic response needed reliable information and raised questions about how data could be collected efficiently, and DHA stepped in to help MOH/EPHI digitize its systems to facilitate this.

Over the past six months, DHA has accomplished much. During the initial response to the pandemic, the laboratory work process was not integrated with any system, which meant its data was subject to loss, duplication, and inaccuracy. DHA developed nine applications to streamline data collection, enhance administrative tasks, and improve the overall productivity for better surveillance, logistics, and case management.

DHA's immediate response also included hands-on technical and on-the-job training to end-users, monitoring, and supportive supervision. MOH/EPHI staff have improved data quality, reduced data loss and duplication, and streamlined the laboratory information system to feed into DHIS2. Progress in turn-around time and better use of scarce resources have consequently improved overall patient care.

As Mesoud said,

“ It’s a government-led and -driven information system, but frankly, without DHA’s support, it would have been difficult to realize it. ”



HRIS-HRA Testing session with FMOH team



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