Coordinating Digital Transformation
Ethiopia

Background

Improving the availability and use of health care data is a priority of Ethiopia's Federal Ministry of Health (FMOH) as it works to improve the quality and equity of health care services. The *Health Sector Transformation Plan*[1] developed by the FMOH in 2015 established the Information Revolution (IR) as an essential element in support of the health sector transformation agenda.

The IR focuses on improving the collection, analysis, presentation, and dissemination of information to support better decision-making. It also emphasizes bringing about cultural and attitudinal changes regarding data management and the perceived value and practical use of information.

The FMOH led the creation of the Information Revolution Roadmap (IRR) to support implementation of the IR.[2] Since establishing the IRR, the FMOH has established a governance framework to provide oversight and monitor implementation. The governing bodies coordinate the efforts of donors and implementing partners working on health management information systems in Ethiopia to ensure they are supporting one, unified system. This government-led coordination, and efforts among donors to align their investments, is helping to solve the historical challenge of fragmented data systems in Ethiopia.

Description of Digital Health Coordination Mechanisms

The IRR was published in April 2016 and was a catalyst for creation of a health information system (HIS) governance framework. The IRR guides all health stakeholders in the development of a unified, government-led HIS. The IRR was drafted to reflect the government of Ethiopia's priority of improving the quality of health care through digitization of health care services and behavioral change in data use practices. It guides investments in digital health and details activities necessary to establish a data use culture. It was designed to solve historical HIS challenges including fragmented donor efforts and lack of government ownership. Resources for developing an HIS had been channeled through various implementing partners which resulted in multiple, fragmented approaches. This also led to geographic and disease specific information silos rather than a unified, countrywide system for health data for decision-making. The fragmentation contributed to a lack of government ownership and dependence on implementing partners to manage and maintain the various systems.

The HIS governance framework, established in December 2017 in support of the IRR, puts the Government of Ethiopia in control of HIS implementation, with technical support from other stakeholders. The initial governance structure consisted of a top-level oversight and decision-making body, the National IR Steering Committee, and technical working groups (TWGs). These bodies operate both at the national and regional levels. Later, the Information Revolution National Advisory Group (IR-NAG) was added. (See Figure 1)

Photo: PATH/Mark Murray

Information Revolution Steering Committees

The National IR Steering Committee is chaired by the Minister of the FMOH, with members from selected FMOH leaders and representatives from donor agencies. The National IR Steering Committee ensures that digital health activities are consistent with the goals of the IR. The Committee meets biannually and is responsible for mobilizing resources and promoting harmonization and alignment of HIS improvement efforts. Each region of Ethiopia coordinates activities under the IR through a Regional IR Steering Committee, chaired by the head of the Regional Health Bureau. Members of the regional steering committees include regional FMOH officials and implementing partners.

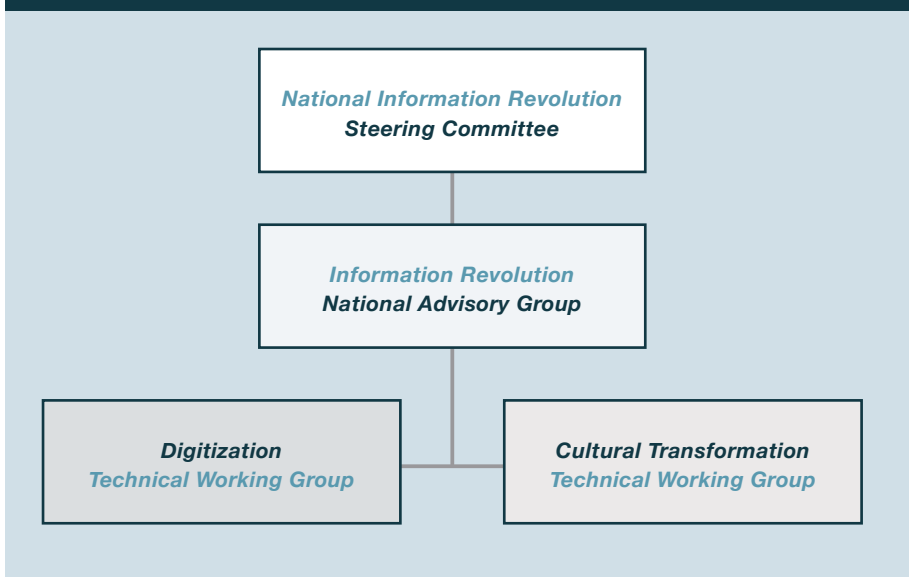## Information Revolution National Advisory Group (IR-NAG)

In November 2018, the IR-NAG was established to provide a forum for a wider group of stakeholders, including representatives from relevant FMOH directorates, other government agencies, donors and United Nations agencies, universities, implementing partners, and the private sector. It complements the role of the National IR Steering Committee by providing technical advice and support for efficient and effective execution of IR activities.

Technical working groups

Two national TWGs have been established in line with the two pillars of the IR: cultural transformation for health data use and digitization and scale-up of a priority HIS. These groups meet monthly, and they provide written reports on the progress of their work and outcomes, for review by the National IR Steering Committee. Terms of reference were established for each TWG to clarify their purpose, membership, and structure. Each TWG is chaired by a representative from the FMOH and membership includes partners implementing relevant activities. Each region of the country also operates a Regional Digitization TWG and Regional Data Use TWG to coordinate relevant activities within the region.

Figure 1.
Ethiopia health information system national governance framework

National Information Revolution
Steering Committee

Information Revolution
National Advisory Group

Digitization
Technical Working Group

Cultural Transformation
Technical Working Group

"The (Information Revolution Roadmap) is designed based on the concept of comprehensive technical support with complete country ownership. The partnership focuses on supporting the Ministry of Health on building and strengthening culture of information use across the health sector."

– Eyob Kebede, Director, Health Information Technology, Federal Ministry of Health

Information Revolution Roadmap Co-creation Process

The government of Ethiopia led the creation of the IRR. The IRR was designed to identify and define high-priority activities to increase the availability of timely and accurate information for decision-making. During the Health Sector Transformation Plan development, a sub-team was created that was responsible for strengthening of the HIS in Ethiopia. After launching the Health Sector Transformation Plan, an assessment of the current state of digital health systems in Ethiopia was conducted and the National Health Management Information Systems Advisory Committee—comprised of government staff, implementing partners and donors— came together to draft the IRR. The FMOH led discussions with donor agencies to come to agreement on the IRR activities and to ultimately endorse the IRR as the guiding document for investments in digital health. The Roadmap includes the collaboratively developed five-year action plan, performance monitoring plan, and estimated activity costs.

Implementation of the IRR began after the Bill & Melinda Gates Foundation made a US $21 million investment to create the Ethiopia Data Use Partnership (DUP) in 2017. The DUP is a five-year effort implemented by a consortium led by John Snow, Inc. The funded workstreams include partnering with the FMOH to establish a standardized Health Management Information System, eHealth architecture, HIS governance, and improved data use. The US Agency for International Development (USAID) has committed funding to help the FMOH realize the goals of the IRR. Funds will be provided for activities to improve HIS performance and sustainability and strengthen information culture in line with the IRR, building on the efforts of the DUP.

Enabling factors

Strong political will

The success of establishing the IRR and the resulting coordinating bodies is rooted in the strong political will of the government to strengthen the HIS and improve the management and use of health care data for decision-making. The *Health Sector Transformation Plan* detailed digital health as a priority, providing donor agencies with a clear understanding of Ethiopia's commitment to digital transformation and unifying all HIS efforts. The inclusion of the IR in the *Health Sector Transformation Plan* allowed for resources to be focused on analyzing the current state of HIS and developing an achievable plan to stop implementation of fragmented systems and align all investments into one system.

Digital health champions

There have been a number of high-level government champions of digital transformation throughout the IR process, including the Minister of the FMOH and the Prime Minister. Representatives of donor agencies in Ethiopia have also committed to engaging in the IRR governance bodies and being advocates for the FMOH's vision, leading to improved transparency and alignmentof digital health funding.

Strong donor-donor coordination

Once Ethiopia established the IR and made clear its intent to own the rollout and implementation of one unified HIS, representatives from donor agencies, including USAID, the Gates Foundation, Global Fund, and the Doris Duke Charitable Foundation, began informal discussions on how to end fragmented investments and support the FMOH's vision. These conversations led to a formal, multi-day meeting with donor and FMOH representatives in January 2016 during which the donors pledged their official support to the IR principles and developed a coordination framework. This collective agreed that the Gates Foundation would serve as the lead donor on HIS investments with other donors investing in complementary activities. The Gates Foundation carried out this commitment by making the first catalytic investment into the IR. USAID followed up by championing the IRR and pledging additional implementation funding.

"The government of Ethiopia's announcement of the Information Revolution, and endorsement by the Prime Minister, was key to showing that they were going to do things differently and had a clear plan for health information systems. All the donors have worked very hard to make sure they are coordinated in their work and supporting the government's vision."

– Keith Hummel, Senior Program Adviser, USAID

Impact of the Roadmap

The IRR allowed for a clear governance framework to be put in place to align donor agencies, implementing partners, and the various directorates and agencies of the FMOH, leading to unanimous stakeholder support of a single HIS based on District Health Information System 2 (DHIS2). Before the IRR, some donors would independently choose an HIS to support without regard for systems that were already in place, leading to multiple systems owned by different organizations. Donors and implementing partners now are better coordinated in their efforts because they have aligned with one another, and monitor their activities against a common action plan and monitoring and evaluation framework.

Lessons Learned from the Information Revolution Roadmap

Key informants provided several overall lessons for others looking to coordinate donor investments into digital health. They are:

» **Before creating a roadmap document**, conduct a thorough assessment of the state of health management information systems and the root causes of health information challenges.

» **When drafting a roadmap**, ensure activities and deliverables have a logical sequence and time frame.

» **Be realistic about expectations** for how long it will take to roll out software systems based on the state of current HIS, infrastructure needs, and technology and data skills of system users.

» **Collectively review the roadmap timeline and costs** to encourage transparency and manage partner expectations. After the first two years of IRR implementation, it was clear the costs did not reflect reality on the ground. Donors, government stakeholders, and implementing partners decided to do a re-costing exercise to establish a new budget. The budget will be reviewed every year to ensure it continues to be adequate and realistic.

Lessons for donors

Co-create with government officials to ensure that investments align with their priorities

Design investments and funding strategies in collaboration with the government. Though this takes a lot of effort upfront, it ensures that funded activities will align with government strategies. This alignment also leads to government ownership and sustainability of the interventions and software platforms.

Encourage the development of a theory of change

Fund the creation of a theory of change. The IRR is based on a theory of change that maps how data use leads to improved health outcomes. This allows for all stakeholders to be aligned on the end vision and the activities and outputs that will lead to the desired outcomes.

Share information and collaborate with other donors

Coordinate with other donors to ensure efforts are complementary and build on work already being done. Donors in Ethiopia have worked diligently to establish strong communication channels and coordinate investments to support the IRR.

Support the creation and sustainment of a strong governance framework

Support the efforts of the government and implementing partners to establish and maintain a steering committee and TWGs to monitor implementation and ensure activities are technically strong and aligned with the roadmap. Strong, functional coordination mechanisms ensure success of the roadmap and elimination of duplicative activities.

Lessons for governments

Establish digital health as a priority to catalyze donor alignment

Draft a strategy that allows donors and other partners to understand the government's commitment to digital transformation and helps to align their efforts around this vision.

Conduct a comprehensive landscape analysis

Conduct a baseline assessment of the HIS prior to designing and costing activities to understand the current digital health ecosystem and identify the gaps to be addressed. This step is vital to ensure a realistic timeline and costs necessary to achieve roadmap objectives.

Ensure health information system alignment within the health sector and government as a whole

Identify all data systems in use and what a unified data system needs to be able to do to meet the needs of all users. Secure buy-in from all health sector stakeholders to take up the new system.

Engage a wide range of stakeholders

Ensure that coordinating bodies include representation from all stakeholders that play a role in improving collection, management, and use of health data, including health workers and national and regional health officials.

Establish clear terms of reference for all coordinating bodies

Set clear terms of reference that detail the digital health coordination and implementation responsibilities and expectations are for each stakeholder. Clear goals and objectives also can be set through a common monitoring and evaluation framework.

PATH/Mark Murray

Interview List

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Tewodros Berihun, Senior Health Information System Adviser, United States Agency for International Development

Keith Hummel, Senior Program Adviser, Global Health Bureau, United States Agency for International Development

Eyob Kebede, Director, Health Information Technology, Federal Ministry of Health

Marasi Mwencha, Country Director, Center for Health Logistics, John Snow, Inc.

Belendia Serda, Program Information and Health System Developer, PATH

Hibret Alemu Tilahun, Director, Ethiopia Data Use Partnership, John Snow, Inc.

Solomon Zewdu, Deputy Director, Ethiopia Global Development, Bill & Melinda Gates Foundation

References

1   Ethiopian Federal Ministry of Health (FMOH). *Health Sector Transformation Plan 2015/16–2019/20 (2008–2012 EFY)*. Addis Ababa, Ethiopia: FMOH; 2015. https://www.globalfinancingfacility.org/sites/gff_new/files/Ethiopia-health-system-transformation-plan.pdf.

2   Ethiopian Federal Ministry of Health (FMOH). *Information Revolution Roadmap*. Addis Ababa, Ethiopia: FMOH; 2016.