



# ANNUAL PROGRESS REPORT

## USAID ZAMBIA EVIDENCE FOR HEALTH PROJECT

FY 2021 (OCTOBER 1, 2020 – SEPTEMBER 30, 2021)

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## ACRONYMS

A/COR	Alternate Contracting Officer’s Representative
AMELP	Activity, Monitoring, Evaluation and Learning Plan
CDC	Centers for Disease Control and Prevention
CDCS	Country Development Cooperation Strategy
CHAI	Clinton Health Access Initiative
CIDRZ	Centre for Infectious Disease Research in Zambia
CoP	community of practice
COR	contracting officer’s representative
DDUC	data demand and use coordinator
DHIO	district health information officer
DHIS2	District Health Information Software 2
DQA	data quality audit
E4H	Evidence for Health
ESV	enhanced site visit
FH	family health
FP	family planning
FY	fiscal year
GNCZ	General Nursing Council of Zambia
GRZ	Government of the Republic of Zambia
HIA	health information aggregation
HIS	health information system
HISP-SA	Health Information Systems Program-South Africa
HISP-ZM	Health Information Systems Program-Zambia
HISS	Health Information System Strategy
HIV	human immunodeficiency virus
HMIS	Health Management Information System
HR	Human Resources
IAF	Interoperability Architectural Framework
ICCM	Integrated Community Case Management

ICEMR	International Centres of Excellence for Malaria Research
ICT	information and communication technology
IDSR	Integrated Disease Surveillance Reporting
IP	implementing partner
KM	knowledge management
KMP	knowledge management platform
KPI	key performance indicator
M&E	monitoring and evaluation
MCH	maternal and child health
MDD	Management Development Division
M-DIVE	Malaria Data Integration and Visualization for Eradication
MECOP	Monitoring and Evaluation Community of Practice
MFL	Master Facility List
MoH	Ministry of Health
MPDSR	maternal and perinatal death surveillance response
MRR	Malaria Rapid Reporting
MSI	Management Systems International
NIDS	National Indicator Data Set
NMCZ	Nursing and Midwifery Council of Zambia
NMEC	National Malaria Elimination Centre
PAMO	Program for the Advancement of Malaria Outcomes
PEPFAR	President's Emergency Plan for AIDS Relief
PMI	President's Malaria Initiative
PPR	performance, plan and report
SHIO	senior health information officer
SOP	standard operating procedure
ToT	training of trainers
TWG	Technical Working Group
USAID	United States Agency for International Development
WHO	World Health Organization

ZNPHI	Zambia National Public Health Institute
ZAMSTAT	Zambian Statistics Agency
ZQA	Zambia Qualifications Authority

## EXECUTIVE SUMMARY

Evidence for Health (E4H) is a five-year (2020–2025) project funded by the United States Agency for International Development (USAID)/Zambia and implemented by Management Systems International (MSI) in close collaboration with the government of the Republic of Zambia's (GRZ) Ministry of Health (MoH).

As part of USAID/Zambia's aim to achieve the goal of improved health systems, the E4H project focuses on improving the quality and timeliness of health information to support improved decision-making. Increasing the quality and timeliness of the Health Management Information System (HMIS) in Zambia will support the MoH and bilateral and multi-lateral donors to make strategic decisions related to their approaches to support improved healthcare products and service delivery. E4H will improve health systems through the following project objectives: (1) strengthen the national, MoH-owned and -managed HMIS; (2) improve monitoring, evaluation and research capacities within key government and non-governmental research institutions; and (3) expand the evidence base for approaches to USAID health programming in malaria, nutrition, family planning (FP), maternal and child health (MCH), and human immunodeficiency virus (HIV).

This annual report provides an update on the project's annual progress for the period of October 1, 2020, through September 30, 2021. Considering COVID-19 restrictions on international travel and social gatherings, E4H employed effective management and communications process that integrate technical and administrative teams. Key achievements for the year include the following:

- Launched the development of the 2022-2026 MoH Health Information System Strategy (HISS). E4H organized a stakeholder workshop that identified existing gaps, opportunities and innovations and subsequently defined the goals, vision and mission for the strategy. In-depth interviews with MoH stakeholders to obtain additional information needed for the development of the HISS are underway.
- Supported the development of the Master Facility List (MFL) that fosters standardization in defining reporting units and documents details of all established public and private health facilities. MFL second user acceptance testing is underway and launching of the platform is scheduled for fiscal year (FY)22, Quarter I.
- Completed the HMIS pre-service curriculum training manual and submitted it to MoH and the People's sub-committee Technical Working Group (TWG) for adoption.
- Operationalized the MoH help desk system which provides an effective communication channel to resolve IT issues in the MoH.
- Supported the development of customized dashboards in the MoH DHIS2 platform for program technical teams with the aim of systematizing data access, visualization and use for improved decision making. Roll out of the dashboards is scheduled for FY22, Quarter I, pending MoH sign-off.
- Trained all relevant implementing partners (IPs) and facilitated the operationalization USAID's online Data Analytics Platform. All IPs are now directly uploading monthly data (i.e., data on key HIV indicators) directly into the live Data Analytics Platform. Creation of an online data analytic

platform strengthened IP data management and enabled USAID staff to gain quick and easy access to IPs' performance data. This helped the USAID Strategic Information team to aggregate the monthly data and submit to the President's Emergency Plan for AIDS Relief (PEPFAR) efficiently and reducing time spent on aggregating data from all facilities, previously submitted by IPs using excel spreadsheets.

- Conducted trend analysis on target family health (FH) indicators on a quarterly basis and facilitated deep dive sessions at provincial level during provincial/district integrated meetings.
- Harmonized malaria indicators through a series of facilitated stakeholder coordination meetings with the MoH's Monitoring and Evaluation (M&E) Directorate and Information and Communication Technology (ICT) unit, national and sub-national health program managers, the Zambia National Public Health Institute (ZNPPI), and the National Malaria Elimination Centre (NMEC).
- Conducted a detailed analysis and visualization of the key malaria performance indicators for the malaria data analysis report covering 2014 through 2020 and submitted it to the President's Malaria Initiative (PMI).
- Successfully conducted a trend analysis and deep dive sessions on family health (FH) priority indicators.
- Completed orientation and training for all FH staff on the DHIS2 system. Each staff member was given a login to DHIS2 and provided with one-on-one follow-up and troubleshooting support.
- Supported FH division and PMI in conducting data analysis in preparation for the mission-wide portfolio review.

Despite the challenges posed by the COVID-19 pandemic, E4H made significant strides toward achieving its set objectives. The project will continue to navigate through the challenges faced and close the gaps identified in the overall delivery of the project.

## ACTIVITY DESCRIPTION

MSI's work to support USAID's health office and its IPs is anchored on expanding the evidence base for improving existing approaches to health programming in HIV, nutrition, FP, MCH, and malaria. To effective management of public health service delivery, accurate and timely health data is critical. In line with USAID goals to improve health systems, the E4H project focuses on improving the quality and timeliness of health information to support improved decision-making. Increasing the quality and timeliness of the HMIS in Zambia will support the MoH and donors in making strategic decisions around their approaches to support improved healthcare products and service delivery.

E4H is a five-year project funded by USAID/Zambia and is implemented by MSI in close collaboration with the MoH of the GRZ. E4H covers a five-year period from March 2, 2020, through March 1, 2025. The project achieves its goal of improving quality and timeliness of health information to support improved decision-making through two key objectives. The first objective is to strengthen the national HMIS owned and managed by the MoH; and the second objective which is aimed to improve monitoring, evaluation, and research capacities within key government and non-governmental institutions is currently on hold due to funding constraints. The third objective is to expand the evidence base for approaches to



health programming in malaria, nutrition, FP, maternal and child health, and HIV. The activity supports the strategic objectives of USAID/Zambia, PEPFAR and PMI.

In addition to supporting the MoH at the national-level, E4H provides support services at the sub-national levels in Central, Copperbelt, Luapula and Northern Provinces of Zambia.

## **MANAGEMENT AND ADMINISTRATION**

### **YEAR 2 WORK PLAN AND ACTIVITY MONITORING, EVALUATION AND LEARNING PLAN IMPLEMENTATION**

Based on the rapid assessment findings, E4H, in collaboration with the MoH M&E Directorate, developed a detailed fiscal year (FY) 21 work plan including the Activity, Monitoring, Evaluation and Learning Plan (AMELP) to address the assessment's recommendations. Subsequently, several engagements were made with stakeholders including MoH aimed at refining the workplan based on USAID feedback. E4H submitted a revised FY21 work plan, including the AMELP, to USAID and subsequently approval was granted approval in FY21 quarter two.

During the reporting period, the project held a mid-year review meeting covering October 2020 through March 2021. The goal of the meeting was to assess progress toward planned FY21 work plan activities with a focus on achievements and targets, areas of improvement, challenges, and corrective actions. In addition, the meeting proposed annual targets on AMELP indicators, learning questions and priority activities for FY22.

During the reporting period, the project held an annual planning meeting to review progress made on FY 2021 implementation and subsequently plan for FY2022. During the meeting, the project proposed activities for FY2022 under each objective and result area. Subsequently, the project held stakeholder consultative meetings aimed at discussing the proposed FY22 Workplan activities. Among the stakeholders engaged were the Ministry of Health (MoH), Nursing and Midwifery Council of Zambia (NMCZ) and Health Professions Council of Zambia (HPCZ). Refining of FY2022 workplan is underway internally, with submission to USAID scheduled for November 15, 2021.

Furthermore, as guided by PEPFAR, the project developed a COVID-19 workplan highlighting E4H support towards the fight against COVID-19 in Zambia. The final revised plan was submitted to USAID for approval, following a thorough review and incorporation of inputs from USAID. E4H will continue following up with USAID on the approval of the plan.

### **E4H FUNDING STREAMS**

Modification 3 to the E4H contract confirmed availability of USAID/Zambia's funding streams from the Health Office technical divisions for FY21, including \$596,657.10 in PEPFAR funding available only through September 10, 2021.

The fourth modification to the E4H contract confirmed availability of USAID/Zambia's funding streams from the Health Office technical divisions for FY22, including \$500,000 in PEPFAR funding to prevent, prepare and respond to COVID-19 impact on PEPFAR-supported beneficiaries and health workforce.

## SUBCONTRACTOR ENGAGEMENT

During the review period, MSI continued collaborating with the Health Information Systems Program-Zambia (HISP-ZM) and Health Information Systems Program-South Africa (HISP-SA). E4H incorporated HISP-SA workplan deliverables into the consolidated FY21 E4H work plan.

During this period, HISP-SA provided HISP-ZM with onsite organizational development support to enable HISP-ZM to achieve its organizational development goals. Related support activities included working with the new HISP-ZM board members and management to implement appropriate governance documents and structures and ensure that all registrations, signatories, and bank authorizations were in place and in line with best practices in the separation of duties and internal controls. In addition, they conducted performance appraisals for HISP-ZM employees.

During the reporting period, MSI received notification that the PEPFAR budget allocation for FY22 would not exceed \$1 million. Given this development, MSI reduced its overall budget for the upcoming FY. Due to these budget constraints, MSI terminated the contract for HISP-ZM and recommended seconding staff to the MoH M&E Office under its own budget to ensure that capacity building continues seamlessly. This change resulted in cost savings to USAID while still ensuring that the MoH technical support is provided.

Following termination of the subcontract with HISP-ZM, E4H worked closely with the subcontractor to complete the agreed-upon deliverables. For continuity of support, two of the five positions that were under HISP-ZM (data management coordinator and help desk officer) were recruited under MSI.

In addition, MSI requested that USAID suspend the senior advisor research and evaluation key personnel position based on the expected funding restrictions continuing through FY22. Subsequently, USAID granted approval in FY21 second quarter.

## PROGRESS TOWARD OBJECTIVES

### QUARTERLY KEY PERFORMANCE INDICATORS

Guided by the FY21 work plan and AMELP, E4H continued monitoring key performance indicators (KPIs) under the main project objectives. The table below shows progress made toward achieving a set of quarterly KPIs during the reporting period.

**Table 1: Performance on Key Performance Indicators**

Quarterly KPIs	Baseline	End-of-Project Target	Year-to-Date Results	Comment
% of target facilities reporting HMIS data on time	Health information aggregation (HIA) 1, 89%	95%	82%	Generally, the performance was slightly below the set targets on all the four aggregated reports in the four supported Provinces (Central, Copperbelt, Luapula, Northern). Erratic supply of HMIS tools in Q2 FY21 affected timely data capturing and reporting. Further, data entry on HIA reports at the district has been affected due to other competing priorities such as daily COVID-19 reporting. To improve reporting rates, in collaboration with MoH E4H embarked on decentralizing DHIS2 data entry reporting to HFs. In addition, E4H will support procurement of tablets to improve COVID-19 surveillance system.
	HIA 2, 87%	95%	86%	
	HIA 3, 59%	95%	53%	
	HIA 4, 5%	50%	20%	
% of target facilities meeting data quality audit (DQA) standards	79.6%	80%	On course	Initially this indicator did not have a baseline. In August 2021, a baseline assessment was conducted, and a full report is available. Tracking of the indicator commences in FY22.
# of HMIS standard operating procedures (SOPs) reviewed/developed and adopted by the MoH	0	3	3 SOPs developed	HMIS manual, DHIS2 user guide and comprehensive DQA guidelines have been developed and shared with MoH. However, adoption by MoH is scheduled for Quarter 1 of FY22.
# of health staff in target provinces demonstrating increased knowledge (pre- and post-tests) of data collection, analysis, and use	0	100	353 enrolled, 114 completed/certificated	MoH staff are being supported to accelerate course completion during onsite mentorship. In addition, in FY22 the E4H will deliver the course through in-person training as the virtual approach did not yield the desired outcome.

# of trainings conducted by training of trainers (ToT) participants	0	16	3	The following ToTs were conducted: revised HMIS tool; malaria case-based surveillance system supported virtually; Facility DHIS2 data entry. Several ToT trainings are for FY22 pending adoption of HMIS strategy/SOPs by MoH.
# of health staff trained by ToT participants	0	160	416	The project surpassed the target. Majority of health staff trained in facility DHIS2 data entry by ToT participants.
# and % of data requests answered within the specified time	0	90%	52%	So far most common issues raised are computer hardware and facility utilities. Orientation to other health facilities (health facilities) is underway aimed increasing system usage. Furthermore, management at different levels are being engaged to ensure that tickets are resolved within a specific time.
# of planned National Indicator Data Set (NIDS) alignments based on program needs completed	0	1	5	Indicators under the following areas have been proposed; adolescents, nutrition, HR, malaria and FH.
# tasks completed to improve server management	0	5	2	Assessment completed and recommendations shared with the MoH for developing the SOP for DHIS2 infrastructure management.
# of DHIS server outages per quarter	5	2	0	No outages were recorded.
# of dashboards developed and used	0	12	8	Dashboards for the following areas have been developed: malaria, maternal health, antenatal, child health, neonatal, nutrition, immunization and FP. MoH is yet to provide approval of the dashboard prior to granting access to users at different MoH levels.
# of interoperability tasks completed	0	5	3	Three out of the five planned tasks under interoperability have been concluded. The tasks completed include: 1.Content review of other systems 2.Preliminary proposal for HMIS architectural framework 3.Defining standards for interoperable data exchange.

## OBJECTIVE I: HIGH-QUALITY, TIMELY, AND ACCESSIBLE HMIS DATA

Accurate, reliable, and timely HMIS data are key ingredients for effective planning and decision making in health management at the various MoH levels. In collaboration with the MoH, E4H continued to improve the quality, timeliness and accessibility of HMIS data at MoH national, provincial, district, and facility levels through a comprehensive program of support for HMIS policy and standards, data quality assurance and improvement, MoH capacity building, platform strengthening, and enhancing the interoperability of the HMIS. E4H conducted the following activities under this objective:

### TASK 1.1.2 MINISTRY OF HEALTH HMIS STRATEGY

During the reporting period, E4H undertook a robust process of supporting the development of the MoH 2022-2026 HMIS strategy.

During the reporting period, E4H led a workshop for stakeholders to launch the development of the HMIS strategy. The meeting involved identifying existing gaps, opportunities, and innovations and subsequently defining goals, vision, and mission. In collaboration with the MoH, E4H supported the coordination of relevant stakeholders and took the lead in the strategy development process.

Various stakeholders, including the MoH, USAID, PEPFAR, and implementing partners (IPs), provided input on the thematic areas, specifically HMIS development, technology, information use and governance and leadership. The following key priorities for the strategy were highlighted:

- Investment in technology and infrastructure to support scale-up of an electronic health information system (HIS).
- HIS interoperability and adoption of standards.
- Providing incentives for innovation and integration of eHealth into core services.
- Identifying funding for medium-to-long term implementation.
- Responding to the expectations of citizens for more efficient, effective, and personalized services.
- Using data and information for public health planning, policies for privacy and security of information.
- M&E to ensure that HIS delivers according to health priorities.

The MoH requested additional stakeholders to participate in the interviews to finalize the identification of priorities for the strategy. During the reporting period, the project team conducted interviews with stakeholders in the U.S. government (e.g., PEPFAR, USAID, the Department of Defense and the CDC) and IPs such as the Clinton Health Access Initiative. The following were key themes emerged from the interviews:

**Table 2: Emerging themes from stakeholder interviews on HISS development**

Thematic Area	Responses from stakeholders
---------------	-----------------------------

Governance	Make use of technical working groups to ensure resilient/structured communication and coordination. Other departments that play a role in health must also be involved, e.g., defence force, mines, correctional services, Zambia Statistics Agency (ZAMSTAT). The strategy must promote ownership. Management and supervision roles and responsibilities related to routine health information systems must be clear.
National indicators	National indicators must be revised as part of the National Strategic Plan. This will be reflected in the M&E framework. On the other hand, there is a need to adopt indicators as disease patterns and programme policies change within the 5-year period. The HMIS must be flexible to adapt to these programme needs.
Systems	There is a lot of system fragmentation and duplication. There is also a lack of strong infrastructure at implementation level, e.g., computers, internet. The strategy must focus on the following principles: <ol style="list-style-type: none"> <li>i. Only collect data once (one source of truth)</li> <li>ii. Reduce duplication of efforts for efficient use of investments</li> <li>iii. Use interoperability where applicable to avoid duplication and promote triangulation</li> <li>iv. Systems must be owned (accountability is divided at moment)</li> <li>v. There must be a balance between innovation and control</li> <li>vi. The legal framework must be kept in mind</li> <li>vii. Existing systems must be strengthened rather than creating new systems for new purposes e.g., COVID-19</li> </ol>
Data analysis and use	The strategy should consider the following: <ul style="list-style-type: none"> <li>• Focus on facility and community level, where data is generated. Promote ownership at this level.</li> <li>• Platforms must be strengthened to promote for big data access, use, and visualization to inform policy.</li> <li>• Data use must be institutionalized. All staff must feel data is their responsibility.</li> <li>• Data timeliness and completeness must be improved.</li> </ul>
Capacity building	Focus on capacity building at granular/patient level. Expand on online training.

Interviews with other key stakeholders such as ZAMSTAT, the Zambia Ministry of Home Affairs and SMART Zambia are scheduled for FY22, Quarter I. Additional information obtained from the interviews will inform development of a comprehensive HISS.

### TASK 1.1.3 TECHNICAL WORKING GROUP/COMMUNITY OF PRACTICE (TWG/COP)

HMIS TWG/Community of Practice (CoP) seeks to ease decision-making, negotiation and promotes consensus-building aimed at integrating efforts and avoiding duplication among stakeholders. HMIS TWG/CoP ensures that donor support to HMIS is coordinated, collaborative and executed efficiently. During the reporting period, E4H ensured the functionality of the TWG sub-committees (people, processes, governance, and technology/digital) in line with HMIS TWG/CoP concept note and terms of reference (ToRs) approved in FY21, Quarter I. Subsequently, MoH successfully appointed participants to the various sub-committees.

The Process Sub-Committee provides appropriate technical oversight and leadership to ensure that appropriate standard operating procedures are available to support the national HIS. The sub-committee reviewed and provided inputs on the indicator and data elements naming conversions to facilitate searching in the HMIS. During the reporting, the Process Sub-committee completed the revision of HMIS tools, including electronic data entry platforms. Training on newly revised tools took place at the provincial and district levels and later cascaded to health facilities. However, printing of the tools was delayed following a circular from the Cabinet Office issued in FY20, quarter 4 instructing government ministries and agencies to print government documents only through the Government Printers Department. Through the TWG, E4H and other stakeholders supported printing selected HMIS tools in the supported districts. The MoH has commenced a massive printing effort of HMIS materials. Availability of standardized HMIS materials will improve data capturing and ultimately improve the quality of data being generated. Following the revision of the HMIS tools, the committee ensured that HMIS electronic platforms were aligned with the 11th revision of the International Classification of Diseases as per World Health Organization guidelines. In addition, the sub-committee engaged MoH to set up a team to conduct the MFL user acceptance testing and data cleaning which included merging of duplicate health facilities. During the reporting period, the sub-committee continued providing coordination support on the development of the HISS.

The People Sub-Committee provides technical oversight and leadership to ensure that the MoH workforce is appropriately staffed and fully capacitated to support the development and maintenance of the national HIS) and can use the available data to make evidence-based decisions. In the reporting period, the people sub-committee held weekly meetings and provided leadership on the development of HMIS contents for the pre-service curriculum of the NMCZ formerly known as General Nursing Council of Zambia. In addition, the people sub-committee embarked on the development of the methodology for the HMIS staff gap analysis that will inform the development of the in-service training plan. HMIS staff gap analysis exercise has been scheduled for next quarter.

To ensure sustainability and avoid duplication of efforts, the MoH decided to integrate the Technology Sub-committee into the existing Digital TWG, which is chaired by the assistant director for ICT. The Digital TWG supports the identification of ICT gaps, challenges and best practices, and supports the MoH in addressing them. The M&E Directorate nominated the E4H senior HMIS advisor and a staff member from the Directorate as representatives to the Digital TWG. During the reporting period, the Digital TWG developed a consolidated work plan to guide the sub-committee's operations and activities. The Digital TWG submitted the consolidated plan to the MoH's ICT unit for review and approval. Furthermore, the TW held a meeting to discuss the new CyberSecurity Act of 2021, a law regulating information sharing and storing of national health data. Following the meeting a recommendation was suggested that all ICT SOPs be revised to incorporate the new requirements under the law. During the reporting period, E4H continued to support MoH ICT unit define user roles for all systems. Furthermore, E4H continued efforts of establishing an interoperability layer that will be linked to the national data warehouse. The digital TWG continues to provide leadership on the interoperability agenda of key HISS.

During the reporting period, the M&E TWG met twice, and provided updates from each sub-committee to the TWG members from different projects supporting MOH. In addition, the MoH and Steering

Committee members conducted a review of the ToRs of the governance sub-committee and the steering committee and agreed to combine the two into one, the governance sub-committee). This is to ensure that appropriate governance and leadership is provided to support the maintenance and development of the HIS in Zambia.

Below is a tabulation of a summary of activities and outputs/deliverables for each sub-committee:



**Table 2: Expected Outputs/ Deliverables for the Sub-committees**

Sub-committee and TWG	Deliverable	Progress
M&E TWG	HMIS rapid assessment	Completed
	HMIS implementation plan	Completed
Process Sub-committee	Zambia HIS Strategy Final Draft	Draft for review
	Master facility list (MFL)	Almost complete
	Guidelines on organisational structures and naming convention	Draft for review
	Indicator development guidelines (principles)	Draft for review
	NIDS development support	Draft for review
	HMIS desktop DQ assessment template	Draft for review
	HMIS DQ plan	Draft for review
	HMIS DQ assessment report	In progress
	Program performance review meeting guidelines	Pilot stage
	DHIS2 user management guide	Final review
	DHIS2 procedure management guide	Final review
	HMIS procedure manual	Draft for review
	Standardized dashboard templates for programs	Completed pending approval
	Malaria reporting framework reviewed	Completed
	Malaria database indicators and data elements aligned with NIDS	Awaiting final approval
	Malaria database targets reviewed and adjusted	Completed
Data exchange between malaria database and national DHIS2 system effected	In progress	
People Sub-committee	Pre-service HMIS curriculum framework	Completed
	Pre-service HMIS curriculum manual	Completed
	Pre-service HMIS curriculum (theory)	Completed
	Pre-service HMIS procedure and evaluation manuals (practical)	Completed
	In-service training plan	Reviewed
	DHIS2 fundamentals online training	In progress
	In-service HMIS competency framework	Completed
	In-service HMIS competency gap analysis	In process
	HMIS training materials	In process
Governance Sub-committee	Terms of reference	Completed
Digital TWG	Terms of reference for ICT sub-committee	Completed
	HMIS Infrastructure SOP	Draft for review
	HMIS Interoperability Architectural framework	Draft for review

## TASK 1.1.4 NATIONAL LEVEL HMIS CAPACITY

Improving the HMIS capacity of MoH staff responsible for data collection, aggregation and analysis guarantees improved data quality. In this regard, the project continues to strive towards improving the capacity of key staff across directorates of the MoH and other critical GRZ entities such as NMEC to understand, analyze, and use HMIS data. In view of this, E4H embarked on a robust capacity building program aimed at strengthening the use of routine HMIS across the MoH reporting hierarchy with the aim of enhancing reporting and data use. Among the programs offered during the reporting period was District Health Information Software 2 (DHIS2) fundamentals and analytics course. The course offers an opportunity for each health care worker to understand the DHIS2 software which is a basic tool for data collection and aggregation and analysis.

During the reporting period, E4H trainers led the DHIS2 analytics training of trainers (ToT) session. The training participants included MoH program managers, district health directors and senior health information officers (SHIOs) from the four E4H-supported provinces and participants from the M&E Directorate. E4H staff, including data demand and use coordinators (DDUCs), were trained separately.

During the report period, a cumulative total of 353 district health information officers (DHIOs) and program managers have been enrolled in the DHIS2 fundamentals and analytics self-paced online course. The disaggregation of trainees by province is as follows: 128 in Central, 44 in Copperbelt, 69 in Luapula, and 116 in Northern. From the total enrolled participants, 114 completed the training and received certificates (22 in Luapula, 62 in Northern, 17 in Central, and 13 in Copperbelt) representing a course completion rate of 32%. The table below highlights the percentage of participants still enrolled on the program and have completed a specific module.

**Table 3: Active Participants Course progression rates per module**

Course Modules	% active participants per module completed
Module 1: Overview and getting started	56%
Module 2: Introduction to DHIS2	69%
Module 3: Introduction to DHIS2 analysis	48%
Module 4: Introduction to DHIS2 customization	8%
Module 5: DHIS2 tracker	8%
Module 6: Way forward and closing	0%

E4H recognizes the low course completion rates; therefore, in collaboration with the MoH provinces and districts, E4H will shift from virtual to in-person training, observing all COVID-19 preventative measures. Online training has proven problematic due to technological challenges. E4H in consultation with MoH will explore workable solutions of delivering online DHIS2 trainings amidst the noted challenges.

In collaboration with the DHIOs, E4H has embarked on conducting a series of DHIS2 data entry orientations to health facility staff in all supported provinces. This activity commenced in August 2021. Extending DHIS2 data entry to health facilities promotes data ownership and use. Furthermore, it presents an opportunity for early detection of errors thereby strengthening quality assurance. It also lessens the data entry burden at the DHIO thus focusing on other M&E duties such as data reviews and DQAs.

Figure I: Distribution of health facilities trained in DHIS2 training per province (August-September 2021)

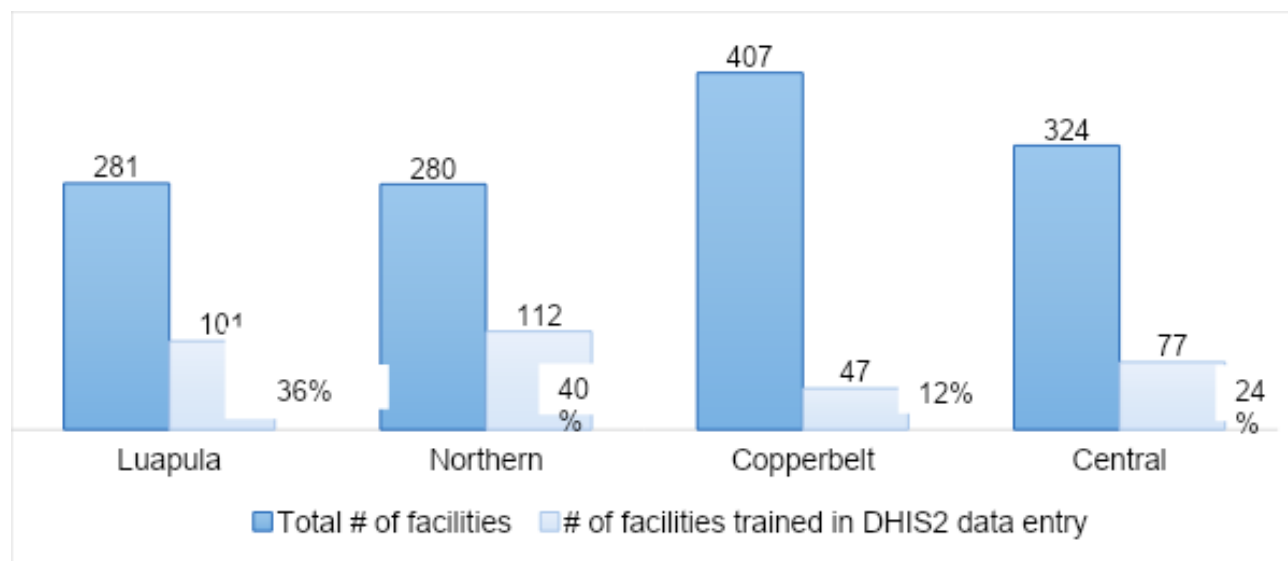


Figure I: Distribution of health facilities trained in DHIS2 training per province (August-September 2021)

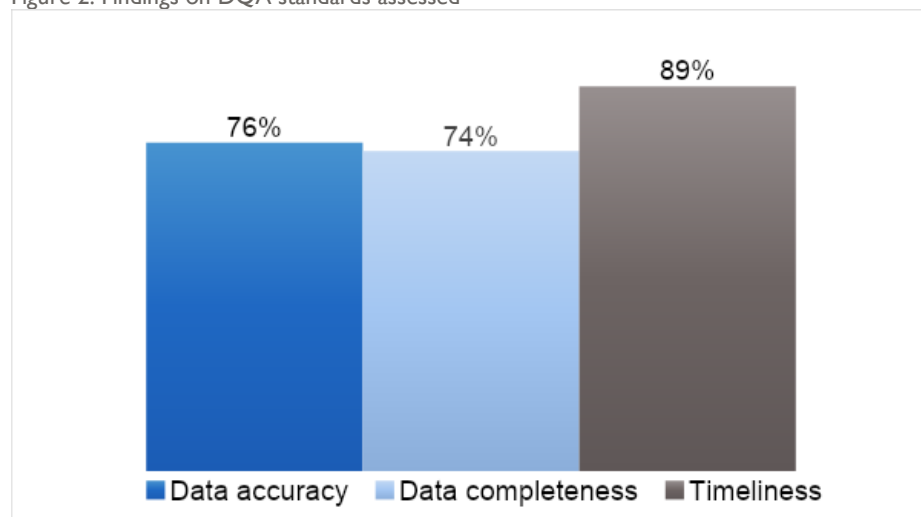
As Figure I indicates, 28% of the health facilities received DHIS2 data entry training in supported Provinces during the report period. From these health facilities, a total of 416 health facility staff participated in the trainings and subsequently were granted access to MoH DHIS2 platform by the end of September 2021. It is expected that this intervention will improve reporting timeliness, routine data quality checks, analysis and use.

In addition to supporting DHIS2 fundamental and data entry trainings, the project continued building capacity among MoH staff at all levels in routine data cleaning and analysis through technical supportive supervision and on-site mentorship. E4H supported monthly data cleaning of selected indicators through flagging outliers for the Information Officers at province and district levels for action. The project continued to support data-driven program review meetings regularly at facility, district, and provincial levels aimed at promoting data use. Furthermore, the project provided routine technical support and mentorship to the provinces and districts on data quality checks using WHO data quality tools on the DHIS2 platform. A total of about 89 activities out of 92 field activities conducted during the reporting period focused on data use and data quality assurance at all levels. By activity type, data capture orientation, Helpdesk system training and DHIS2 fundamentals were the most activities which were conducted to support strengthening data use for decision making. Summary details of field activities undertaken in FY21 have been highlighted under annex I.

During the reporting period, DDUCs began orienting MoH provincial and district staff on the help desk system. A total of 453 user accounts were created across the four provinces. During the period of review, 27 tickets out of the total tickets raised (52) were closed, representing a 51% resolution rate. Commonly raised issues include facility medical equipment and supplies, electrical and power backup, and computer hardware and software issues. E4H will continue notifying and following up with management at all levels. E4H will continue to roll out the help desk system to all supported facilities.

During the reporting period, E4H conducted a data quality assessment (DQA) of MoH DHIS2 data to determine the baseline value for the E4H AMELP data quality indicator in selected facilities across the supported provinces (Central, Northern, Luapula and Copperbelt). The assessment was guided by MoH DQA guidelines version 2014. The assessment revealed that the data quality level across the 48 randomly selected health facilities was at 79.6%. Among the common practices affecting data quality were irregular conducting of program review meetings and inconsistent adherence to quality assurance checks during report compilation at the facility. Below is a graph highlighting assessment findings per data quality standard assessed. A detailed report was produced, highlighting other key findings of the assessment.

Figure 2: Findings on DQA standards assessed



During the reporting period, E4H supported PEPFAR to conduct an indicator mapping by generating data from the MoH DHIS2 platform on key selected indicators. The project also conducted a comparative analysis on the list of health facilities in DATIM and DHIS2 including identifying and reconciling missing health facilities in both systems. E4H presented the findings of the comparative analysis during the meeting held between MoH and USG teams (PEPFAR, USAID and Department of Defense) on August 10, 2021. The teams agreed to support capacity-building for the provincial health teams on data alignment. E4H oriented the provincial teams on aligning data in DATIM and DHIS2 on August 24<sup>th</sup> to improve data consistency. E4H will continue working with PEPFAR and MoH on the data alignment process and the E4H will be working with the MoH teams on the data alignment process in the supported provinces. Further, E4H supported PEPFAR to prepare an import file on the annual PEPFAR indicator that reports on the number of GRZ staff who received any form of PEPFAR support during the FY.

## TASK 1.2.1 PRE-SERVICE TRAINING CURRICULUM

Inclusion of HMIS fundamentals on data collection, analysis and reporting in pre-service training curriculum guarantees improved data quality, management and use by the health staff once deployed into service. During the reporting period, E4H in collaboration with MoH and NMCZ, conducted a pre-service gap assessment to inform development of the pre-service curriculum framework. along with a matrix to compare an “ideal” curriculum to the existing curriculum. Subsequently, a situational analysis workshop was successfully held with support from UNICEF, NMCZ and the USAID Health Education Project. E4H successfully proposed including HMIS in the following curricula: Diplomas in Registered Nursing, Public Health Nursing, and Mental Health Nursing. Subsequently, E4H facilitated an HMIS capacity building training for NMCZ members in preparation for the HMIS content alignment in the general nursing, public health, and mental health curricula. Following the training, a content alignment meeting was held resulting in HMIS content adoption in the nursing curricula with a total of 20 hours training time allocated toward HMIS. The curriculum highlights the purpose, benefits, and general functions of HMIS. It further describes data capturing processes on both HMIS paper and electronic data sources, steps in data processing, analysis, and presentation. It further details processes involved in data generation, calculating, interpreting, as well as use of indicators for health systems improvement.

Following the inclusion of HMIS content, E4H provided technical support during a validation meeting with the NMCZ, and the Zambia Qualifications Authority (ZQA). E4H finalized the development of the HMIS pre-service curriculum training manual and submitted it to MoH and the People Sub-committee members for review and inputs. Upon receiving feedback, MoH held an editorial meeting on the developed materials with E4H’s support and submitted final edited materials to the ZQA for adoption. In addition, E4H completed the development of the procedure (training tools) and evaluation manuals for the pre-service curriculum. Subsequently, they held a meeting with the NMCZ to validate the procedure, evaluation, and student handbook for the pre-service curriculum. In addition, mental health curriculum was revised to include the HMIS component. Further a pre-editorial meeting was held to review the content and add case studies to the procedure manual. The final editorial meeting is scheduled for FY22; thereafter E4H will support adoption and implementation of the curriculum.

### **TASK 1.2.2 HEALTH SECTOR STAFF CAPACITY**

Improving the capacity of key staff across directorates of the MOH and other critical GRZ entities such as NMEC promotes understanding, analyzing, and use of HMIS data. During the reporting period, E4H submitted the in-service training plan for review to the MoH to generate feedback from the MoH M&E and Training Directorates before finalizing. The framework is centered on human resources involved in HMIS processes at all levels. It attempts to define and map out the specific HMIS related knowledge, skills and abilities on data collection, processing, reporting, and use required by health personnel at various levels of the health services provision. E4H presented the framework to the People Sub-committee for review and subsequently revised it based on the feedback.

E4H submitted the core competence framework for the in-service curriculum to the Cabinet Office’s Management Development Division (MDD) for review and feedback and proposed that the framework be reviewed in line with job descriptions to guide curriculum development. Following concurrence by the Cabinet Office’s MDD on the core competence framework, E4H initiated a meeting with MDD to review job descriptions for HIOs and medical record officers/clerks with the aim of guiding curriculum development. Consequently, job descriptions for the stated officers included additional job responsibilities, clear reporting channels and defined career progression. The revised job descriptions

clearly outlined HMIS data collection, analysis and reporting skills required by the health staff to improve data quality and use. Through the MoH M&E Directorate, E4H shared the revised job descriptions with the People Sub-committee for review.

E4H advanced the development of the competency framework in line with the revised job descriptions. E4H discussed MoH's training needs with the M&E Director and Assistant Director – Routine Health Information. MoH proposed holding a follow-up meeting for October 2021 to finalize HMIS gap analysis and develop a comprehensive in-service training package.

### **TASK 1.3.1 HMIS DATA PLATFORM STRENGTHENED**

The strengthening of the HMIS data platforms result in HMIS data that MoH and partners can trust and share. During the reporting period, E4H continued strengthening HMIS data platforms in collaboration with the MoH.

#### **DHIS2 CONTENT IMPROVEMENT**

In collaboration with the MoH M&E unit, the project resolved several issues in the database to improve DHIS2 content. Among the items resolved were on naming conversions for facility lists, user roles, linking data elements, and grouping indicators. In January 2021, E4H created and installed the HIA1a, HIA1b, and HIA2 tools in the DHIS2 live instance to mimic the revised paper tools. Subsequently, a DHIS2 assessment was conducted and additional changes which included alignment of meta data, organizational units and data elements and removal of duplicates were implemented. In collaboration with MoH, E4H conducted a quality check to validate the changes and clean data was subsequently uploaded on the production instance.

In addition, the assessment revealed the need for MoH program managers and officers to always be engaged throughout the development process of changes to data elements in the HMIS tools. This resulted in a focused revision of HMIS tools which included the disaggregation of Family Planning indicators to include age to enable the program to analyze the uptake of FP products by group and develop interventions for each specific age group such as adolescents. Furthermore, this helped capture maternal deaths occurring in the community at facility level through the DHIS2 platform. The involvement of program officers contributed to the inclusion of causes of neonatal deaths in the system hence making it possible to analyze neonatal death by cause through the DHIS2.

During the reporting period, E4H held a meeting with the MoH M&E Directorate team and agreed on the metadata principles and standards for organization structures and metadata naming. The MoH and the data management team agreed to implement the changes. E4H is in the process of compiling the detailed, cleaned and renamed indicators and data elements for MoH's approval before making the changes in DHIS2 in FY22. The project continues to ensure effective and efficient functionality of HMIS data platforms.

In addition, E4H supported the finalization of the nutrition indicators through consultation with stakeholders. These nutrition indicators are being included in the HMIS tools so that data can be available in the DHIS2 platform for analysis by all MoH programs. This will help to measure and monitor the performance of the nutrition interventions through data reported in the DHIS2 platform.

## MASTER FACILITY LIST

The MFL fosters standardization in defining reporting units and documents related details of all established public and private health facilities. During the reporting period, E4H continued to coordinate the development of the MFL in collaboration with the MoH. Subsequently, E4H recruited developers for three months to complete the MFL development process. Before engaging the developers, the MoH M&E Directorate and ICT Unit were given an opportunity to review selected candidates' curricula vitae. A meeting with the MoH and E4H teams was held and the MFL database was handed over to the developers. The MFL Inception Report was shared with the MoH for review and feedback. The first prototype was then released in FY21 quarter one.

During the reporting period, the MFL prototype was presented to MoH and positive feedback was received. This was followed by a demonstration on the MFL to the MoH M&E Directorate in preparation for the initial user acceptance testing. MoH through the process sub-committee proposed a team to conduct the MFL user acceptance testing. The additional proposed changes arising from the testing were added. A second user acceptance testing is underway and launching of the platform is expected in FY22, Quarter 1. E4H through the Digital TWG, will engage key stakeholders to start integrating the MFL with key applications. The MFL is central to achieving HIS interoperability because all systems in the health sector will depend on the updated MFL.

## NATIONAL INDICATOR DATA

Establishing a robust and responsive national indicator data set to suit program needs is key to promoting data use and decision making. In this regard, in conjunction with the M&E TWG process sub-committee, E4H continued to develop the NIDS across different health areas. A workshop to develop the human resources, training, infrastructure, laboratory, and pharmacy indicator sets was successfully conducted. The proposals from the meeting were shared with the Process Sub-committee for further refining and possible upload on the DHIS live instance.

Following revision of the MoH facility aggregation tool, E4H reviewed gaps in the indicators. During the reporting period, the project held a meeting with MoH on the proposed indicators under the nutrition program and subsequently updated the indicators onto DHIS2 accordingly. In addition, E4H held interviews with program managers from the Child Health Program on the proposed indicators to ensure that all indicators included are program-driven to promote their use and buy-in. The interviews took place between June and September 2021.

NIDS development is ongoing and will continue in FY22 due to the vast amount of work involved and coordination of several programs at national, provincial, district, health facility, and community levels for inputs. Finalized indicators will be included on the DHIS2 live server based on guidance from the M&E Directorate; others will be addressed through the interoperability of various systems.

## TASK 1.3.2 ENHANCED SURVEILLANCE AND REPORTING FOR MALARIA

Successful implementation of Zambia's National Strategy for Malaria Elimination requires dependable and reliable HIS to capture data on malaria case incidence at national, provincial, district and health facility catchment area levels. With the support of PMI funding, E4H continued to provide technical assistance to strengthen national-level malaria M&E activities. In the reporting period, E4H carried out the following activities aimed at enhanced surveillance and reporting for malaria:



- E4H assessed Malaria systems to map data collected in the Malaria Rapid Report, the Malaria Surveillance System, and malaria data in the national HMIS. The assessment compared metadata in primary malaria data collection systems by identifying data sets where malaria data are reported, clarifying differences in data elements from various data sharing platforms or sources, and addressing data compatibility issues. It also checked the accuracy of data analysis reports.
- The draft Malaria Systems Comparative Analysis Report was submitted to the MoH and NMEC and subsequently, NMEC shared its preliminary feedback. The report was presented to the Surveillance Monitoring Evaluation and Operational Research TWG for feedback from the NMEP.

Following the submission of the Malaria Systems Comparative Analysis Report to the MoH, the NMEC, and the Surveillance Monitoring Evaluation and Operational Research TWG, a team comprised of staff from ZNPHI, NMEC, MoH and E4H was created to review the systems issues raised in the report and to develop a road map to address the identified issues. In collaboration with NMEP, this group met to discuss the road map to improve the DHIS2 malaria database. Subsequently, NMEP shared data elements and indicators to all stakeholders for a comprehensive review. Thereafter, E4H led a meeting aimed at harmonizing the malaria reporting systems by different stakeholders. The reporting systems are the MoH's: HIA1, HIA2 and HIA4 reporting; NMEC's Malaria Rapid Reporting (MRR); and ZNPHI's Integrated Disease Surveillance Reporting (IDSR). During the meeting, the malaria indicator dataset was reviewed and the malaria KPIs for DHIS2 dashboards were proposed and shared with MoH for review. Based on the feedback, E4H updated the malaria indicators in consultation with the case management and vector control units of the NMEC. A follow-up stakeholder meeting has been scheduled for FY22 quarter one for finalization and adoption of the malaria indicators.

### **MALARIA CASE-BASED SURVEILLANCE SYSTEM**

Surveillance is the backbone of disease prevention and control and is particularly critical to malaria elimination programs, providing the disease intelligence necessary to target interventions and monitor their effectiveness. Achieving malaria elimination requires transitioning from surveillance systems reporting aggregated case data towards systems that facilitate rapid confirmation, investigation, and reporting of individual cases, and provide enhanced analytic methods to guide decision-making related to anti-malaria interventions. During the reporting period, MoH requested support to establish a DHIS2 Malaria Case-based Surveillance Instance for NMEP. The support requested involved; mirroring the instance on a local server; and establishing the production instance, including mitigating any initial troubleshooting and data privacy concerns during creation. Following installation of the servers in December 2020, E4H successfully set up the development and training sessions in January 2021.

During the reporting period, E4H provided remote technical support on the malaria case-based surveillance ToT meeting. However, the setting up of the malaria case-based surveillance system was put on hold because all staff involved were conducting the malaria indicator survey. The surveillance system related activities will resume in FY22, Quarter I.

### **TASK 1.3.3 DASHBOARDS AND OTHER SUPPLEMENTARY TOOLS DEVELOPED**

To systematize data access and use for improved decision making, E4H facilitated the development of customized dashboards in the Ministry's DHIS2 platform for program technical teams to pull and visualize data from the HMIS easily and routinely. During the reporting period, E4H supported the MoH to



consolidate and harmonize indicators, definitions, and data elements. The cleaned indicators were included on the live server after MoH's approval to pave the way for the development of dashboards. Subsequently, the provincial DDUCs compiled baseline information, including dashboard requirements for each program. FH, HIV, Nutrition, and malaria dashboard templates were set up in the HMIS production. Feedback on dashboard color coding was received from the M&E Directorate and was addressed. Subsequently, a meeting was held with the MoH M&E Directorate's team to consolidate duplicate dashboards and to review the lay-out of dashboards. E4H updated the dashboards based on the received feedback and has continued to hold weekly update meetings with a team from the MoH M&E Directorate to review both indicators and related dashboards and to obtain additional inputs on dashboard reporting requirements from program managers. During FY22, Quarter 1, E4H will provide access to the dashboards to other users at various levels of the health system once they are approved by the MoH program managers.

### **TASK 1.3.4 INTEROPERABILITY OF HMIS STRENGTHENED**

Interoperability of key health systems will strengthen the HIS, promote information exchange promoting real-time data and standard analytical tools to improve health care delivery. Providing technical assistance to the MoH on the development of a comprehensive operational strategy for achieving HIS interoperability in line with the e-Health Strategy is one of E4H's key deliverables and a priority for the MoH at the highest levels. During the reporting period, E4H conducted HMIS Systems Assessment aimed at understanding key characteristics around the following areas: general information, the system's structure, code usage, data exchange formats, data security, and system back-up protocols. The systems assessed were grouped into four categories: DHIS2-based systems, clinical support systems, administrative systems, and data warehousing systems at the national level. The assessment revealed that multiple financial, logistic, and programmatic systems are in use. There are multiple national data warehouses using different technologies with overlapping functionalities that are driven by specific donor agencies. There is minimal focus on interoperability, and there are no registries in use to support interoperability, despite the MoH being in the process of developing a Master Facility Registry.

These findings informed the development of an implementation plan for the Interoperability Architectural Framework (IAF). The IAF report was shared with USAID, MoH M&E and ICT for review. USAID provided written feedback on the IAF and a subsequent virtual meeting was held, and additional inputs were provided. In addition, MoH recommended that E4H develop an interoperability strategy as opposed to a policy which might take longer to implement. The feedback received was incorporated in the revised version of the framework. E4H continues to engage the MoH's ICT unit to finalize development of the IAF and subsequently organize a detailed stakeholders' meeting to reach consensus on the draft interoperability guidelines in FY22, Quarter 1. Furthermore, E4H intend to engage a consultant to guide development and implementation of interoperability strategy in FY22.

### **OBJECTIVE 2: CAPACITATED ZAMBIAN RESEARCH COMMUNITY (ON HOLD)**

This objective focuses on building the research capacity of selected research institutions, but it is currently on hold pending funding.

### **OBJECTIVE 3: EXPANDING THE EVIDENCE BASE FOR HEALTH**

Expanding the evidence base for improving existing approaches to health programming in nutrition, FP, MCH has been the cornerstone of MSI's work to support USAID's FH division, PMI and PEPFAR. Having

accurate and timely health data is one of the basic pillars required for effective management of public health service delivery.

### TASK 3.1.2 USAID/ZAMBIA HEALTH OFFICE AND IMPLEMENTING PARTNER M&E CAPACITY STRENGTHENED

#### IMPLEMENTING PARTNER MONITORING AND EVALUATION COMMUNITY OF PRACTICE

The objective of the M&E Community of Practice (MECOP) is to strengthen the M&E capacity of USAID health IPs; create a professional network of M&E specialists and provide a platform for sharing best practices and success stories in M&E. It is also an effective platform to ensure smooth implementation of the IP M&E systems in USAID/Zambia's health programming.

Following the submission of the final updated version of the MECOP concept note to USAID, E4H conducted an IP mapping exercise, based on the IP target list approved by the contracting officer's representative (COR). E4H facilitated the first MECOP introductory meeting and 23 members representing various USAID, PEPFAR and CDC health IPs participated.

During the reporting period, E4H conducted an online survey to assess the M&E capacity and needs of USAID IPs and staff. Overall, 20 staff members from different IPs participated in the survey, representing a 50 percent response rate. Key findings included the need for training in data visualization, infographics, and survey design and use (online data collection tools). The survey findings informed the development of the MECOP Workplan.

During the reporting period, a second MECOP meeting was held and the results from the MECOP IP self-assessment survey were disseminated and the proposed activities in the draft MECOP Workplan were reviewed. It was recommended that the minimum M&E system standards for the MECOP members needed to be defined and included in the MECOP Workplan. E4H drafted the M&E system standards and incorporated them in the MECOP Workplan following review by the members. The workplan was re-submitted to USAID for approval and it is scheduled for implementation in FY22.

### TASK 3.1.3 USAID/ZAMBIA HEALTH OFFICE MONITORING AND EVALUATION DIVISION SUPPORT

#### KNOWLEDGE MANAGEMENT

Knowledge management is important because it supports the constant sharing of data across stakeholders and emphasizes the importance of learning. Having an effective KM platform also serves as a means of continuity for future health officers and staff that will rotate into the mission. Effective knowledge management supports the creation, dissemination, and utilization of knowledge to help achieve organization's objectives and goals. In this regard, E4H continued to support knowledge management needs for USAID. During the reporting period, E4H gave a demonstration on the BOB, enhanced site visits (ESVs) data analytics, and Knowledge Management Portal (KMP) also referred to as the Amano Platform<sup>1</sup> to the USAID team. Based on feedback, E4H included a dashboard that flags low-performing facilities in the data analytics platform, added a dashboard that compares ESV and BOB data

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<sup>1</sup> Amano is the Bemba word for knowledge.

from facilities, and further included data maps on Amano to allow for easy access to Health Office documents by category or topic.

Follow-up meetings were conducted with the USAID team to review the data analytics platform and to provide additional feedback. As a result, the platform dashboards were finalized, and scorecards were created to analyze BOB data. E4H created user credentials for all members of the USAID Family Health Division and provincial staff to log into the platform. The platform was updated with a new template to capture revised age groups to create Pediatric Surge Dashboards for the proposed indicator cascades, based on USAID's request.

During the reporting period, E4H finalized the virtual ESV tool and oriented the USAID field staff. To improve the tool's administration system, E4H followed up with a post-orientation to obtain further feedback. In addition, E4H staff monitored the tool's implementation and provided support to the team during facility assessments. USAID regional staff piloted the virtual ESV tool and the tool was revised based on feedback from the field. Development of the BOB and ESV tool demonstrates collaborative teamwork between the USAID Health Office, USAID regional coordinators, and E4H.

E4H supported ESV data entry using the virtual ESV tool. In addition, E4H developed a remediation tracker and dashboard in the data analytics platform. E4H engaged a system developer from BAO Systems (the hosting service provider) for technical support with the BOB-ESV data analytics platform backend to assist in fixing errors identified in the organizational units and to clean up the system.

In the third quarter, with support from BAO Systems, E4H fixed the identified errors in the organizational units and cleaned up the BOB-ESV data analytics platform system. E4H continues to validate the virtual ESV and BOB data that IPs submit monthly, to ensure data quality.

Following approval of the submitted plan to train/orient USAID staff on using the Data Analytics platform, E4H conducted an orientation on the BOB and ESV platform for BOB which covered data collection. This session also included an orientation on the knowledge management portal, Amano Platform. To ensure that the team achieves competence in using the Data Analytics and the Amano platforms, E4H continues to provide follow-up individualized support to USAID regional staff.

The project simplified the virtual ESV data capture system and developed a user-friendly DHIS2 BOB and DHIS2 ESV procedure manual with a focus on the virtual ESV data capture, dashboard visualizer, pivot table navigation and data analysis. E4H continued over this year to find ways to simplify the remediation tracker in the Data Analytics platform. E4H continued throughout the year, to fix errors identified during the virtual ESV data entry.

During the reporting period, a meeting for USAID IPs was held to discuss the operationalization of the BOB and the ESV Data Analytics platform, it was agreed that all IPs will migrate the BOB data submission from using the excel template to using the Data Analytics platform. E4H created user credentials for all IPs on the platform and oriented the IPs on how to enter and import BOB data on the platform and subsequent follow up individual IP orientations were conducted. In addition, a user guide that outlines processes involved in creating an import file on the platform was developed and shared with the IPs.

E4H has supported the IPs in uploading BOB data in the Data Analytics Platform and data for the period from January to August 2021 has been uploaded including addressing challenges that IPs faced in importing data in the platform.

E4H developed the Amano implementation plan and technical strategies for each Health Division within the Health Office in consultation with the USAID team. The revised Amano plan and strategies were reviewed and provided feedback was addressed. Subsequently, an online survey was conducted to gather information on documents that each USAID Division planned to be uploading in the Amano Platform. Subsequently, E4H finalized the development of the KMP implementation plan in preparation for the launch of the portal.

E4H developed a “decision tree guideline” to guide USAID staff on the type of resources to upload on the Amano Platform as opposed to the Google Drive. The guideline was developed based on feedback that health staff were not clear on the distinction between the use of the Google Drive and Amano. The guideline was reviewed and finalized with the alternate contracting officer’s Representative (A/COR) during the reporting period.

During the reporting period, E4H successfully oriented the USAID Social Protection team on the use of the Amano Platform and continued supporting USAID teams on uploading documents and using the platform. The resources uploaded to the platform include documents and resources provided by the FH division. E4H also oriented the newly recruited USAID staff on using the platform and created user accounts for them. However, in quarter 4, the Amano Platform saw low utilization by the USAID teams. E4H engaged the Health Office leadership on the way forward regarding the platform.

To support expansion of existing approaches to health programming in HIV under PEPFAR, E4H participated in construction of data visualizations, a pre-requisite to information use. Further, USAID granted approval for E4H to submit data on the number of people who test positive for HIV in USAID-supported provinces (Central, Copperbelt, Luapula, Muchinga, Northern, and North-Western) from the data analytics platform on a monthly or quarterly basis to the Centre for Infectious Disease Research in Zambia (CIDRZ) for the development of recency testing dashboards. Data from October 2019 to December 2020 was submitted in March 2021 while data for FY21, Quarter 1, was submitted on June 18, 2021. Outstanding data for the FY21 is planned to be submitted in October 2021 after finalization of data uploads by the IPs in the data analytics platform.

## FAMILY HEALTH

Under Objective 3, E4H received a statement of work from the USAID FH division requesting support in three areas: (1) increase access to key FH data, (2) mapping of all sources of FH data in Zambia, and (3) knowledge management support for FH data use and storage. In collaboration with FH team, E4H developed an annual activity plan to track all support provided directly to the FH division from March 2021 until September 2021. Below are the specific areas which E4H agreed to support:

- Data access and visualization
- Data capacity building
- Explore maternal and neonatal mortality
- Performance plan and report (PPR) support
- Knowledge management – *reported in previous section (p. 19).*

## DATA ACCESS AND VISUALIZATION

There are two primary streams of work under data access and visualization: FH indicator analysis and FH staff access and orientation to DHIS2.

*FH indicator analysis.* The project conducted several meetings with the FH division to prioritize indicators for routine monthly and or quarterly data analysis using the HMIS data. E4H prepared presentations on three thematic areas:

1. Reproductive maternal health
2. Child health and nutrition
3. Family planning.

E4H held consultative meetings with the FH staff to determine the critical indicators that they would like to track over time. The final list included 47 indicators across all three subject areas. The project started with preparing monthly PowerPoint presentation which showed longitudinal data from the past four years to identify trends and highlighted any major shifts and anomalies in the data. Provincial data was also provided to show provincial trends over the last four years. To better understand the underlying causes of the performance of selected indicators, E4H engaged with the MoH Directorate of M&E and Provincial Health Offices' program managers. Subsequently to the initial indicator analysis presented in March, E4H then began preparing indicator analysis by quarter for the team and held subsequent trend analysis presentations. The next indicator analysis will be held on October 13, 2021.

In addition to the quarterly analysis of FH indicators, E4H responded to ad-hoc requests for data analysis from FH staff. To support the health portfolio review, the FH Director requested a presentation of key FH indicator data from Luapula, Muchinga Southern, Eastern, Central and Copperbelt provinces to show a comparative analysis of indicator trends before and after the period of January 2020 to March 2021. In addition, the E4H team completed an analysis of teenage pregnancy data from DHIS2 covering the period January 2020 to April 2021 upon request and is currently working on a data visualisation presentation of perinatal death rates, as directed by the FH Director.

E4H conducted comparative analysis of FH indicators for geographical impact analysis comparing intervention versus non-intervention sites for the recently closed USAID SM360+ project. This analysis compared target regions and districts with non-target regions and districts, exploring dating from 2014 to present and was presented to the FH division.

*FH staff access and orientation to DHIS2.* E4H conducted the first DHIS2 orientation for the FH Division focused on how to log in to the DHIS2 system and how to review data and dashboards. The second DHIS2 orientation was conducted in which the FH team was oriented on how to navigate the pivot tables and data visualizers in the DHIS2 system including how to review data and dashboards. The final orientation was conducted in FY21 quarter three. E4H then completed individual support time with FH staff to ensure that they can enter DHIS2, navigate the system, manage their account, download data, review dashboards and develop their own pivot tables. FH staff noted that they are pleased to be able to access DHIS2 data directly as it allows them to view timely and detailed data, by district and facility always. These orientations will continue as a strategy to improve data quality by having more people accessing and reviewing data in the MoH DHIS2 platform. Equally, this support will help the USAID FH

team continue to engage the MoH team in reviewing the data for improved data utilization and data driven decision making.

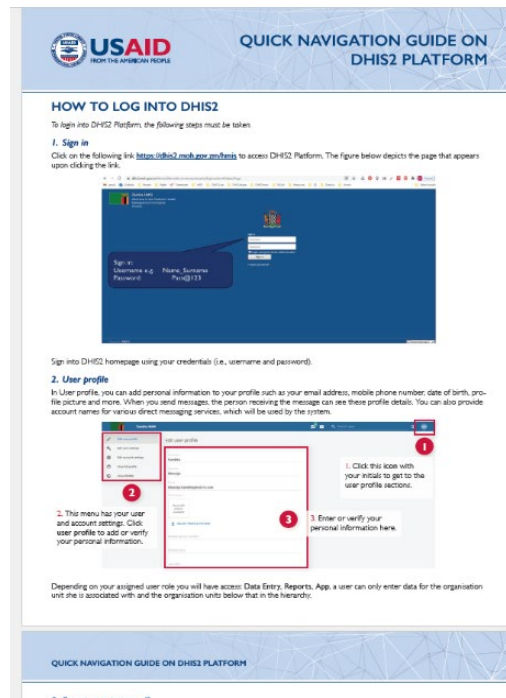
As a supplemental learning material, E4H developed “DHIS2 cheat sheets” for both the FH Division and the provincial USAID staff to provide quick and easy visual reference on the use of the DHIS2 system. E4H also provided one on one consultations with FH staff to help them trouble-shoot access and data manipulation in DHIS2. E4H supported the orientation of USAID Regional Staff on the DHIS2.

### DATA CAPACITY BUILDING

E4H engaged FH team to identify deep dive topics of interest to FH. These focused deep dive analyses help to critically look at specific topics of interest. These “deep dives allow the FH staff to have a deeper understanding of the DHIS2 data, indicator definitions and accurate tracking challenges.

E4H conducted several detailed deep dive data analyses on selected topics. The first deep dive conducted by E4H for the FH division was on the causes of maternal and neonatal mortality. The presentation outlined the maternal deaths data collection and reporting flow on both the MoH DHIS2 and Maternal and Perinatal Death Surveillance Response (MPDSR) systems. It also highlighted data gaps in reporting platforms and possible solutions. E4H was requested to make a similar presentation to the MoH Safe Motherhood TWG to highlight the identified data gaps and possible solutions to key stakeholders. Explore maternal, newborn, and child death causes was an area of interest which the team explored during the deep dive. Mapping of MPDSR data collection process compared to DHIS2 was done and data flow chart was developed. During the deep dive, recommendations to develop consistency in data and reporting from MoH was done.

During the reporting period, the second deep dive analysis was presented and covered the topic of Family planning usage. Data presented from DHIS2 covered data from 2018 and looked at longitudinal trends and provincial analysis on use, uptake, and preferences in various FP methods. The third deep dive was presented on September 20 and covered the topics of maternal post-natal care and nutrition indicators. The presentation provided a longitudinal analysis and provincial analysis of women who receive their first medical visit within the first 48 hours after giving birth. Actual data from DHIS2 was compared with targets set by the MoH and outliers were observed and health facilities that were consistently not reporting data on this indicator. Child nutrition data was presented as well, looking at longitudinal and provincial trends and gaps in data reporting. The deep dive resulted in a series of questions for further inquiry with the MoH. In particular, the low numbers of stunting and wasting were explored, and it was discovered that many health facilities across the country do not have adequate anthropomorphic equipment necessary to determine stunting and wasting rates in facility.

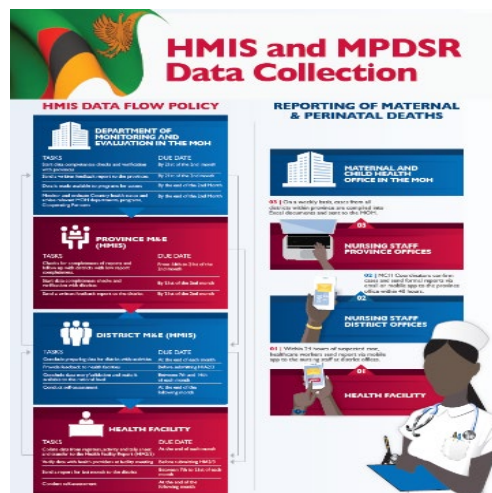


DHIS2 Cheat Sheet on How to Log into DHIS2.



## EXPLORING MATERNAL AND NEONATAL MORTALITY DATA

During the reporting period, E4H held a discussion with the FH division on the data collection and verification process for the maternal and perinatal mortality data collected by the MCH office in the MoH. E4H developed a flow chart graphic to show the difference between the MPDSR data collection system and the DHIS2. Discussion was held on ways to harmonize the two systems. E4H was introduced to the MCH TWG by the FH director to advocate for a streamlined approach to data collection.



Infographic Comparing MPDSR and DHIS2 data collection and validation process.

## PERFORMANCE PLAN AND REPORT SUPPORT

E4H launched the PPR support work within the FH division. In August of 2021, E4H worked with the FH contact to finalize the list of 28 PPR indicators to be reported at the end of this calendar year. E4H is currently being introduced to all IPs to begin data tracking of PPR indicators in advance of the annual report submission at the end of the year. E4H will identify indicators that may be under or over expected targets and help to draft justifications for these differences. The project will engage AOR/CORs to validate data on PPR indicators and complete PPR data entries. This work will continue through to the end of December 2021.

## MALARIA

With support from the Presidential Malaria Initiative, the malaria component of E4H aims to support USAID/PMI with malaria data analytics and visualizations to assess the performance of malaria intervention programs with a focus on Northern, Luapula, Central and Copperbelt provinces. E4H participated in the ClinEpiDB data sharing workshop with the International Centers of Excellence for Malaria Research (ICEMR). The workshop focused on using the ClinEpiDB open-access online clinical epidemiology database and tools to explore complex public health studies. All ICEMR data generated from research studies conducted in Zambia are deposited in this database. The trained E4H team is now able to access the ClinEpiDB database and conduct analyses and visualizations.

E4H led the updating of the data-sharing inventory on the Nchelenge Malaria Learning Lab. Data from PMI supported IPs was updated including from VectorLink, Program for the Advancement of Malaria Outcomes (PAMO) Plus, Procurement and Supply Management, and the ICEMR database. Data from Akros is still outstanding due to contractual obligations that do not allow Akros to share data directly with an IP. E4H is following up with PMI on the outstanding data to complete populating the inventory. The analysis of available data on the Nchelenge District has been completed.

During the reporting period, E4H successfully coordinated a Nchelenge Malaria Learning Lab Workshop with participation from NMEC, the Nchelenge District Health Office and various stakeholders implementing malaria programs in Nchelenge District. The workshop intended to triangulate data and share the impact of interventions that work to eliminating malaria in the district. At the workshop, it

was agreed that in collaboration with ICEMR, E4H will coordinate analysis and case study development highlighting high-impact interventions that can be employed in Nchelenge District.

E4H conducted a detailed analysis and visualization of key malaria performance indicators for the malaria secondary data analysis report. The final malaria secondary data analysis report was submitted to PMI in June 2021. The E4H team also supported PMI in consolidating quarterly data for submission to PMI headquarters.

E4H participated in a DQA activity in Luapula Province in collaboration with the PAMO. The exercise's main objective was to verify the accuracy of malaria reported data.

During the reporting period, E4H supported DQAs in three districts (Kabwe, Serenje and Mkushi) in Central Province. The exercise aimed at assessing the quality of malaria data collected at the health facility level and reported in DHIS2. The assessment revealed that all facilities reports were captured in DHIS2. However, data inaccuracies were observed from 42% of the facilities assessed. Furthermore, all health facilities assessed reported inadequate HMIS tools particularly outpatient department registers. This resulted in the use of improvised registers (e.g., hard cover notebooks) as outpatient department registers by the health facilities. As an action to improve data quality at health facilities, E4H will provide technical support during monthly data review meetings in the districts and health facilities. This approach will support early detection of data errors and subsequent employing of corrective measures. Also, through the provincial DDUC, E4H will continue to strength capacity of MoH health facility staff in HMIS data management through on-site mentorship and administering of DHIS fundamental training.

During the reporting period, E4H facilitated DHIS2 administrator data management training on malaria to MoH Provincial and District Staff. This was in response to the NMEC's request for E4H to provide technical support during the training and 20 participants from five provinces (Central, Copperbelt, Eastern, Muchinga and North-Western) attended. PATH's Malaria Control and Elimination Partnership in Africa provided the logistical support for the participants. Training objectives included:

- Training the participants on the use of DHIS2.
- Training the participants on the use of Tableau.
- Training participants on overall administrative support during Integrated Community Case Management (ICCM) training.
- Introducing participants to the Zambia Health Analytics Platform developed by Zenysis.

The training was meant to build capacity in the provincial teams to support ICCM trainings through creation of organizational units required at different levels in the MRR in their respective provinces as they will have administrative access to the platform. This will reduce reliance on the national level teams in supporting the provinces with the ICCM trainings and trouble-shooting challenges which community health workers usually face when submitting data in the MRR.

E4H supported the creation of the Malaria Data Task Team (MDATT), which analyzes the impact of malaria interventions across all malaria thematic areas. The MDATT is coordinated by the NMEC.

E4H supported PMI quarterly data generation and submission into the Malaria Data Integration and Visualization for Eradication (M-DIVE) starting January 2021. M-DIVE is a global platform for PMI-supported countries to submit data. In addition, the project supported PMI in conducting data analysis for malaria indicators in preparation for the USAID/Zambia-wide portfolio review.



Further, E4H is participating in the malaria program review which the NMEC is currently conducting to inform the development of the new strategic plan for the program starting in 2022. Program desk reviews will be followed by a stakeholders' meeting for all malaria thematic groups to present their findings and strategies.

## **AD HOC TECHNICAL SUPPORT REQUESTS**

To support expansion of existing approaches to health programming in HIV under PEPFAR, E4H participated in construction of more meaningful data visualizations. In addition, the project successfully submitted the FY21 Quarter 1 data to the CIDRZ on the number of people who test positive for HIV from two of the USAID-supported provinces (Central and Copperbelt). The data was generated from the data analytics platform submitted by IPs using standardized excel templates. The data is for the development of recency testing dashboards by CIDRZ. E4H continues to follow up with the selected IPs to submit the outstanding data.

## SUCCESS STORIES

### INTRODUCTION OF HMIS COMPONENT INTO NURSING CURRICULUM DIPLOMA

Annually, the NMCZ registers approximately 9,000 nurses who later deploy to various health facilities throughout Zambia. However, a comprehensive HMIS training package is not offered to these nurses as part of their formal training. This gap in the HMIS fundamentals from the inception of the nursing career results in a lack of basic understanding of the importance of tracking services and cases as part of the HMIS data management fundamentals.

The Zambia HMIS Report of 2016, Zambia HMIS Review Reports of 2009 and Zambian HMIS Assessment Report of 2005 show that the MoH, through its stakeholders and cooperating partners, attempted supporting the institutionalisation of HMIS curriculum in health training institutions (e.g., colleges and universities). The National Institute for Public Administration) was targeted as a pilot



Participants reviewing and editing the diploma in nursing curriculum.

Evidence for Health team for USAID.

institution. However, these interventions and strategies failed to introduce HMIS material into health training institutions in Zambia.

In 2020, the USAID E4H project was tasked to conduct a pre-service curriculum gap assessment. This assessment identified the pre-service training needs and reasons why the introduction of HMIS in health training institutions failed previously. E4H, working with NMCZ and the HPCZ developed a standardized HMIS pre-service curriculum that can be applied to different healthcare courses and programs offered in the health training Institutions in Zambia. The stakeholders agreed that the pre-service HMIS curriculum is nested in the

Diploma in Nursing curriculum which constitutes 75 to 80 percent of health workers in Zambia. The curriculum will be taught in more than 105 nursing colleges and universities in Zambia beginning in 2022. This will ensure a steady inflow of health professionals who are competently trained in HMIS.

### IMPROVED DATA MANAGEMENT AND ANALYSIS AT HEALTH FACILITIES IN MPOROKOSO DISTRICT – NORTHERN PROVINCE

Historically, data capture for the MoH DHIS2 was the sole responsibility of the DHIOs despite facilities being the originators and owners of the data. health facilities typically do not have access to the DHIS2 and would submit their data in hard copy to the DHIOs. Depending on the number of health facilities in a particular district, the manual entry of the multiple health facilities' data is a tedious and time-consuming process which could affect the timeliness of reports and quality of data. Based on MoH DHIS2 reports for the past decade, Mporokoso district's data quality averaged between 75% and 80% in terms of completeness and ranged from 50% to 70% in timeliness of facility reports. Factors contributing

to such poor data quality included delays in DHIS2 data capturing at the District Health Information Office due to workload.

In view of the above, E4H embarked on a robust training of health facility staff in DHIS2 data entry. In July 2021, E4H supported training of health facility staff in DHIS2 for all health facilities in Mporokoso District in Northern province, with the aim of shifting the burden of data capture and analysis to the facilities.

Following the training, all the facilities entered their data for the month of August 2021 into DHIS2 with less difficulties. Further, report timeliness increased to 100% from the reported 70% in the month of July 2021. Additionally, report completeness improved to 100% in all facilities from the 83% reported in July 2021. Shifting the

responsibility of data entry to the facilities has given the facilities an opportunity to adequately verify the data prior to reporting in DHIS2. Over time, thorough review of data has promoted data use in the quantification of commodities, quality assurance and overall decision-making processes. Between August and September 2021, 337 health facilities representing 26% of the facilities in E4H supported provinces were trained in MoH DHIS2 data entry. The project targets to train additional health facilities by the end of FY22.



DHIS2 health facility data entry training in Chingola, August 2021.  
Evidence for Health team for USAID.

## LESSONS LEARNED

### IDENTIFIED PROBLEMS AND SOLUTIONS

At the beginning of the year, the implementation of most activities slowed as some IPs and stakeholders went on industrial break during the festival period in December 2020. In addition, the COVID-19 pandemic continued to negatively affect timely implementation of most activities, especially during the COVID-19 Delta surge from May through July 2021. The project mitigated this challenge through undertaking most activities virtually and seeking USAID approval for specific in-person activities that cannot be held virtually while observing COVID-19 prevention precautions.

During the reporting period, E4H identified an erratic supply of registers and reporting tools in health facilities. The problem began in January 2021, upon introduction of revised HMIS tools in the health facilities. A lack of reporting tools affected reporting timeliness and overall data quality. To address this issue, E4H supported the printing of interim tools to minimize data loss in the supported provinces.

Through collaborating with partners, such as the The Global Fund to Fight AIDS, Tuberculosis and Malaria

Organization (the Global Fund), the MoH obtained the funding required for massive production of HMIS materials. E4H began piloting of electronic solutions such as e-registers and e-tally sheets. The project has been following up with MoH on bulk printing of registers and other HMIS materials and the MoH commenced printing in the last quarter of FY21. E4H will support distribution of the new registers in the four supported E4H provinces in Quarter 1, FY22.

In addition, the lack of a budget to support critical hardware, such as servers, laptops, and tablets, continues to affect digitalization of HMIS. E4H is addressing this issue through collaborating with partners and donors in the M&E TWG and reaching out to specific partners, such as UNICEF, that fund hardware procurement. In addition, in FY22, E4H will support procurement of tablets to support COVID-19 surveillance system.

## **BEST PRACTICES TAKEN TO SCALE**

- The E4H-FH bi-monthly check-in and regular engagement with all FH team members helped streamline KPIs to monitor under the FH component. The meetings resulted in setting FH priorities. Similarly, E4H monthly check-in meetings with PMI assisted in clarifying PMI's requirements for the malaria program, including the Nchelenge Learning Lab, and tracking progress toward objectives. The meetings have also helped in setting malaria priorities to be implemented in FY21.
- Involving the MoH during the development of all strategic data management and training documents produced by E4H from the onset promotes ownership and an expedited adoption process. This can be seen by the expedited adoption of the HMIS pre-service and in-service curriculum frameworks, which the MoH will now implement as standard practice.
- Establishment of national and sub-national TWGs and several other platforms such as the Nchelenge Learning Lab for engagement with development partners and stakeholders offered an opportunity for coordination, collaboration and avoidance of duplication.
- Holding of project mid-year and annual review meetings presented an opportunity to understand progress made towards planned activities and targets with a clear picture on achievements, areas of improvement, challenges, and corrective actions. It further presented an opportunity to kick start the planning process for FY22 by identifying priority areas for implementation.

## ACTIVITIES PLANNED FOR NEXT QUARTER

E4H intends to carry out these general and objective-specific activities from October 1 through December 31, 2021.

### GENERAL

- Continue to monitor the COVID-19 situation in Zambia, ensure adherence to the GRZ COVID-19 guidelines, and review the office working arrangements when necessary.
- Finalize the development of FY22 workplan and submit to USAID by November 15, 2021

## OBJECTIVE I: HIGH-QUALITY, TIMELY, AND ACCESSIBLE HMIS DATA

### RESULT 1.1: IMPROVED HMIS POLICIES AND STANDARDS

#### Result 1.1.1: HMIS Rapid Assessment and Findings Report

- Continue engaging the MoH and donor community in supporting the implementation of recommendations.
- Assess the COVID-19 systems, forms, servers, processes, and document requirements to recover data, report consistently and share data; design interventions and a detailed plan of action agreed with all stakeholders.

#### Result 1.1.2: HMIS Strategic Plan

- Develop the National Health Strategic Plan 2021–2026.

#### Result 1.1.3: Strengthened National-level HMIS Capacity

- Develop SOPs and define the timeline for implementation at all health system levels.
- Use of help desk to provide responsive services to lower levels.
- Promote data use during facility, district and Provincial planning meeting.
- Carry out monthly data reviews and provide feedback, build discussion forums for COVID-19.

### RESULT 1.2: STRENGTHENED HMIS CAPACITY OF HEALTH SECTOR STAFF

#### Result 1.2.1 Revised HMIS Pre-curriculum

- Define the ToT approach and implementation timetable for the revised HMIS pre-service curriculum.
- Implement the ToT approach in accordance with the timetable.
- Support and strengthen the ongoing implementation of HMIS pre-service training curricula.
- Develop specific COVID-19 related procedures, evaluations, case studies and student handbook sections for inclusion in all curricula.

#### Result 1.2.2: Capacity Building for MoH Staff at the Sub-national Level

- Support and strengthen the implementation of HMIS in-service training curricula.
- Conduct DHIS2 Health Facility data entry training.
- Develop a comprehensive data quality plan at the national, provincial, and district levels based on SOPs.
- Provide onsite technical support and mentorship to ensure the completion of DHIS2 fundamental trainings for district health officers.

## **RESULT 1.3: IMPROVED HMIS SYSTEMS FOR ANALYZING AND AGGREGATING HEALTH DATA**

### **Result 1.3.1: Strengthened DHIS2 Platform**

- Launch the MFL.

### **Result 1.3.2: Improved Malaria Surveillance and Reporting**

- Implement a data exchange between the malaria database and national DHIS2 system.
- Adjust reporting tools in malaria databases to address reporting needs.

### **Result 1.3.3: Dashboards and Supplementary Tools**

- Align dashboards with reporting requirements for both the MoH and NMEC.
- Conduct analytics through standard dashboards for performance assessment.
- Conduct training on data analysis tools, dashboards, and reporting formats for both the MoH and NMEC.
- Support the institutionalization of programmatic data reviews at all levels per HMIS policy.
- Using current available tools, develop dashboards for COVID-19 for each level of health service and management: Community, health facility, district health office management and programs. Where required purchase appropriate analytical tools.

### **Result 1.3.4 Strengthened Interoperability of HMIS**

- Define standards for interoperable data exchange.
- Define the action plan for data exchange based on the review of other systems.
- Design and implement interoperability of all COVID-19 systems (e.g., client management, ZNPFI, community, travel and vaccinations) with other notifiable diseases and the main HMIS/data warehouse.

## **OBJECTIVE 2: BUILDING CAPACITY FOR THE ZAMBIAN RESEARCH COMMUNITY (ON HOLD)**

- No activities are planned for this coming quarter as this objective is on hold.

## **OBJECTIVE 3: EXPANDING THE EVIDENCE BASE FOR HEALTH**

### **RESULT 3.1: EXPANDED USAID HEALTH EVIDENCE BASE**

#### **Result 3.1.1: Operations Research, Special Studies, and Big Data Analyses**

- Complete a deep dive and quarterly analysis of FH indicators.
- Conduct MoH PEPFAR data alignment DQA

#### **Result 3.1.2: Strengthened USAID and IP M&E capacity**

- Hold the quarterly MECOP meeting.
- Support M&E capacity building in data analysis and visualizations, including support for the 2021 national Malaria Program Review process.
- Begin collection of PPR indicator data; harmonize definitions with IPs and develop a calendar for regular reporting through the remainder of the calendar year.

#### **Result 3.1.3: USAID M&E Division Supported**

- Provide support to USAID for data analysis and visualization needs related to ESVs and BOB monthly reports.
- Support periodic malaria DQAs.
- Support PMI/Zambia quarterly reporting on the M-Dive platform
- Strengthen malaria surveillance, reporting, and overall data management in the Nchelenge District.
- Support USAID Health Office in prioritizing data sharing from IPs and ensure that COVID-19 systems used by IPs respond to the COVID-19 surveillance system.



## ANNEX 1: FY21 SUMMARY OF FIELD ACTIVITIES AND JUSTIFICATION

SN	Activity and Location	Month	Trip Justification	Results
1	Help desk, e-register and patient flow	September	Foster data demand and use of quality data	Introduction of the project to DHO and selected HFs
2	Conduct Malaria Data Quality Assessment in Nchelenge and Chiengi Districts	October	Foster data demand and use of quality data	Data and documentation gaps were identified, and lack of data collection tools appreciated as most registers were improvised
3	Support monitoring the implementation of Child Health Week activities in the following districts: Mwense, Mwansabombwe, Kawambwa, Nchelenge , Kabwe, Ngabwe, Chisamba, Chibombo, Chingola, Kitwe, Lufwanyama, Mufulira, Chililabombwe, Luwingu, Lunte, Kasama Mpulungu and Mbala Districts.	November	A national event supported by all health IPs, and to also assess the impact of COVID-19 pandemic on child health interventions	Child Health Week data management enhanced, and data collection tools distributed
4	Provincial ART Data review meeting in Kapiri Mposhi	November	Supporting data use for decision making	Mentorship was done on how HF staff can use data.  Provided TA on how to improve retention on ART clients.



5	Provincial TB HIV Data review meeting in Kitwe	November	Supporting data use for decision making	Successfully reviewed performance for Copperbelt Province and for 10 districts in the province
6	DHIS2 ToT in Lusaka	December	Train as trainers to provide effective DHIS2 support in the supported provinces	Successfully completed the course as ToTs
7	Help Desk System demonstration, and distribute HMIS tools in Mkushi	February	Orient DHIO and HF staff on the revised tools and data reconstruction.	HMIS tools distributed to DHO and selected HFs.  Onsite mentorship on data reconstruction done using the revised tools.
8	Help Desk System demonstration, and distribute HMIS tools in Luano	February	Need to orient DHIO and HF staff on the revised tools and conduct data reconstruction.	HMIS tools distributed to DHO and selected HFs.  Onsite mentorship on data reconstruction done based on revised tools.
9	DHIS2 Fundamentals and help-desk orientation in Chisamba	March	Conduct onsite mentorship/orientation on the help desk system and support DHIS2 fundamentals training	11 DHO and HF staff supported through to module 3 and 4
10	Office renovations	March	Need to create space to accommodate the Provincial DDUCs	E4H procured a workstation, air conditioner and other office stationery to

				support the placement of the Provincial DDUCs
11	DHIS2 fundamentals and help-desk orientation in Chingola, Kitwe, Mporokoso, Mwense, Serenje Districts	April	Conduct onsite mentorship/orientation on the help desk system and support DHIS2 fundamentals training.	<p>99 staff oriented in the help desk system and accounts created.</p> <p>Onsite TA and enrollment in the online fundamentals course with 87 staff successfully enrolled and progressing to module 3 and 4.</p>
12	Capacity building of HFS in Chembe and Samfya Districts in DHIS2 data capture	April	Chembe and Samfya Districts were selected as model districts for the province	All the 8 HFs in Chembe and 12 out of 24 HFs in Samfya were trained in DHIS2 data capture.
13	Data Quality Audit in Kabwe, Mkushi and Serenje Districts	April	Enhancing data quality management, and data use	Action plans for mentorship and support supervision developed.

14	DHIS2 fundamentals and help-desk orientation at Mansa General Hospital, Chililabombwe, Mpongwe, Shibuyunji, Mpulungu, and Mbala Districts.	May	Conduct onsite mentorship/orientation on the help desk system and support DHIS2 fundamentals training	185 staff oriented in help desk system and accounts created.  Onsite TA and enrollment in the online fundamentals course with 87 staff successfully enrolled and progressing to module 3 and 4.
15	DHIS2 HF data capture training in Chingola and Kitwe Districts.	May	Conduct DHIS2 facility data capture training to improve reporting rates and reporting timeliness.	20 HFs oriented in data capture at HF level to ensure timely data entry and to improve data use
16	Malaria Rapid Reporting System (MRRS) stakeholders' meeting for NMEC, Provincial and district staff held in Chongwe, Lusaka Province.	May	Providing technical and backend support on the MRRS	14 officers were trained in MRRS as ToTs
17	TB-HIV Data Review meeting in Luapula Province	June	Encourage the use of data for decision making and identify the challenges that TB/HIV program faces in reporting.	All the 12 districts had challenges with HIV data especially on current on ART and on documentation of the viral load suppression data. During the meeting, mentorship was provided, and HFs were tasked to hold data reviews monthly.

18	Conduct HMIS data management TSS, DHIS2 fundamentals and help desk orientation in Chienge, and Itezhi-tezhi Districts and at Kabwe Women Hospital.	June	Conduct DHIS2 HF data capture training to improve reporting rates and reporting timeliness.	28 DHO staff enrolled onto the DHIS2 fundamentals through to module 3.  40 staff oriented.
19	DHIS2 HF data capture training in Mporokoso District	July	Conduct DHIS2 HF data capture training to improve on reporting rates and reporting timeliness.	27 HFs oriented in data capture at HF level to ensure timely data entry and to improve data use.
20	District Integrated Meeting to review 2nd quarter 2021 performance in Kawambwa District	July	Review the performance of indicators and develop strategies to enhance performance.	32 HFs participated. Covid-19 vaccination coverages was noted to be low, and strategies were developed to improve vaccination coverages.
21	Baseline assessment for DQA indicator in all the four provinces (selected districts and facilities)	July – August	Determine the baseline value for the DQA indicator	The assessment revealed that the data quality level across the 48 randomly selected HFs was at 79.6%. Common practices affecting data quality included irregular conducting of program review meetings and inconsistent adherence to quality assurance checks during report compilation at HFs. A detailed report was produced, highlighting other

				key findings of the assessment.
22	DHIS2 HF data capture training in Milenge, Luwingu, Mwense, Lunga, and Chipili Districts	August	Conduct DHIS2 HF data capture training to improve reporting rates and reporting timeliness.	68 HFs were trained in DHIS2 data capture.
23	Copperbelt Data Quality Audits for Kitwe, Mpongwe and Masaiti Districts	August	Enhance data quality, management, and data use	Action plans for mentorship and support supervision developed.
24	Conduct District Integrated Meeting to review 2nd quarter 2021 performance in Nchelenge, Mporokoso, Luwingu, Mufulira, and Mwansabombwe Districts	August	Review the performance of indicators and develop strategies to enhance performance.	Measures to improve data use at HF level discussed to create demand and use of data to inform health programming.
25	Provincial Planning launch in Copperbelt	September	Need for the districts to incorporate E4H plans in their annual workplans.	E4H shared areas of priority for consideration and including in the provincial plans. During the meeting, emphasis was put on data driven planning.
26	TB-HIV Data Review meeting in Kitwe	September	Encourage the use of data for decision making and identify challenges of reporting TB/HIV data	All the 12 districts had challenges with HIV data especially on current on ART and on documentation for the viral load suppression. During the meeting, mentorship was provided,

				and HFs were tasked to hold data reviews monthly.
27	DHIS2 HF data capture training in Mansa, Chilubi Island, Lunte, Lupososhi, Kasama, and Mbala Districts	September	Conduct DHIS2 HF data capture training to improve on reporting rates and reporting timeliness.	119 HFs were trained in DHIS2 data capture.
28	Conduct District Integrated Meeting to review 2nd quarter 2021 performance in Chembe, Chifunabuli, and Chingola Districts	September	Review the indicator performance and develop strategies to enhance performance.	Measures to improve data use at HF level discussed to create demand and use of data to inform health programming.
29	Data Verification in Kitwe	September	Ensure data from HFs is verified and outliers are addressed in readiness for the DIM	Data verified and necessary corrections made in the DHIS2
30	Post Malaria Data Quality Review meeting for Central Province involving Kabwe, Mkushi and Serenje Districts	October	Review actions taken and to discuss performance of malaria indicators.	Action plans aimed at improving data quality and use developed

## ANNEX 2: PHOTOS FROM FIELD ACTIVITIES



Facility DHIS2 Data Entry Training in Chisamba District in August 2021.  
Evidence for Health team for USAID.



HISP-SA team conducting interviews on NIDS with Program Managers in Central Province.  
Evidence for Health team for USAID.





E4H team during the planning meeting held at Ciela Resort on 25 – 27 August 2021.  
Evidence for Health team for USAID.