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MINISTRY OF HEALTH-ETHIOPIA

INFORMATION REVOLUTION

SUCCESS STORIES

VOLUME - II



PREPARED BY: MINISTRY OF HEALTH IN COLLABORATION WITH
DATA USE PARTNERSHIP (DUP)





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PRELUDE

Information Revolution (IR) is the major among the health sector transformation agendas that the Ministry of Health (MOH) has been implementing since 2015. Currently, it also continued as the most important one of the five priority areas- the rest being quality and equity; motivated, competent, and compassionate (MCC) health workforce; health financing; and leadership - of the second Health Sector Transformation Plan (HSTP-II).

The Information Revolution agenda, as it deals with a radical change in a way health data need to be captured, used and shared, is a foundation on which the remaining transformational agendas flourish. Considering a success in IR also as an accelerator of the other priority areas, Ethiopia Data Use Partnership (DUP) - a project implemented by a consortium of partners which are led by Ministry of Health and JSI, Research and Training Institute (JSI) has prioritized supporting implementation of IR at all levels of the health system since 2017.

Digitization of the health data tools to ensure generation of quality data and change of culture to use information for actions and health planning, two of the three IR enablers, have shown tremendous progresses over the last few years thanks to multiple partners contributions. With the aim to promote, celebrate and scale up the successes, the MOH jointly with DUP has been documenting case stories that portray how enhanced use of quality health information translated to a provision of improved health services.

These success stories were collected from different places and contexts in Ethiopia, and so far, each of the stories were shared widely through various online outlets, including websites of MOH, JSI, etc. in different times. To promote it further, MOH and DUP pursued additional sharing modality, such as a print form since the 2020 health sector Annual Review Meeting (ARM). For the second consecutive year, we started to assemble the stories in an annual magazine named 'Information Revolution Success Stories'.

This IR Success Story magazine is usually disseminated during the ARM to reach out to more audience. In this volume-II magazine, success stories of how two health centers in Harari regional state have advanced their healthcare service deliveries by transforming use of quality information for informed decisions and actions. It also tells a story of two Sidama region districts progression to becoming a role model in the implementation of IR. A success in enabling data visualization using mobile DHIS2 apps for the Amhara regional health bureau leaders and program experts is also included in this magazine.

USING QUALITY DATA TO IMPROVE HEALTH SERVICE OUTCOMES

By Benti Ejeta, Senior Learning and Knowledge Management Specialist, (DUP)/JSI



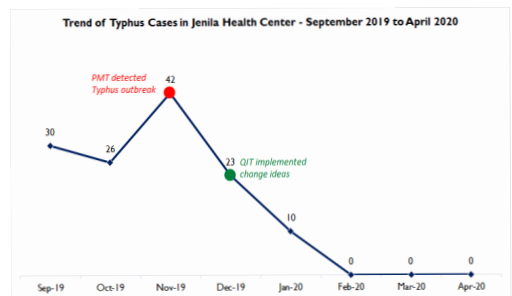
Amal Ahmed, director of Jinella Health Center

The Jinella Health Center serves nearly 30,000 residents of the city of Harar in the Harari National Regional State, Ethiopia. Recently, it was lauded for its response to a typhus outbreak and increasing malaria cases. With the help of the Ethiopia Data Use Partnership (DUP), a joint initiative of JSI and the Ministry of Health (MOH), the center has improved its data quality and use of high-quality health information, empowering a practice of evidence-based decision-making.

“ It was the all-time record high ”

In November 2019, Jinella’s performance monitoring team (PMT) noticed a surge in typhus cases. Reports indicated that cases had increased from 30 to 42 in two months. “It was the all-time record high for our health center. We found it very alarming and it needed to be addressed urgently,” says Amal Ahmed, director of the center and PMT chairperson.

Jinella quickly deemed the typhus outbreak a public health emergency and formed a quality improvement (QI) team within the PMT to determine the source of the outbreak and to map and implement interventions. With this hefty assignment, the QI team worked tirelessly, reviewing piles of records and a plethora of data to discern the leading cause of the outbreak. As part of its approach, the QI team applied the information use cycle, a process to improve performance adopted by Ethiopia’s Ministry of Health (MOH) that involves identifying gaps; prioritizing problems; investigating root causes; and recommending and implementing interventions.



“The team traced the data to Bote Area, a street where homeless people dwell in the city of Harar,” says Haregawin Hailu, health information technology expert at Jinella and QI team member. Not only did the team’s meticulous efforts lead to the identification of the initial location of the outbreak, they also found that the lack of access to proper hygiene and sanitation services were its root causes. The QI team recommended sanitizing the area, making facilities accessible, and providing fresh clothes to the people who dwelled there. The team also said that these citizens’ access to services and facilities would need to be maintained to further contain the typhus’ spread.

However, these recommendations—especially providing permanent access to sanitation and hygiene services—seemed impossible due to scarce resources and limited capacity. So Jinella launched a resource mobilization campaign that yielded various sanitation and hygiene items, including soap and clean clothes, from the Harari Regional Health Bureau (RHB), local partners, and community members.

In December 2019, following the resource mobilization, Jinella organized a week-long campaign to implement the QI team’s recommendations. During this time, Jinella supported efforts to clean the streets and provided a means for people who were homeless to wash themselves, receive a haircut, and change into clean clothes. Over a few weeks, the health center provided essential items to sustain the effort. Jinella also used the campaign to raise public awareness of the need for personal and environmental hygiene.

The return on this investment was impressive; in January 2020, the typhus caseload fell to ten. By the next month, it dropped to four cases; ultimately reaching zero in March 2020. Since then, there have been no new cases of typhus.

“ We found it puzzling. Contrary to the efforts, cases never seemed to slow. ”

Around the same time, reports indicated that despite the health center’s best efforts, malaria continued to be on the rise. “We found it puzzling. Contrary to the efforts, cases never seemed to slow down,” says Amal. Confounded, Jinella decided to pause and review its actions against its data.



Samiya Baker, health officer of Jinella Health Center, checks a woman’s blood pressure.

Again, Jinella turned to its PMT to find answers. The team thoroughly reviewed and analyzed the health data related to malaria and uncovered the mystery: only nine of 169 cases reported from July to December 2020 originated in locations under Jinella's jurisdiction. Fifty-two percent of cases were from other districts in the Harari region, and 48 percent were from adjacent districts in the Oromia Region.

In total, case data were coming from 12 districts in the two regions, which explained why Jinella's interventions in its catchment area had failed to reduce the number of malaria cases. This information made it obvious that malaria prevention could be achieved only in coordination and collaboration with stakeholders. Jinella realized it needed to segregate data by source location; and share the data and seek solutions with responsible persons in each location.

Halfway through 2020, Jinella presented its discovery and intervention ideas to the Harari RHB during the regional monthly essential health review meeting, a performance review of the health sector in the Harari region. Jinella and the Harari RHB devised a plan to collaborate with the other woredas and Oromia Region to curb the spread of and ultimately eliminate malaria.

Accordingly, Jinella began sharing data, including data from other districts in the region, via a regional platform. Similarly, the data generated from adjacent districts in Oromia were shared via an existing platform shared between Harari RHB and the Eastern Hararge Zone health departments of Oromia.

Thanks to Jinella's efforts, malaria reports are now prepared in relation to the case's origin. This disaggregation has made it possible to reallocate resources to other priority health services. "The fact that we are relieved of the stress of trying to tackle the disease that largely comes from outside our catchment area helped us to refocus our efforts," says Samiya Baker, health officer at Jinella.



**PMT has become a reliable force behind all these successes.
In fact, now it is where it ought to be.**



Jinella's response to both the typhus outbreak and rise in malaria cases demonstrates its progress in creating a data-driven culture in which actions are based on evidence. Over the last couple of years, the health center also recorded significant improvements in other health services, including family planning and skilled birth attendance. This resounding progress is directly attributed to its optimized PMT, a team that has increased its capacity and strengthened its commitment to review, analyze and translate health data.

Before 2019; however, Jinella had a poor record of data use, and its PMT was ineffective. According to Amal, PMT review meetings were held regularly, but discussions were not translated into action until MOH, DUP and the Harari RHB helped the health center build its capacity to generate high-quality data and use it to inform actions. This assistance included on-the-job-training with regional DUP staff to enhance the PMT's overall performance. Jinella also became one of the health institutions that participated in the Capacity Building and Mentorship Program, which was implemented by DUP, MOH, and local universities. In December 2020, Haramaya University helped organize a week-long training event that was largely credited for promoting a data use culture at Jinella.



Today, the PMT has become the forum that reviews the facility's performance; identifies and prioritizes health service gaps; and recommends and implements improvement mechanisms. It is where the health center turns to for guidance. "PMT has become a reliable force behind all these successes. In fact, now it is where it ought to be," says Amal. The health center's strong family health team and its recognition of high-performing individuals have also contributed to Jinella's success. To ensure progress and sustainability of its data culture, Jinella has started incentivizing data use behavior. A weekly ceremony recognizes high performers in data use as "Stars of the Week," and displays their photographs in the health center.

IMPROVED HEALTH DATA ACCESSIBILITY & VISUALIZATION USING DHIS2 MOBILE DASHBOARD APP FOR EVIDENCE BASED DECISION

By Benti Ejeta, Senior Learning and Knowledge Management Specialist, (DUP)/JSI

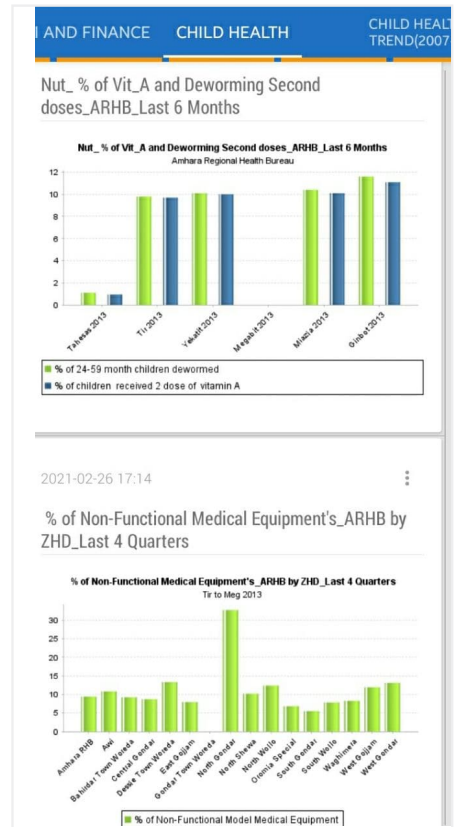
THE CONTEXT

Amhara Regional Health Bureau (ARHB) has been implementing different Information Revolution (IR) initiatives across the regional health systems since 2018. These multifaceted efforts target ensuring quality health data; creating culture of data review; and using data for decisions and actions. One area where more attention and resource exerted over the last three years is the implementation of District Health Information Software-2 (DHIS2) – a health information management tool that captures, stores and analyzes routine service data; and enables information visualization to support evidence based decision making goals.

Pertaining to the huge investments that went to implementing this digital health tool, DHIS2 has taken its rightful place as a main data source across most of the regional health systems. As a result the quality of service data in the region in terms of representative completeness and timeliness has improved much and remains above the national targets (90%) for the last several months. However, this progress was hampered to some degree by due to the fact that the data were inaccessible and invisible on different display tools other than desktop and laptop computers. Ensuring easy access to the health data needed availing data visibility on various display tools, including mobile phone. It was believed that this would facilitate easy access to data for the health leaders and Program experts to make timely and accurate decisions.

MITIGATING THE SITUATION

By partnering with Amhara RHB, Ministry of Health (MOH) and Data Use Partnership (DUP) worked to realizing data access and visualization on smart mobile phones and tablets. The team that cobbled together from DUP and regional health bureau identified a suitable application that can fetch data directly from the regional DHIS2 database and make displays of analyzed data. This application was a DHIS2 dashboard app and was installed on smartphones and tablets of 32 program managers including bureau heads. The DHIS2 Mobile Dashboard which was identified from the DHIS2 application store has made the health data collected using DHIS2 accessible all the time everywhere surpassing geographical and infrastructural disparities.



However, before rolling it out, the application was tested for effective functionality as Ethiopia's DHIS2 instance is different from the global one due to the different calendar Ethiopia uses. In addition, it was

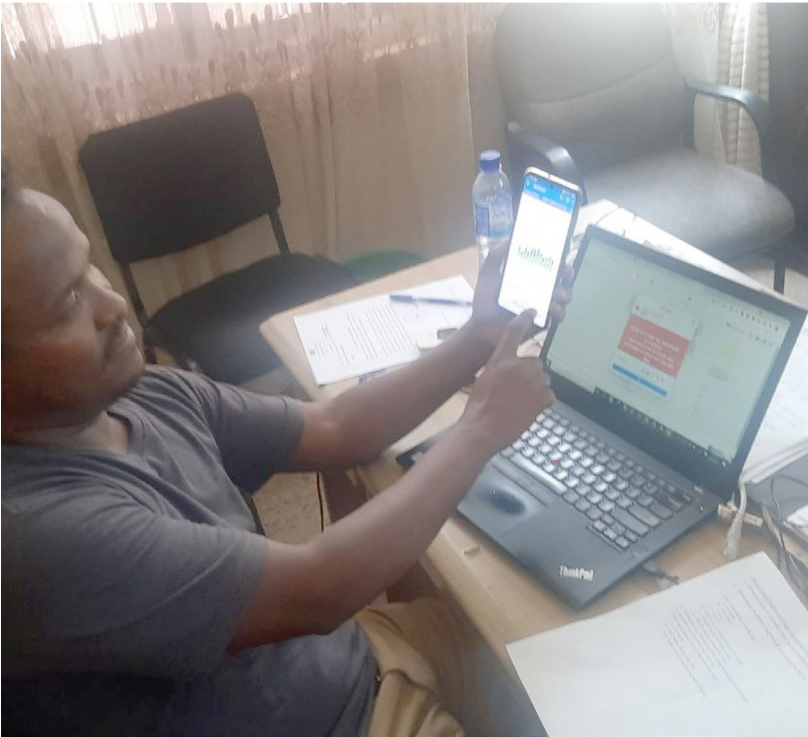
Evaluated against synchronization of all DHIS2 dashboards; synchronization of dashboard contents and data regularly as soon as data is updated on DHIS2; visibility of data properly; and visibility of the dashboard offline without internet connectivity.

With this testing, all criteria boxes ticked affirming the suitability of the application to best serve the purpose it needed for. To further confirm the applicability of the tool, decision was made to implement it at a lesser scale. This implementation built confidence in the app. Then, DHIS2 Mobile Dashboard app was implemented on much larger scale.

Directorate	# of staff who're using Mobile dashboard
PMED	10
HPDPD	10
Curative	3
Supply Chain	3
Head, Bureau	2
Regulatory	1
Multi-sectoral and HIV	1
Advisory	2
Total	32

THE BENEFIT

Currently directors and program experts from Disease Prevention and Control Directorate (HPDP), Planning Monitoring & Evaluation Directorate (PMED), Curative & Rehabilitative Directorate (CRD), logistics Directorate, and Resource Mobilization Directorate are using this app to access, review and use DHIS2 data on their smartphones. Accordingly, it enable the health leaders and program experts to access selected key performance indicators status regardless of internet connectivity on smartphones and tables.



“

I am using Mobile dashboard ever since I installed it on my Mobile Device. I benefited a lot from this app to get visualization of key performance indicators on my hand which helps me a lot to take evidence based decisions irrespective of where I am

”

says Teklehaymanot Gebrehiwot, PMED director.

Teklehaymanot Gebrehiwot, PMED Director, speaking about the benefit of using the app

Kassahun Tamir is a specialist at the directorate of the Mothers, Newborn and Child Health in Amhara regional health bureau. He has been using the DHIS2 Mobile Dashboard application ever since it came to the scene.

“

It gives me confidence while I am at meetings, training and other events since I can refer to the status of selected program indicators easily on my smartphone,

”

says Kassahun. He also believes that the app has helped him and his coworkers to make timely and accurate decisions.

IMPROVING HEALTH SERVICE DELIVERY IN ETHIOPIA THROUGH STRENGTHENED PERFORMANCE MONITORING TEAMS

By Benti Ejeta, Senior Learning and Knowledge Management Specialist, (DUP)/JSI



On the morning of March 9, 2021, Lemlem Alemu, who was nine months pregnant, was attending her last antenatal care appointment at the Aboker Health Center in the Harari Region of Ethiopia. She was one of several pregnant women brought to the health center by the family health team, which makes routine community visits and provides multiple services, including home-based care, for those unable to visit the center.



Mrs. Alemu at an ultrasound examination.

Historically, however, the quality of care, including skilled birth attendance (SBA) at Aboker has been poor. In April 2020, only 9 of 52 women that the health center planned for delivery gave birth at Aboker. Reports indicated that the health center's poor performance was largely linked to a weak performance monitoring team (PMT), which is supposed to monitor, review, and analyze health center data and performance.

“As members of PMT, we meet to review performances. But nothing concrete comes out of it,” said Muna Ali, Aboker Health Center director and leader of the health center's transformation. PMT members met regularly to discuss and identify gaps, but would fail to follow up with action plans to fill them.

Resuscitating the PMT

Ineffective PMTs, stemming from a poor data use culture, were ubiquitous across health facilities. When the Ministry of Health, Ethiopia Data Use Partnership (DUP) and the Harari Regional Health Bureau (RHB), uncovered this issue, they began monitoring and evaluating the PMT discussions, decisions, and actions. This involvement helped identify the underlying problems, which included a general lack of awareness of PMT standards and practices. As a solution, MOH and DUP recommended mentorship and supportive supervision for health center staff, coupled with capacity-building training on the PMT standards.



PMT members at Aboker Primary Health Center

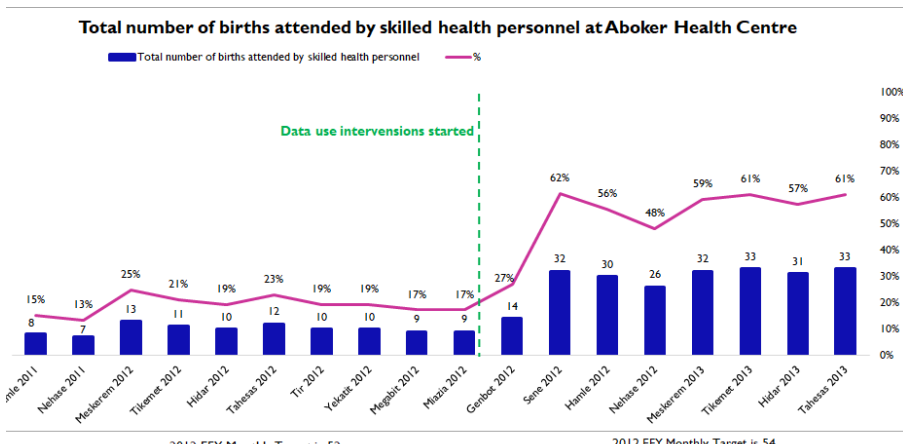
MOH, DUP and the RHB worked closely with Aboker Health Center staff to assure PMT members were capacitated and motivated to apply standards and rules. MOH and DUP suggested ways to optimize the PMT, and in November 2020, held a capacity-building training to enhance members’ use of data to improve health outcomes.

For the health facility, this was an ‘a-ha’ moment that led to a change of course in its data use practices. “DUP’s hands-on support and mentorship have been extremely useful. It helped us to exactly identify where we had been failing all along,” said Mrs. Ali. As a result of the ongoing effort, Aboker’s PMT transformed from a largely symbolic entity that produced few results into a forum for highly analytical and critical decisions that drive the center’s improved performance.

PMT members have become “proactive data consumers,” said Mrs. Ali. As the PMT started identifying problems, analyzing root causes, and developing and implementing interventions, a perceptible shift in the data use culture began improving health service delivery.

Ensuring Improved Services

One of the gaps that the revitalized PMT identified and prioritized was the low SBA. By applying a problem analysis cycle, the PMT found that inadequate staff commitment and low community awareness were the underlying reasons for the low SBA numbers. To help raise community awareness, the team recommended consolidating a community-level service and adding a particular focus on maternal, newborn, and child health. Through regular visits and conversations, the family health team was able to persuade community members and pregnant women to start and/or resume antenatal care services, and consequently deliver at the health facility. Following months of intensive implementation of the recommended interventions, SBA jumped from 17% in April 2020 to 61% in December 2020, an all-time high for the facility.



Mrs. Alemu was among the growing group of women who planned to give birth at the facility. “The idea of being helped by [a] skilled person gives you a sense of assurance,” she said as she finished her examination and walked to the counseling room. To maintain progress, Aboker started a campaign called “No More Home Delivery,” which led to improved number of women giving birth at the facility.

The health center also showed steady improvement in the HIV positivity yield, which is the proportion of HIV positive results of the total tested. Aboker saw consistent growth from April to December 2020, and recorded the highest performance in the region in 2020.



Muna Ali shows the transformation at the Aboker Health Center

In addition to improving health service delivery, the strengthening of Aboker's PMT has fostered a high degree of commitment to data use at all levels. And since the introduction of recognition and incentives, including cellphone airtime, for high-performance, staff commitment and motivation to use data has increased significantly, and a culture of 'no health data, no health program' has taken root.

The Take-Away

Aboker demonstrated that the quality of health service delivery is contingent on staff having correct and relevant information to make sound critical decisions. The availability of high-quality data depends on a culture of data use, powered by a strong PMT that ensures quality, monitors performance, and swiftly identifies and corrects problems as they arise.

ETHIOPIA'S EXPERIENCE: EMPOWERING AND IMPROVING THE USE OF QUALITY DATA FOR EVIDENCE-BASED DECISIONS THROUGH CAPACITY BUILDING AND MENTORSHIP

By Benti Ejeta, Senior Learning and Knowledge Management Specialist, (DUP)/JSI

Mr. Gizachew Gishu is head of the Hawella health center, one of the four health centers in the Hawella district of the Sidama region in Ethiopia. During his tenure at the health center, he grappled with how poor data quality and its use negatively impacted the provision of services. “In the health center, there was lack of an effective process and practice of managing health information. Poor data recording and sharing practices resulted in information loss which mostly led to ill-informed actions.”

Mr. Gishu's reflection mirrors the challenges that woredas, or districts, across the country face—despite the critical importance of data. In 2015, in recognition of how routine health information can advance national efforts to deliver quality and universal healthcare and contribute to the country's progress toward achieving the 2030 agenda of the SDGs, the Ministry of Health (MOH) launched the [Health Sector Transformation Plan \(HSTP\)](#), a five-year initiative with four transformational agendas.



Mr. Gishu, Hawella Health Center Head, showing a renovated cardroom after the intervention

The Information Revolution (IR), one of the four agendas, seeks to create a culture of information use at all levels of the health sector; digitize priority health interventions; and strengthen governance of the health information system. Over the past several years, the MOH has partnered with regional health bureaus and local universities to support woredas implement IR initiatives in the Capacity Building and Mentorship Program (CBMP). While the MOH designed CBMP, its implementation is primarily led by six local universities as it aims to improve the generation, sharing, and use of quality data to ensure evidence-based decision-making, in addition to fostering strong multi-sector collaboration between academic institutions and service providers.

In Sidama, Hawassa University, jointly with the [Ethiopia Data Use Partnership](#) (DUP) led by JSI Research & Training Institute, Inc., Sidama regional health bureau, and the MOH, has been supporting CBMP implementation in the Shebedino and Hawella districts since December 2018. In the two districts, there are 12 health facilities and two district health offices. The baseline assessment indicated that 60% of the facilities lacked any kind of appropriate process and practice to produce and use quality data, while 34%, despite having monitoring and evaluation infrastructure in place, did not adequately use it. Only 6% of the health facilities and offices were able to use improved quality data. It was a compelling gap that required swift and urgent intervention attention.

Throughout the intervention Hawassa University provided capacity building activities, including a training on data quality and use improvements. It also focused on supporting the district health offices and facilities to produce quality data through operationalizing nonfunctioning electronic health tools, such as DHIS2, a digital platform that the MOH rolled out across the country in January 2018 to improve the generation, use, and sharing of high quality data from all health institutions across Ethiopia.



Ilfinesh Juge, Cardroom Worker, registering a Hawella Health Center Visitor

A year into the intervention, a performance review indicated that most health facilities in the two districts had made strides in laying down the very foundation to producing and using data-- setting-up a functioning M&E system. However, a significant number of health facilities were still underperforming and falling behind. Convening and training grassroots level implementers to execute activities did not yield desired results, so Hawassa University began to rethink its support mechanism. The university shifted to an innovative and practical approach that provided focused and tailored support to each health facility, customized to their specific context and needs, and documented and shared the lessons learned to assist other districts facing similar challenges. This approach created an opportunity for

the university to closely work with facilities on all aspects of transforming its health information management, including down to the renovation of facility rooms, cardrooms, and waiting rooms.

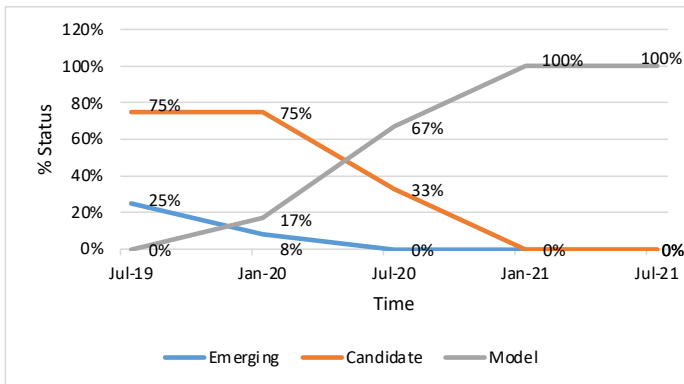
“This means, which we call practice-based learning approach, enabled facilities and units to effectively remove the barriers that hindered quality health data production. Additionally, this focused intervention created a demonstration site where others visit for experience sharing. Visitors usually return home with ‘we too can do it’ attitude,” says Mr. Keneni Gutema, PhD, the university’s program coordinator.

In July 2021, 100% of the health facilities and district offices in the Shebedino and Hawella districts achieved becoming models in collecting, consuming, and communicating quality health data. More importantly, all of the health facilities and offices are currently able to share their data using one or more of the MOH’s digital health tools. The change moved beyond improving the data quality in the two districts -- across all levels of the health system, a culture shift, where health staff began to seek, review, and use data to make programmatic and budgeting decisions, become the norm.



Mrs. Wusen Giro, Gebre Kiristos Health Center, discussion the progress

The use of quality data directly translated to improved health service deliveries. For example, at Hewalla health center, one of the facilities, skilled birth attendance (SBA) has reached 84% in July 2021. “The improvement in all priority areas made our health center the preferred destination by the community. Similarly, all other service have shown substantial improvement thanks to the support from the university and DUP;” says Mrs. Wuse Giro, head of Gebre Kiristos Health Center in Shebedino district.



Through a rigorous evaluation, the regional health bureau and the MOH verified and officially accredited the districts as models in implementing initiatives that enhance quality data management and use practices. Following this verification, Hawassa University inaugurated the two districts as models on 27th of August 2021 in an elaborate ceremony.

The collaboration in Shebedino and Hawella districts among the country’s academic and health sector actors is just one microcosm of a nationwide movement that is a piece of a greater global effort to ultimately achieve better health and nutrition outcomes. Ethiopia’s experience demonstrates the need for strong partnerships across sectors, models to learn from and be inspired by, and innovative approaches that contribute to accomplishing the greater global goals while accommodating the local context.



IR SUCCESS STORIES