COUNTRY HEALTH INFORMATION SYSTEMS AND DATA USE

Year 1 Annual Report
August 1, 2020 to September 30, 2021

Submitted: December 23, 2021

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CHISU has a defined, measurable and repeatable approach, tailored to each country or regional context and strategy, that can clearly demonstrate progression in a country's health information systems and digital journey. Important in this journey is identifying and empowering local institutions.

4 COUNTRIES, 1 REGION (11 COUNTRIES)

» 5 webinars + leadership series, 800+ attendees

» Launched a gender strategy and toolkit, and the CHISU website www.chisuprogram.org

2 Stages of Continuous Improvement (SOCI) assessments completed
e.g. In Burkina Faso and Serbia, CHISU supported training and use of the HIS SOCI bringing together stakeholders to build consensus, identify gaps and chart out a path to measurable progression across the core domains.

2 e-Health strategies supported
e.g. In Serbia, CHISU is working with the Prime Minister's Office and other stakeholders to develop the country's e-health national strategy to provide a unified EHR for clients, improve interoperability, and increase the quality of health data to better address health priorities and gaps.

4 health information systems enhanced and scaled
e.g. CHISU digitized, tested and launched the High Performing Health Care (HPHC) Tool available in English, French and Spanish. To date, over 40 organizations have registered to use the tool. In Burkina Faso, CHISU is working with the Ministry of Health to use the DHIS2-based One Health Information System to monitor COVID-19 cases, sharing test results with clients, tracking vaccination and generating e-vaccination cards.

393 people with enhanced HIS capacities across CHISU program
e.g. In Burkina Faso, CHISU trained 34 district health staff and 126 community agents (health, wildlife and environment) to identify and report unusual health events that occur in the community on the DHIS2-based One Health Information System.

Data to action: Use of One Health data in Burkina Faso led to reporting of dead fish in the Mouhoun River and to the discovery that the water was contaminated, which led to a multi-sectoral regional response. In addition, the Ministry of Health uses weekly data analysis to take action as they did to proactively stop the August 2021 cholera and dengue outbreaks.

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Acronyms

AI	artificial intelligence
AMELP	activity monitoring, evaluation and learning plan
CHISU	Country Health Information and Data Use
COVID-19	coronavirus disease, illness caused by SARS-CoV-2, identified in 2019
CSPS	*centre de santé et de promotion sociale* (health and social promotion center)
DH&I	digital health and interoperability
DHIS2	District Health Information Software version 2
DSIS	*direction des systèmes d'information en santé* (HIS Directorate)
DSS	*direction des statistiques sectorale* (Statistics Directorate)
DQR	data quality review
EBS	events based surveillance
EMRO	Eastern Mediterranean Regional Office
ENDOS	*entrepôt de données sanitaires* (Burkina Faso's national DHIS2 instance)
GEMNet	Global Monitoring and Evaluation Network
GHSA	Global Health Security Agenda
HIS	health information system
HMIS	health management information system
HPHC	high performing health care
ICT	information communication technology
IPH	Institute of Public Health
JSI	John Snow, Inc and JSI Research and Training Institute, Inc
KII	key informant interviews

KM	knowledge management
MEL	monitoring evaluation and learning
MENA	Middle East and North Africa
MIS	management information system
MOH	ministry of health
RHIS	routine health information system
RTI	Research Triangle Institute
SMS	short message service
SO	strategic objective
SOCI	HIS Stages of Continuous Improvement
USAID	United States Agency for International Development
USG	United States Government
WHO	World Health Organization
XB	cross bureau

Introduction

This report covers CHISU's work during the period from August 1, 2020 to September 30, 2021. Below are Activities implemented in Year 1, including three scoping exercises (in Serbia, Niger, and Mali), four Activities in specific countries or regions (in Burkina Faso, Serbia, Niger, and MENA), one global Activity (HPHC), and eight cross-bureau (XB) Activities.

Activity Code	Activity Name	Start Date	End Date	Status
BF-001	Burkina Faso One Health Information System Support	10/01/2020	09/30/2021	Open
SB-001	Serbia Scoping Exercise	11/01/2020	05/31/2021	Closed
SB-002	Strengthening HIS Governance and Data Use in Serbia	04/01/2021	03/31/2022	Open
NR-001	Niger Scoping Exercise	04/01/2021	05/31/2021	Closed
NR-002	Strengthening the HIS in Niger	07/01/2021	9/30/2022	Open
ML-001	Mali Scoping Exercise	09/16/2021	10/31/2021	Open
MENA-001	Support to GHSA information systems in MENA	03/10/2021	03/31/2022	Open
OHS-001	Digitize and Deploy HPHC Tool	02/23/2021	09/30/2022	Open
XB-001	Start up Operations	08/01/2020	09/30/2021	Closed
XB-002	Country Operations Support	08/01/2020	06/30/2022	Open
XB-003	Monitoring, Evaluation and Learning	08/01/2020	06/30/2022	Open
XB-004	Gender in HIS support	08/01/2020	06/30/2022	Open
XB-005	Knowledge Management Support	08/01/2020	06/30/2022	Open
XB-006	Communications	08/01/2020	06/30/2022	Open
XB-007	Technical start up and orientation	08/01/2020	09/30/2021	Closed
XB-008	Global HIS Management and Leadership	07/01/2021	06/30/2022	Open

Activity reports

BF-001 - One Health Information System Strengthening in Burkina Faso

In August 2020, CHISU began discussions with the Burkina Faso Mission and the Global Health Security Agenda (GHSA) Team in USAID Washington, to continue support to the One Health information system started under the MEASURE Evaluation project. The work plan was approved on October 2, 2020; a three-person team (Resident Advisor, Events-based Surveillance Advisor, and Senior Technical Advisor) started by November and other team members were recruited throughout the year.

Sub-Activity 1: Strengthened governance and enabling environment of One Health and ENDOS in Burkina Faso
In Year 1, CHISU engaged with different departments and divisions managing the One Health thematic commissions to implement the approved work plan, with stakeholders including the One Health Technical Secretariat. The One Health information system links to the national health management information system (HMIS) to meet the needs of the Ministry of Health (MOH), Ministry of Animal Resources and Fisheries, and Ministry of Environment Green Economy and Climate Change to enable a comprehensive and effective response to all health threats at the community level.

CHISU initiated the relaunch of the biweekly meetings of the One Health technical coordination group and biweekly meetings of the One Health Technical Secretariat. The One Health thematic committees are one of the bodies of the national One Health coordination platform. These commissions were already defined but needed specific regulatory texts. CHISU supported the development and validation of the regulatory texts of the thematic commission 5 focused on "surveillance, monitoring, notification, preparation, vaccination and emergency response." In March 2021, CHISU provided funding for the committee's workshop to develop its terms of reference. In May 2021, CHISU financed the validation of the legislation governing the composition, organization and functioning of the subcommittee in charge of disease surveillance. Access to the One Health information system was extended to One Health Technical Secretariat and Director Dr. Pierre Yameogo.

CHISU organized a One Health workshop in June 2021 to define indicators from sector databases, define the profiles and roles of the users of the One Health database, and to define the actor profiles allowing decision-makers to receive notifications of cases of priority zoonotic

diseases. The workshop targeted decision-makers, partners and One Health focal points from the ministries of health, environment and animal resources.

The Stages of Continuous Improvement (SOCI) assessment in Burkina Faso was completed in Q4. CHISU translated the tool into French and technically and financially supported the SOCI implementation process which was led by the Directorate of Sectoral Statistics involving representatives of the central departments and programs of the MOH, representatives of the intermediate level, the operational level, and technical and financial partners of the national health information system (HIS). CHISU created an assessment leadership team composed of all HIS strengthening stakeholders. The five main components of the HIS progression were assessed and analyzed according to the criteria of the SOCI tool.

CHISU also supported a joint investigation mission of the health, animal resources and environment ministries focused on suspicious fish and cattle mortality in the Boucle du Mouhoun region. This mission was evidence of the collaboration established between central level actors from different sectors.

Sub-Activity 2: Increased availability and interoperability of quality health data and information systems
In the first half of the year, CHISU confirmed its intervention regions, Boucle du Mouhoun and Centre West, following discussions with the MOH and USAID. CHISU procured information communication technology (ICT) equipment, including 503 tablets, 40 modems, and 40 laptops, for these regions to scale up and decentralize data entry for the One Health system and ENDOS (Burkina Faso's national HMIS, uses the district health information software, version 2 (DHIS2)). For ENDOS, CHISU trained 79 CSPS (centre de santé et de promotion sociale) actors in health facilities in Koudougou district in the Centre West region. Shifting data entry to health facilities will reduce the workload of the district and improve the quality of data. For the One Health system, CHISU supported the update of event-based surveillance (EBS) One Health tools and the EBS training modules for regional, provincial, and community actors. In Q4, CHISU trained 32 service point agents and 126 community agents in the notification of unusual events in Sabou district in the Centre West region. These actors come from the 3 ministries (Health, Animal Resources and Environment) and were previously equipped with notification tools and an updated image box ("boite à image") to aid identification of symptoms of different diseases and illnesses.

CHISU provided technical and financial support to the MOH to enhance the One Health system with the following functionalities for coronavirus disease (COVID-19) programs:

- COVID-19 testing- Laboratories now enter COVID-19 test results into the One Health system. The results are then transmitted to an application developed by the Direction des Systèmes d'Information en Santé (HIS Directorate) (DSIS) which then sends results by short message service (SMS) to clients.
- COVID-19 vaccines- To support the Government of Burkina Faso's plan to digitize the COVID-19 vaccination campaign, CHISU integrated COVID-19 vaccination forms and indicators in the One Health electronic platform, along with vaccine tracking forms for the management of vaccine doses received and administered.

CHISU supported the integration of COVID-19 variables in the national HMIS, ENDOS, and revised the interoperability layer algorithm and standard operating procedures. CHISU met with Cooper/Smith, World Health Organization (WHO) and DSIS and other stakeholders to coordinate activities on interoperability.

From March to June 2021, CHISU worked with MOH and its partners through a series of workshops to digitize community data through the RapidPro community data management system. This will help with ensuring interoperability between the RapidPro application and the One Health electronic platform through the interoperability layer. CHISU successfully led the integration of priority zoonoses indicators into the RapidPro application.

Sub-Activity 3: Improved data analysis and use
CHISU funded the training of one staff member of the One Health Technical Committee for the Inter-University Diploma "International, Emerging Infections: One Health" approach in Dakar, Senegal from June 14 to 25, 2021. CHISU received a request from the DSIS to finance the support of 12 candidates from the main departments of MOH to participate in a training in health data management and analysis. This training took place from July 5 to August 6, 2021 via the Institute for Interdisciplinary Training and Research in Health Sciences and Education e-learning platform.

CHISU supported the installation of the WHO data quality review (DQR) application in ENDOS and the training of central level actors in data analysis. Central level actors, including those from the various programs, were trained in the use of the tool and in carrying out regular data analysis. A total of 39 indicators of the main programs were defined and configured. CHISU supports the Directorate of Protection of Population Health to do weekly analysis of epidemiologic data (reported through the Télégramme, Lettre Officielle Hebdomadaire [Weekly official 'telegram']) data. In August, there was an increase in the number of cholera cases in the eastern region and an increase in dengue cases in the city of Ouagadougou. MOH decided to provide medicines and disinfection supplies to the eastern region. Recommendations were

made to strengthen dengue monitoring and quality of service. Finally, the profile of the users of the One Health electronic platform has been defined and configured. This will allow multi-sectoral actors to receive case notifications directly either by SMS or by e-mail for decision making.

Deliverables	Deadline	Status
1.1 HIS resource mapping	Y1 Q4	Cancelled
1.2 Report on status of technical governance structures for national HMIS and One Health	Y2 Q1	In progress
2.1.1 ICT supplies inventory list and distribution report	Y2 Q1	In progress
2.1.2 Deployment activity report	Y2 Q1	In progress
2.2.1 Brief outlining new systems exchanging data with ENDOS and Meeting report	Y2 Q1	In progress
2.2.2 HIS architecture / interoperability standard document [New deliverable added last quarter]	Y2 Q1	In progress
3.1.1 One Health training report	Y2 Q1	In progress
3.1.2 EBS training report	Y2 Q1	In progress
3.1.3 EBS supervision visits reports	Y2 Q1	Not started
3.1.4 DHIS2 Action Tracker action plans	Y2 Q1	Not started
3.2.1 Role definition matrix for One Health platform	Y1 Q1	Completed
3.2.2 Activity reports from embedded staff	Y1 Q4	In progress
3.2.3 WHO Data Quality Review (DQR) module in ENDOS installation workshop report	Y1 Q4	Completed

Challenges and solutions:
- The ministries involved in joint investigations of public health events need improved coordination and currently do not have harmonized and validated tools. CHISU will support the creation and implementation of this tool in Year 2..
- The installation of the DQR in ENDOS and the training of central level actors is an important CHISU achievement in Year 1, however its extension to the health district level would allow HMIS actors to analyze the quality of the data. including those of health

facilities in a more systematic way. The health programs have been introduced to it, but their ownership of the DQR remains a major challenge to be resolved. CHISU will continue support in Year 2 to encourage this ownership.

● The MOH intends to extend ENDOS data entry to all health facilities. However the lack of resources limits this achievement. CHISU plans to support this expansion in its intervention regions (Centre West and Boucle du Mouhoun).

● The sustainability of the SOCI process is a challenge even though the actors have benefited from capacity building allowing them to continuously monitor the progress made in achieving the HIS objectives. CHISU plans to refine the recommendations resulting from the SOCI assessment, integrate them into the strategic plan of the Routine Health Information System (RHIS) (under development), and continue to mentor appropriate MOH staff to monitor the evolution of the HIS using the SOCI toolkit and other relevant frameworks.

Plans for next period:
● Support One Health technical secretariat and thematic technical commissions
● Support One Health technical secretariat in the development of a joint investigation form *(new in PY2 work plan)*
● Support One Health technical secretariat joint investigations *(new in PY2 work plan)*
● Provide One Health technical secretariat and the 4 One Health departments with an internet connection *(new in PY2 work plan)*
● Deploy One Health information system in focus regions
● Procure ICT supplies for One Health technical secretariat and 4 departments *(new in PY2 work plan)*
● Conduct One Health EBS training in focus regions
● Conduct extension of DQR *(continued in PY2 work plan)*

SB-001 - Serbia Scoping Exercise

In April and May 2021, CHISU supported a Serbia-based consultant and participated in five meetings of the eHealth Steering Committee, covering both the Strategy and Action plan working group and the Electronic Health Record working group. This work, as well as the interview of 20+ key stakeholders and a desk review of 15 key documents, led to the development and approval of the Y1 work plan for SB-002 and the hiring of the Resident Advisor in Serbia.

Deliverables	Deadline	Status

Detailed work plan schedule for scoping assignment	Y1 Q1	Completed
Debrief meeting to the Mission	Y1 Q2	Completed
Defined overall framework for potential support to the e-Health system in Serbia	Y1 Q2	Completed

Plans for next period: None, this activity is closed. Serbia activities are reported under SB-002.

SB-002 - Strengthening HIS Governance and Data Use in Serbia

The CHISU Y1 work plan was approved by USAID on April 22, 2021. CHISU's work in Serbia focused on supporting the eHealth Steering Committee to develop the eHealth Strategy 2021-2026 and Action Plan 2021-2023. In consultations with the eHealth steering committee, CHISU supported a consultant who prepared documentation on the current status, drafted the analysis of the Information Technology sector, and assembled the vision, goals and objectives of the Program Draft Action Plan (Measures and Activities). CHISU also supported a full SOCI assessment which was used to inform the addition of a new objective for the strategy focused on data use as well as provide targets for the Action Plan.

Sub-Activity 1: Strengthened governance and enabling environment of HIS in Serbia
CHISU participated in eHealth Steering Committee meetings and supported two workshops for the eHealth Steering Committee where the baseline situation, goals and objectives for the future of the health information system were discussed. CHISU provided consultant support to coordinate the meetings and produce a draft of the Shared Health Record analysis. CHISU also provided consultant support to draft the Program and Action Plan, so the eHealth Steering Committee could adopt it internally. The Program and Action Plan next moves for public comment and eventual adoption by the government scheduled for early 2022.

CHISU supported an assessment of the national HIS using the SOCI toolkit through orientation at an eHealth Steering Committee meeting in June, small stakeholder group meetings (with the Office of the Prime Minister, Ministry of Health, Institute of Public Health (IPH) Batut and National Alliance for Economic Development) in July and August, and then presented at workshops in August and September. The eHealth Steering Committee agreed on the results of the SOCI, showing both the current state as well as targets for where the HIS should progress at the end of the two-year period of the Action Plan.

Sub-Activity 3: Improved data analysis and use

CHISU initiated work on data flow and work flow mapping to understand how data move through various layers of the Serbian health system, identification of representative public health decisions to be informed by deeper data-driven insights, development of an approach to review currently available data, and finally, sharing materials for stakeholder engagement. CHISU consulted with relevant stakeholders to define the scope of the data needs assessment. The approach for conducting the assessment was finalized and proceeded with identification of key collaborators in government agencies, starting with the IPH Batut.

Deliverables	Deadline	Status
eHealth strategic guidelines and documents	Y1 Q4	In progress
Report on status of technical governance structures for national HIS	Y1 Q4	In progress
SOCI mentorship plan	Y2 Q1	Not Started
Data Needs Assessment report	Y2 Q1	In progress
Guidance document for optimized use of existing data for improved decision making	Y2 Q2	Not Started
Assessment report on advanced analytics readiness	Y2 Q2	Not Started
Artificial intelligence (AI) driven prototype	Y2 Q3	Not Started

Plans for next period:
- Launch initial data needs assessment activities with IPH Batut in October
- Expand data needs assessment engagement to other decision-makers, data experts and technical staff
- Develop SOCI mentorship plan
- Finalize SOCI report
- Participate in launch of national eHealth Strategy and Action Plan

NR-001 - Niger Scoping Exercise

From April to May 2021, CHISU met with over 25 different stakeholder groups, participated in the MOH Directorate of Statistics Financial and Technical Partners Meeting, reviewed over 30 different national documents relating to the HIS, and presented findings and recommendations

to USAID. This work led to the development and approval of the Y1 work plan for NR-002 and the hiring of the Resident Advisor in Niger.

Deliverables	Deadline	Status
Desk Review	Q3	Completed
Stakeholder Analysis	Q3	Completed
Key Informant interviews	Q3	Completed
Debrief with the mission	Q3	Completed

Plans for next period: None, this activity is closed. Niger activities are reported under NR-002.

NR-002 - Strengthening the HIS in Niger

The CHISU Y1 work plan for Niger was approved by USAID on September 2, 2021. The Resident Advisor assumed duties in Niamey and was successfully onboarded through a series of orientation sessions and training on JSI Research and Training Institute (JSI) and USAID procedures. CHISU presented the activities in Niger to various Technical and Financial Partners working on HMIS in the country. One of the main challenges in the country is the harmonization of various activities conducted by the Directorate of Statistics, and ensuring CHISU activities align.

Sub-Activity 1: Strengthened governance and enabling environment of HIS in Niger
CHISU participated in meetings with USAID's Implementing Partners in Maradi and Zinder. CHISU presented its activities to USAID Implementing Partners and HMIS Technical and Financial Partners in Niger. CHISU also presented at the Directorate of Statistics at the MOH.

Deliverables	Deadline	Status
1.1 Brief of support to the new HIS strategic plan	Y2 Q4	Not started
1.1.5 Monitoring plan for new HIS strategic plan	Y2 Q4	Not started
1.1.5 Revised national indicator set	Y2 Q4	Not started
1.1.5 Quarterly technical working group meetings	Y2 Q4	Not started
1.2.1 HIS assessment report	Y2 Q1	Not started

1.2.2 Mentorship plan	Y2 Q1	Not started
2.1.1 Recommendations brief	Y2 Q3	Not started
2.1.2 Quarterly monitoring report	Y2 Q3	Not started
2.1.3 ICT infrastructure assessment report	Y2 Q1	Not started
2.1.4 Asset disposal approval	Y2 Q3	Not started
3.1.1 DQR report	Y2 Q2	Not started
3.1.2 Data quality assurance plan and monitoring report	Y2 Q3	Not started
3.1.3 Training report	Y2 Q3	Not started

Plans for next period:
- Conduct an ICT assessment
- Install the DQR module in the HMIS and train HIS staff
- Conduct a SOCI assessment and engage in HIS strategic planning activities

ML-001 - Mali Scoping Exercise

The Mali scoping exercise statement of work was approved by USAID on September 16, 2021. The purpose of the scoping exercise is to gather information from key stakeholders and resources to better understand regional and national level HIS strengthening needs in Mali, with a focus on the COVID-19 response. In September, CHISU started gathering key HIS documents, developed a stakeholder list and started engaging with different stakeholders to gather information to develop the Y1 work plan.

Deliverables	Deadline	Status
Key stakeholder list	Y2 Q1	In progress
Recommendations and findings	Y2 Q1	In progress
Proposed Year 1 work plan	Y2 Q1	Not Started

Plans for next period:
- Finalize recommendations and findings
- Debrief with Mission
- Year 1 work plan

MENA-001 - Support to GHSA information systems in MENA

The work plan for support to GHSA information systems in the Middle East and North Africa Region (MENA) was approved on May 11, 2021. The purpose of this activity is to facilitate better availability of and access to organised health information for 11 countries in the MENA region. This includes an assessment of the SIGNAL data platform developed by the WHO Regional Office for the Eastern Mediterranean (EMRO) and elicitation of criteria for countries to use in the region to determine their readiness to adopt and use this platform for regional GHSA data sharing.

CHISU established an interviewing process and data collection tool to inform the landscape briefs and recommendations brief on the evaluation of the WHO SIGNAL data module, and began to reach out to US government (USG) interagency partners to make connections at the regional and country level. CHISU made contacts in all 11 target countries and began a comprehensive interviewing process, in addition to collecting documents and resources. CHISU also received an overview of the WHO SIGNAL platform from WHO EMRO in two meetings. Following two months of interviews, CHISU requested an updated tiering of countries based on the depth of information received and contacts made; USAID approved the updated tiers on September 1, 2021. Due to the delayed kickoff of this activity in Q3 on June 1, 2021, USAID approved the submission of the first set of briefs on September 30, 2021. CHISU began drafting briefs for the new Tier 1 (Jordan, Egypt, Libya, West Bank/Gaza) and submitted the first brief on September 30, 2021.

CHISU encountered political challenges getting in contact with Ministries of Health and government contacts across the region. All 11 countries in the region have specific procedures for engaging on this material, and navigating each of those was slower than expected. CHISU was able to proceed due to existing relationships within the team with the country Missions for Yemen and West Bank/Gaza, and through engagement of an Arabic speaking consultant with strong contacts in the region.

Additionally, there was skepticism from WHO EMRO about convincing the country offices to participate in the assessment, perceiving that country offices consider assessment reports offer little to no tangible benefit in countries. The CHISU team created a tailored work statement for WHO country offices to explain the shared benefit of the work, which opened the door at the country level in Iraq, Algeria, and Jordan.

CHISU also encountered difficulties contacting and engaging meaningfully with a number of USAID Missions, especially those without health programs. CHISU's approach of persistence,

continued support from USAID, and a willingness to reach out to appropriate country contacts (other IPs, private sector firms, regional non-governmental organizations) without overstepping allowed CHISU to continue working without holding up the process.

Sub-Activity 1: Strengthened governance and enabling environment of HIS
CHISU held two meetings with WHO EMRO during the reporting period. The first was introductory; the second provided a 90-minute overview of the WHO SIGNAL platform. CHISU learned that the module, called Online Signal Module, is part of a broader surveillance platform called ePHERM (Electronic Platform for Public Health Emergency Response Management). The team received a presentation with screenshots of the tool, rather than an active demonstration.

CHISU has started to discuss the tool with WHO country offices (Jordan) who have received access to the tool; however, it does not appear to be working or in use.

The team made over 120 contacts, held 27 formal interviews with 63 individuals (in addition to informal introductory calls). Groups interviewed included USAID Missions, Ministries of Health, USG agencies, international donors, non-governmental organizations, and private sector partners. CHISU drafted country reports for Egypt, Jordan, Libya, and West Bank/Gaza, and submitted the Jordan brief on September 30, 2021.

Deliverables	Deadline	Status
1.1 Conduct a landscape analysis in Egypt	Y1 Q3	Delayed
1.2 Conduct a landscape analysis in Jordan	Y1 Q3	Delayed
1.3 Conduct a landscape analysis in Yemen	Y1 Q3	In progress
1.4 Conduct a landscape analysis in Morocco	Y1 Q3	In progress
1.5 Conduct a landscape analysis in Tunisia	Y1 Q4	In progress
1.6 Conduct a landscape analysis in Libya	Y1 Q4	Delayed
1.7 Conduct a landscape analysis in Iraq	Y1 Q4	In progress
1.8 Conduct a landscape analysis in Syria	Y2 Q1	In progress
1.9 Conduct a landscape analysis in West Bank/Gaza	Y2 Q1	Delayed
1.10 Conduct a landscape analysis in Lebanon	Y2 Q2	In progress
1.11 Conduct a landscape analysis in Algeria	Y2 Q2	In progress

1.1.12 Synthesize information into regional brief	Y2 Q2	In progress
1.1.13 Quarterly update	Y2 Q2	In progress
2.1 Develop recommendations brief	Y1 Q4	In progress

Plans for next period:
- Complete remainder of Tier 1 briefs
- Continue interviews in Tier 2 and 3 countries
- Complete Tier 2 briefs

OHS-001 - Digitize and Deploy HPHC Tool

The work plan for this activity was approved on February 23, 2021. CHISU designed, built, tested and launched the High Performing Health Care (HPHC) tool based on USAID requirements and review of several demonstrations of the initial version of the tool. CHISU coordinated the public launch event on May 26, 2021 with over 500 registrants and 150+ participants. Many organizations have registered to use the tool including The Global Fund, UNICEF and USAID missions in Liberia, Nigeria, Mozambique, Guinea and Senegal. CHISU supported the vetting of over 60 user requests with USAID Office of Health Systems to establish their eligibility to use the tool. We anticipate we will have some registered users begin to use the site for their own surveys in the next quarter.

Sub-Activity 2: Increased availability and interoperability of quality health data and information systems
CHISU registered the website (https://hphctool.org), established the SSL (secure socket layer) security, updated the system requirements document, completed the online user guide in French and English, and applied fixes such as to prevent users from submitting the form if visiting it outside of the context of a tool implementation. CHISU translated the tool and website into French and translated the tool into Spanish. CHISU added in a dataset from Pakistan in order to ensure that users visiting to "explore the data" were not met with empty dashboards. CHISU also made adjustments to the Country Comparison dashboard to enable users to filter results by methodology and level of analysis.

Deliverables	Deadline	Status
Online tool mockup	Y1 Q2	Completed
Test version of tool	Y1 Q2	Completed

Final version of HPHC tool	Y1 Q3	Completed	
User guide	Y1 Q3	Completed	
Launched site	Y1 Q3	Completed	

Plans for next period:
- Provide support to the site
- Record and vet registration requests through USAID
- Define any necessary site enhancements for Year 2

Operations reports

XB-001 - Start up Operations

At the start of the project, the executive management team of the Project Director, Deputy Project Director, Senior HIS Director, Finance and Operations Director, and Program Officer was hired. Project kick-off meetings were held with CHISU partners — JSI Research & Training (JSI), Research Triangle Institute (RTI) International, Vital Strategies, Jembi Health Systems, Macro-Eyes and Global Evaluation, and Monitoring Network (GEMNet- Health) — to determine and establish team operations. CHISU met with the USAID agreement officer representative team to establish a schedule of regular meetings and established compliance and operational procedures, including environmental compliance, subcontracting, and travel procedures. CHISU held introductory meetings with personnel from USAID's Global Health Bureau and with USAID missions. The project did not have a traditional start given the COVID-19 pandemic. However, the project has adapted well to functioning virtually.

CHISU carried out a competitive process to identify a vendor for a management information system (MIS) in the first half of the year. USAID approved the subaward for the selected vendor, DevResults. During the second half of the year, the vendor created a basic MIS and trained four CHISU staff as MIS administrators. The MIS was customized to meet CHISU's requirements for reporting, work planning, and other operations tracking. The MIS was successfully launched for Q4 reporting in September 2021.

Deliverables	Work plan*	Deadline	Status
MIS design document	Y1	Y1 Q2	Completed
MIS launch	Y1	Y1 Q4	Completed

| Development and testing demo | Y1 & Y2 | Y1 Q4 | Completed |

*This Activity contained tasks for Y1 Q4 in both Y1 and Y2 work plans. As a result, we report on deliverables from both work plans here.

Plans for next period: None, this Activity closed on 30 September 2021. MIS-related activities will be reported under XB-003 going forward.

XB-002 - Country Operations Support

At the start of the year, the partner presence and capability mapping spreadsheet was updated to include registration and country presence status for all core, program and resource partners. This spreadsheet serves as the first point of reference for assessing response capacity when the program is asked to provide support to USAID missions.

Throughout the year, CHISU developed and submitted work plans and statements of work for USAID approval in Burkina Faso, Serbia, MENA, Niger, and Mali. Start-up conversations with USAID Missions in Ghana, Indonesia, Malawi, and Haiti were also initiated. CHISU developed and finalized the country support structure guidance document and orientation presentation to standardize country operations, headquarters-country support team roles and responsibilities, and communication norms and expectations. In addition, CHISU recruited a Country Support Manager, and regular meetings with the Burkina Faso, Serbia, Niger, and MENA teams were convened.

Deliverables	Work plan*	Deadline	Status
CHISU country support guidance document	Y1	Y1 Q4	Completed
CHISU Partner presence and capability mapping spreadsheet	Y1	Y1 Q1	Completed
Statement of Work - Mali	Y2	Y2 Q3	In progress
Statement of Work - Ghana	Y2	Y2 Q3	Not started
Statement of Work - Haiti	Y2	Y2 Q4	Not started
Statement of Work - Indonesia	Y2	Y2 Q3	Not started
Statement of Work - Malawi	Y2	Y2 Q3	Not started

*This Activity contained tasks for Y1 Q4 in both Y1 and Y2 work plans. As a result, we report on deliverables from both work plans here.

Plans for next period:

- Submit statements of work for Haiti, Ghana, Indonesia and Malawi
- Continue country support team meetings

XB-003 - Monitoring, evaluation and learning

Under this activity, CHISU developed a draft activity, monitoring, evaluation and learning plan (AMELP) as one of the program's 90-day deliverables. After multiple revisions, the AMELP was approved in May 2021. The Monitoring, Evaluation and Learning (MEL) lead developed MEL orientations, an AMELP overview and review of Indicators, which were conducted live and/or recordings circulated to Operations, Technical and Activity staff.

The learning questions development process launched in December 2020. Representatives from all CHISU partners and USAID generated cross-cutting and SO-specific questions. The questions were refined by a small group (MEL Advisor, Knowledge Management (KM) Advisor, and Deputy Director) and were included in the revised AMELP. CHISU developed a learning action plan, with the timeline, methods, and linkages with other project processes (e.g. KM) noted for each learning question.

Implementation of the learning plan started with a desk review of data demand and data use. Based on the lack of consensus in the literature on a definition for data demand, CHISU developed a protocol for a Delphi-like process to garner input through an expert panel. CHISU held two meetings with the expert panel, on 14 and 21 September 2021, and developed a brief on data demand including an updated definition. This brief provides some answers for one of CHISU's learning questions, will inform CHISU's approach to measuring data demand, and positions CHISU to play a technical leadership role in defining this concept for the overall HIS community.

In addition, CHISU developed guidance for SOCI implementation documentation, developed templates for CHISU work plans, and compiled and coordinated Y2 work planning for cross-bureau and core technical funding.

Deliverables	Work plan*	Deadline	Status
CHISU AMELP	Y1	Y1 Q1	Completed
CHISU's Annual Learning Action Plan	Y1	Y1 Q4	Completed
MEL and MIS orientation sessions	Y2	Y2 Q3	In progress
MIS functioning smoothly	Y2	Y2 Q3	In progress

Operational learning questions	Y2	Y2 Q3	In progress
Reviewed and revised AMELP	Y2	Y2 Q1	In progress
Semi-annual and annual reports	Y2	Y2 Q1 & Q3	Not started

*This Activity contained tasks for Y1 Q4 in both Y1 and Y2 work plans. As a result, we report on deliverables from both work plans here.

Plans for next period:
- Support annual review process in October
- Finalize data demand definition and engage in discussions with USAID for inclusion in AMELP
- Review and update Learning Action Plan for Y2
- Finalize revisions to AMELP for submission with annual report
- Support ongoing customizations to improve the MIS
- Develop and begin to offer orientations for Learning, Work planning, Reporting using the MIS

XB-004 - Gender in HIS

CHISU developed a Gender Action Plan as one of the program's 90 day deliverables. The plan included a discussion of the importance of gender in HIS, CHISU's approach to gender integration, how gender will be integrated in each strategic objective (SO), and how the plan will be implemented, monitored, evaluated and disseminated. The plan was approved by USAID on October 23, 2020. Implementation of the plan initiated with analysis of country work plans with gender considerations and action points noted.

CHISU also developed a Gender in HIS Considerations guide to support Activity-specific selection of gender considerations based on the country work plan. CHISU created an asynchronous gender orientation for all staff that was followed by individual team consultations with the gender advisor to discuss and prioritize gender integration ideas in each work plan. CHISU created a mechanism to institutionalize gender integration through work planning and reporting in the MIS. Work plans were reviewed by a gender advisor who created a "Gender in XX country/activity" menu of options for ensuring gender is considered at each stage and sub-activity of the work plan. These gender integration opportunities are used to guide discussion, prioritization of feasible areas for integration, and create a data table in the MIS, allowing activity leads to share regular updates on progress, successes, and challenges. The MIS will also track gender considerations of all trainings and products to feed into indicator 7.1.

In Year 1, CHISU implemented and achieved the following:

Serbia
In Serbia, there was some initial lack of clarity as to what data were disaggregated in IPH Batut. As part of the Year 1 work, CHISU was able to confirm that many of the data are disaggregated. CHISU is in ongoing conversations with a partner at IPH Batut to learn more about how the gender data are analyzed and used, in addition to what their needs might be related to gender data. CHISU is documenting the gender balance in decision-making bodies, such as the eHealth Steering Committee and keeping parity in mind for training or CHISU sponsored events. Serbia also completed the SOCI toolkit in Year 1, which includes sex-disaggregated data and other gender components as benchmarks in the progression to a mature HIS, so this was inherently included in the SOCI implementation and results. Gender gaps identified will be integrated into roadmaps and will help inform strategic planning. Finally, the CHISU Regional Advisor has also scheduled a meeting for early Year 2 with the Social Inclusion and Poverty Reduction Unit and Coordinating Body for Gender Equality to better understand their role and possible collaborations, as well as the Gender Focal Person in the MOH.

Burkina Faso
During Year 1, the Burkina Faso team also completed the SOCI assessment, noting that gender gaps emerged in data analysis and use, which will be useful for action planning. The Burkina Faso team collected detailed records of all Year 1 activities and training with the gender participation ratios to enable measurement over time. Year 1 activities ranged from zero to 33% participation from women, with the average meeting including 16% female participants. The Burkina Faso team completed the gender orientation and several in-depth discussions with the gender advisor, noting the cultural context in Burkina Faso can be a barrier to full participation for women. The team brainstormed additional ways to integrate gender that supports women's participation and engagement, but also focuses on gender data availability and use, and gender discussion in meetings and decisions that does not put undue burden on only women to speak up or participate in meetings.

MENA
The landscape in MENA included a gender question about availability of sex-disaggregated data. While results indicated disaggregation is lacking, this is an important finding to document and spur demand for disaggregated data. It is also an important reminder to meet countries where they are at while encouraging progress towards gender data availability and use.

HPHC Tool

USAID's HPHC tool includes several equity questions and analysis by sex, with visuzalizations including ions also allow for disaggregation. However, CHISU team members identified opportunities to improve the tool in future iterations by adding the option to visualize the sex disaggregated data in comparison to each other on the same screen. Including the ability to compare the gender questions across time and location would also be beneficial.

Deliverables	Work plan*	Deadline	Status
CHISU Gender Action Plan	Y1	Y1 Q1	Completed
Gender orientation sessions	Y1	Y1 Q4	Completed
Gender in HIS activity reports	Y2	Y2 Q3	In progress
Gender in HIS synthesis	Y2	Y2 Q3	Not started

*This Activity contained tasks for Y1 Q4 in both Y1 and Y2 work plans. As a result, we report on deliverables from both work plans here.

Plans for next period:
- Plan for gender in HIS activities in Niger, Mali, Malawi, Haiti, Indonesia, Ghana and core technical activities
- Continue to track gender integration in on-going country and core activities

XB-005 - Knowledge management support

As part of a collaborative participatory approach, CHISU convened meetings with each core and program partner and USAID to develop CHISU's Knowledge Management (KM) Plan. The CHISU team used the findings from the group interviews to facilitate a working session where key pieces of the KM Plan were developed, including the mutual definition of knowledge management, target audiences, and KM tools and approaches for each target audience. USAID approved the KM plan on October 23, 2020.

CHISU created and launched the project Intranet site and the email listserv. CHISU's Intranet is hosted on Google Sites and will serve as a landing page for shared documents, an event calendar, and other shared activities. CHISU's email listserv was launched and grew to over 1,500 contacts. CHISU curated content for newsletters, the listserv, social media, and the website such as microblogs highlighting content from selected thought leadership webinars (see XB-007 for more information). CHISU supported the development and review of 15 abstracts for submission to five conferences.

KM orientation was conducted for country teams in Burkina Faso, Niger, and Serbia. CHISU held the first Pause and Reflect Session during the senior management team meeting in July 2021, focused on the data demand learning question. In addition, CHISU's first "Live with CHISU'' event was held on Facebook Live with the Burkina Faso team on August 31, 2021. This was our first French speaking event with CHISU Leadership and Governance Lead and the Burkina Faso MOH's HMIS Director.

Deliverables	Work plan*	Deadline	Status
CHISU's KM Plan	Y1	Y1 Q1	Completed
Quarterly Pause and Reflect events	Y1 & Y2	Y2 Q3	In progress
KM orientation sessions	Y2	Y2 Q3	In progress
Webinars	Y2	Y2 Q3	Not started
Conference abstracts	Y2	Y2 Q3	In progress
Monthly updates to intranet	Y2	Y2 Q3	In progress

*This Activity contained tasks for Y1 Q4 in both Y1 and Y2 work plans. As a result, we report on deliverables from both work plans here.

Plans for next period:
- Support preparing KM synthesis for annual review sessions in early October.
- Synthesize data demand summary and prepare for presentation to USAID.
- Start planning for Y2 external thought leadership webinars.
- Continue supporting country teams to integrate KM activities into their work plans.
- Plan for Pause and Reflect Session for the November All-Hands meeting.

XB-006 - Communications

CHISU developed a font treatment to identify USAID Global Health Bureau's flagship HIS program that differentiates CHISU from other existing data projects. USAID approved the CHISU communications strategy on February 18, 2021. CHISU launched social media handles for LinkedIn, Facebook, and Twitter on February 1, 2021, and reached 395 followers on LinkedIn, 7,552 likes on Facebook, and around 62,000 impressions on Twitter in Year 1.

The CHISU website (http://chisuprogram.org) was launched on September 3, 2021 after receiving approval to launch from the USAID Web Governance board on August 1, 2021. By the end of September, the website had 178 visitors and 576 page views. In addition, CHISU created several factsheets, templates and training materials to create systems to better tell CHISU stories and results.

Deliverables	Work plan*	Deadline	Status
CHISU Communications Plan	Y1	Y1 Q4	Completed
Updated Branding and Marking Plan	Y1	Y1 Q4	Completed
USAID approval for CHISU website	Y1	Y1 Q4	Completed
Website demo	Y1	Y1 Q4	Completed
Website launch	Y1	Y1 Q4	Completed
Communications training	Y2	Y2 Q3	In progress
Website content management guidance	Y2	Y2 Q3	Not started
Monthly and quarterly updates to newsletter, social media, and website	Y2	Y2 Q3	In progress
Success stories	Y2	Y2Q3	In progress
Templates for reports	Y2	Y2Q3	Completed
Country factsheets and reports	Y2	Y2Q3	In progress

*This Activity contained tasks for Y1 Q4 in both Y1 and Y2 work plans. As a result, we report on deliverables from both work plans here.

Plans for next period:
- Maintain and update the CHISU website as new countries and deliverables are completed
- Create and update collateral such as factsheets and brochures
- Position the program through strategic engagement via social media, events and messaging

XB-007 - Technical Start up

CHISU developed an orientation series for the HIS SOCI Orientation Series. The purpose of the series was to a) enhance awareness and understanding of the SOCI framework and how it will be used to monitor project performance and to help countries progress in their HIS maturity; b) identify potential improvements to the SOCI assessment methodology and tool; and c) enable the CHISU Management Team at USAID to advocate for its use to strengthen country HIS. The SOCI Orientation Series was presented in two workshops: Workshop 1 ran over five sessions

from January 11-20 with all CHISU core and program partners. Workshop 2 with the USAID CHISU Management team ran from January 25 - February 2.

CHISU organized and hosted a thought leadership series with five webinars. The first focused on HIS leadership considerations: held on March 17, 2021 and attended by 156 people from 40 countries and 90 organizations. The second focused on gender in HIS: held on April 14, 2021 and attended by 97 people from 25 countries and 30 organizations. The third focused on standards-based interoperability of HIS: held on May 12, 2021 and attended by 160 people from 34 countries and 62 organizations. The fourth focused on digital systems and data quality: held on June 9, 2021 and attended by 184 people from 46 countries and 118 organizations. The fifth focused on Local Organizations and HIS: held on July 14, 2021 and 227 persons attended (611 registered) from 51 countries and 142 organizations. Recordings of all webinars are available on CHISU's YouTube channel, with each receiving over 200 views.

Deliverables	Deadline	Status
SOCI orientation series	Y1 Q2	Completed
Recommendation Brief	Y1 Q2	Delayed
Quarterly webinar series	Y1 Q4	Completed

Plans for next quarter: None, this Activity closed on 30 September 2021. Webinars will be reported under XB-005 going forward, and the recommendation brief is expected to be completed in Y2 Q1 and will be reported under XB-009.

XB-008 - Global HIS Management and Leadership

CHISU actively participated in meetings within the Health Data Collaborative (HDC), including the Digital Health and Interoperability (DH&I) Working Group and the Routine Health Information Systems (RHIS) Working Group. CHISU provided key reviews of the HDC RHIS Strategy document as well as the DH&I Maturity Model Working Group's Navigator for Digital health Maturity Models. In addition, CHISU used guidance developed by the project (see XB-003) to document feedback on the use of SOCI in Serbia and ideas for improvement including the development of a facilitators guide, the inclusion of examples for documents mentioned in the tool, especially in the Data Use subdomain.

Deliverables	Deadline	Status

Annual report on key topics and trends in HIS and Digital Health	Y2 Q3	Not Started
Global Goods feedback report	Y2 Q3	Not Started

Plans for next quarter:
- Document feedback from the use of SOCI in Burkina Faso
- Document feedback from DHIS2 use in Burkina Faso and Niger
- Continued active participation in HDC working groups and the Global Digital Health Network

Annex 1 - CHISU's contribution to health system strengthening

CHISU was conceived to continue and expand USAID's investment in integrated health information systems (HIS). Specifically, CHISU will contribute to health systems outcomes and USAID's Vision for Health Systems Strengthening by the improved use of quality data. Our theory: if quality data are used to make policy and health system optimization decisions, health disparities will be reduced because there will be a greater understanding of geographic and demographic distribution of gaps in health services, commodities, and workforce. If these data are disaggregated, meaningful, and population sensitive data are produced, care will be as effective, safe, and people-centered as possible, and the health system's responsiveness and resources will be optimized.

In Burkina Faso, the One Health ministries (health, environment and animal resources) conducted a joint investigation of dead fish and cattle in Sécaco village in Burkina Faso. This is a good example of the use of data from CHISU-supported HIS and the effective and people-centered impact on the lives of Burkinabe at the community level. Additionally, the digitization of the High Performance Health Care tool allows decision makers to gain insights into public perception of health systems performance and provides the possibility of combining this with service delivery data to gain a more holistic view of the health system.

Further, CHISU contributes to USAID's Vision for Action in Digital Health through the implementation of the Stages of Continuous Improvement (SOCI) in Burkina Faso and Serbia. These activities operationalize the objective of assessing and advancing national and regional capacity for digital health, particularly in leadership and governance. CHISU supported HIS and eHealth strategies in Burkina Faso and Serbia which operationalize the alignment of investments in national digital health strategies. CHISU engaged in national processes to define the enterprise architecture and enabled interoperability of different systems in Burkina Faso, strengthening the platform for further investments in national digital health architectures. Finally, CHISU supports the (re)use of global digital goods with the SOCI applications in Burkina Faso and Serbia and enhances the use of DHIS2 in Burkina Faso for example, the CHISU-supported system improves the delivery of COVID-19 test results.

CHISU's mandate and interventions are also aligned with WHO's Results Framework on Strengthening HIS, Global strategy on digital health 2020-2025 and Health Data Collaborative Theory of Change. These key global documents are a call to action for member countries, provide a framework for strengthening country HIS through the application of digital

technology, and define a pathway for measurable impact on health information systems strengthening in countries.

It may be too soon to discuss trends in USAID Mission demand since two countries and one region - Burkina Faso, Serbia, Middle East and North Africa (MENA) - reached full implementation in year 1. Patterns and trends will be more evident at the end of year 2. Nonetheless, CHISU supported Burkina Faso and Serbia to understand the maturity and progression of their HIS, an essential governance input. With better HIS governance, countries have greater ability to withstand systemic shocks and integrate technological advances to improve the availability, quality and use of data. The SOCI assessments in Burkina Faso and Serbia allowed these countries to track the evolution of their HIS against standardized improvement domains and will be well placed to share best practices with other countries. The Burkina Faso SOCI highlighted the strong level of Governance and Workforce and the significant improvement the country is looking to make in Data Quality Assurance processes. In Serbia, the most significant improvements are targeted in the areas of HIS Governance and ICT Infrastructure. CHISU is also documenting and learning from each SOCI application which will assist with further refinement.

Through the implementation of project learning activities, CHISU is well placed to document and describe demand for data in the context of data use for decision making. We learned data demand in digital health goes beyond previous descriptions of seeking and requesting data but now considers processes such as integration of globally agreed data guidance, interoperability of different electronic systems and advanced analytics generated from multiple data sources, considers different types of stakeholders and multiple sources of data to fill an information gap, or to improve on or interpret existing information.

The integration of gender in HIS introduces the challenge of going beyond sex dissagregated data to a deliberate consideration of the impact of gender in every area of HIS strengthening and evolution. This integration will allow for holistic and equitable data generation, analysis and use to ensure an all of society approach to health. CHISU developed a tool for identifying and planning for integrating gender considerations in HIS strengthening interventions. From this exercise, in Serbia, CHISU had conversations with the Institute of Public Health Batut to learn more about how the gender data are analyzed and used and what their gender data needs might be. CHISU also engaged the Social Inclusion and Poverty Reduction Unit and Coordinating Body for Gender Equality to better understand their role and possible collaborations with the eHealth Steering Committee. The MENA landscape analysis included a question about the availability of data by sex, and the results indicate a lack of disaggregation in all countries.

CHISU's first implementation year can be characterized as foundational with collaborative thought leadership. With the addition of Ghana, Haiti, Indonesia, Mali, Malawi and Niger to Burkina Faso, Serbia and MENA, and the expansion of core funded technical activities, the project is poised to learn and adapt, advance HIS in supported countries and contribute to global leadership. CHISU is also poised to provide evidence for our hypothesis that use of quality data from multiple interoperable data sources promotes equity, quality and resource optimization.

Annex 2 - Summary by Strategic Objective (SO)

SO1 - CHISU has been engaged to strengthen governance and HIS enabling environments in four countries or regions: **Burkina Faso, Serbia, Niger, and the Middle East and North Africa region (MENA)**. CHISU's work in Burkina Faso, Serbia and Niger is primarily focused on the SOCI component *HIS leadership and governance organizational structures and functions*. CHISU supported national stakeholders in the One Health technical coordination group in Burkina Faso and in the eHealth Steering Committee in Serbia. The work in MENA is focused on carrying out an array of landscape analyses that identify and understand the data sources that inform decision making in these countries in order to determine HIS leadership and governance interventions that are needed. Lastly, CHISU-supported SOCI assessments were completed in Burkina Faso and Serbia.

SO2 - CHISU has been engaged to increase the availability and interoperability of quality health data and information systems in **Burkina Faso and at the global level**. In Burkina Faso, CHISU enhanced the One Health system with COVID-19 testing and vaccination functionalities. CHISU supported digitization of community data on priority zoonoses in the RapidPro application, and enabled exchange through the CHISU-supported interoperability layer. CHISU worked with national and sub-national stakeholders to install and configure the WHO DQR application and integrate COVID-19 indicators in the national HMIS (ENDOS). CHISU also began the expansion of ENDOS to health facilities and the expansion of the One Health system with events-based surveillance training for health facility and community-level users. At the global level, CHISU launched the HPHC tool and expanded its use through translation of the tool into Spanish and French, and completed the online user guide in both French and English. Over 60 user requests were received and vetted.

SO3 - CHISU has been engaged to increase demand and use of health data and information to address health priorities, gaps and challenges in **Burkina Faso and Serbia**. In Burkina Faso, under SOCI's sub-component *User/stakeholder engagement*, CHISU supported defining a role matrix for the One Health electronic platform, and under *Data synthesis and communication*, CHISU supported analysis with the One Health technical secretariat for action at the district level. Furthermore, under *Data quality assurance and quality control*, CHISU began training national stakeholders on the WHO DQR application in ENDOS and how to carry out analysis for the upcoming data quality review. In Serbia, under *Data use availability strategy*, CHISU supported a data needs assessment to inform the approach for data use and data analysis.

SO4 - No local organizations have been engaged by CHISU for capacity enhancement support. A menu of services that CHISU can provide to strengthen the technical capacity of local organizations has been drafted with the intention of circulating it to USAID country missions.

Annex 3 - Indicator achievement

Indicator	Data source(s)	Y1 target	Achieve -ment	Comment
SO1: Strengthened governance and enabling environment				
1.1: Number of countries engaged by CHISU to improve governance and enabling environment for HIS	Key Informant Interviews (KIIs), program records	3	4	In Burkina Faso, CHISU is working with national stakeholders, including MOH and other ministries. In Serbia, CHISU is working with national stakeholders. In the Middle East and North Africa Region (MENA), CHISU is working with regional and national stakeholders. In Niger, CHISU is working with national and subnational stakeholders.
1.2: Number of CHISU supported standards-based HIS governance processes implemented	KIIs, program records	TBD	4 BF-2 SB-2	In the SOCI area of *HIS leadership and coordination*, CHISU supported the One Health technical coordination group in Burkina Faso and supported the eHealth Steering Committee in Serbia. In Burkina Faso, this support included preparation of legal texts for the committee in charge of surveillance. In the SOCI area of *HIS organizational structure and functions*, CHISU conducted workshops and provided technical assistance to national stakeholders on using

				the SOCI toolkit to assess the national HIS in both Burkina Faso and Serbia.
1.3: Number and percent of CHISU-supported key governance behaviors that improved	KIIs, program records	TBD	0	No fully documented improved behaviors in Y1.
1.4: Number and percent of CHISU-supported countries or regions that advanced in HIS leadership and governance components on the SOCI scale	Formal or informal SOCI, KIIs, program records	0	0	CHISU completed baseline SOCI assessments of the national HIS in both Burkina Faso and Serbia. Follow up SOCI assessments will not be conducted for at least one year.
SO2: Increased availability and interoperability of quality health data and information systems				
2.1: Number of countries engaged by CHISU to increase availability and interoperability of health data and information systems	KIIs, program records	2	1	In Burkina Faso, CHISU is working at national and sub-national levels with MOH.
2.2 Number of CHISU supported electronic systems that were scaled or enhanced	KIIs, program records	TBD	4 BF-3 OHS-1	In Burkina Faso, CHISU scaled two systems (ENDOS and One Health platform) to health facility and community-levels. Also in Burkina Faso, CHISU supported four enhancements to three systems: ● ENDOS (1), installed and configured the WHO DQR module ● One Health system (2), configured for COVID-19 test results and for

				COVID-19 vaccination and vaccine tracking ● RapidPro community data system (1), configured with priority zoonoses Under OHS, CHISU scaled HPHC tool by translation into Spanish and completing the online user guide in French and English and vetting over 60 user requests.
2.3: Number of CHISU-supported electronic systems with newly enabled interoperability or readiness for interoperability	KIIs, program records	TBD	2 BF-2	In Burkina Faso, CHISU supported interoperability for two systems: ● One Health platform, enabled data exchange of COVID-19 test results with DSIS application to send SMS result to client ● RapidPro, enabled data exchange of priority zoonoses with One Health system
2.4: Number and percent of CHISU-supported countries or regions that advance in HIS ICT infrastructure and HIS standards and interoperability components on the SOCI scale	Formal or informal SOCI, KIIs, program records	0	0	CHISU completed baseline SOCI assessments of the national HIS in both Burkina Faso and Serbia. Follow up SOCI assessments will not be conducted for at least one year.
SO3: Increased demand and use of health data and information to address health priorities, gaps and challenges				
3.1: Number of countries engaged by CHISU to increase	KIIs, program records	2	2	In Burkina Faso, CHISU is working at the regional level with MOH for data use.

demand and use of health data and information to address health priorities, gaps and challenges				In Serbia, CHISU is working with national stakeholders for data use.
3.2: Number of countries engaged by CHISU to increase quality of HIS data	KIIs, program records	2	1	In Burkina Faso, CHISU is working at the regional level with MOH for data quality.
3.3: Number of CHISU supported data use processes implemented	KIIs, program records	TBD	3 BF-2 SB-1	In the SOCI area of *User/ stakeholder engagement*, CHISU supported defining a role matrix for the One Health electronic platform in Burkina Faso. In the SOCI area of *Data synthesis and communication*, CHISU supported analysis with ST One Health for action at the district level in Burkina Faso. In the SOCI area of *Data use availability strategy*, CHISU supported a data needs assessment in Serbia.
3.4: Number of CHISU supported data quality processes implemented	KIIs, program records	TBD	2 BF-2	In the SOCI area of *Data quality assurance and quality control*, CHISU carried out training on the WHO DQR application and on EBS in Burkina Faso.
3.5: Number and percent of CHISU supported key data use behaviors that improved	KIIs, program records	TBD	0	No fully documented improved behaviors in Y1.

3.6: Number and percent CHISU supported key data quality behaviors that improved	KIIs, program records	TBD	0	No fully documented improved behaviors in Y1.
3.7: Number and percent of CHISU supported countries or regions which advance in the data use component on the SOCI scale	Formal or informal SOCI, KIIs, program records	0	0	CHISU completed baseline SOCI assessments of the national HIS in both Burkina Faso and Serbia. Follow up SOCI assessments will not be conducted for at least one year.
3.8: Number and percent of CHISU supported countries or regions which advance in the data quality assurance component on the SOCI scale	Formal or informal SOCI, RDQA, RDQA+G, DQA, DQR	0	0	CHISU completed baseline SOCI assessments of the national HIS in both Burkina Faso and Serbia. Follow up SOCI assessments will not be conducted for at least one year.
SO 4: Strengthened organizational development of local non-governmental partners for sustained data use				
4.1: Number of local partners engaged by CHISU to improve practices and capacities that would enable them to receive direct assistance for HIS programming	program records, KIIs	1	0	No local partners have been engaged by CHISU.
4.2: Percent of CHISU-assisted organizations with improved performance [CBLD-9]	program records, KIIs	TBD	N/A	
4.3: Number and percent of CHISU supported local organizations that meet criteria to receive direct	NUPAS, KIIs, program records	0	N/A	

funding for HIS programming				
4.4: Number and percent of CHISU supported local partners who successfully applied for direct funding for HIS programming	program records, KIIs	0	N/A	
Cross-cutting				
5.1: Number of people trained in skills and concepts that address HIS governance and enabling environment, HIS interoperability, data quality, demand and use	program records	N/A	393 BF-313 SB-50 Core-30	In Burkina Faso, 313 were trained, 19% female and 81% male, as follows: ● 31 national staff received orientation to and participated in SOCI workshop ● 4 national, 9 regional and provincial, 32 service point, and 126 community agents trained in events-based surveillance in One Health ● 18 national stakeholders participated in workshop to install and customize the WHO DQR application in ENDOS ● 14 national stakeholders participated in workshop to define and configure key indicators in WHO DQR application in ENDOS ● 79 health facility staff were trained on entering data in ENDOS

				In Serbia, 50 stakeholders received orientation to and participated in SOCI workshops, 52% female and 48% male. At the global level, 30 CHISU partner and USAID staff were trained over 5 sessions on SOCI, 43% female and 57% male.
5.2: Number of newly adopted global goods that are used by stakeholders in CHISU supported countries or regions	program records, online surveys, KIIs	N/A	1	SOCI toolkit was newly used in Burkina Faso and Serbia
5.3: Number of global goods that are adjusted or augmented based on stakeholder feedback in CHISU supported countries or regions	program records, online surveys, KIIs	N/A	0	CHISU is supporting the use of global goods including SOCI, DHIS2, and RapidPro. However, in Y1, this use has not resulted in any adjustments or augmentation.
Data Security and Privacy				
6.1: Number and percent of CHISU supported countries where CHISU activities include data security	KIIs, program records	N/A	1	In Burkina Faso, CHISU incorporates data security into training of end-users for ENDOS and the One Health electronic platform.
6.2: Number of CHISU supported countries or regions which have financial, technical and human resources dedicated to data security	KIIs, program records	N/A	2	Burkina Faso documented SOCI scale of 3 on HIS policies, 3 on Policy compliance, and 4 on Data security exchange. Serbia documented SOCI scale of 2 on HIS policies, 2 on

				Policy compliance, and 3 on Data security exchange.
6.3: Number and percent of CHISU supported countries or regions with improved data security	KIIs, program records	N/A	0	No fully documented improvement in Y1.
Gender				
7.1: Number and percent of HIS products or events created or conducted with CHISU support, which include gender considerations	Program records	N/A	6 (32%) BF-1 SB-3 Core-2	At all three SOCI workshops in Serbia and one SOCI workshop in Burkina Faso, CHISU documented gender equity in HIS leadership participation as well as facilitated discussions about gender components captured by the SOCI toolkit. At global level, one webinar and one microblog commented on Gender equity and health outcomes.
Knowledge Management				
8.1: Number of knowledge-sharing products to which CHISU contributed	Program records	N/A	6 Core-6	CHISU produced five microblogs that summarized the content of the thought leadership webinars held previously, using telling and publishing KM approaches. In addition, CHISU contributed to the Navigator for Digital Health Capability Models that was published in September 2021, using a publishing KM approach.
8.2: Number of knowledge-sharing events in which CHISU participated	Program records	N/A	13 BF-2 SB-3	In Burkina Faso, CHISU held one 6-day SOCI workshop using asking and telling KM

			Core-8	approaches. In addition, CHISU held a "Live with CHISU" event about how the HIS is supporting the response to COVID-19 using telling and publishing KM approaches. In Serbia, CHISU facilitated three sessions orienting and presenting SOCI results at three different 2-day workshops to reach consensus using asking and telling KM approaches. At the global level, CHISU held five thought leadership webinars (see XB-007 for details), using a telling KM approach. CHISU hosted two sessions with the expert panel (see XB-003 for details) to consult and reach consensus on an updated definition for data demand, using asking, telling, and publishing KM approaches. Finally, CHISU held a public launch of the HPHC tool (see OHS-001 for details), using telling and publishing KM approaches.

Annex 4 - Communication products

Webinars, recordings available on [CHISU's YouTube channel](#):
- March 17, 2021 - HIS Leadership considerations: From community to national level for HIS progression
- April 14, 2021 - Gender equity and health outcomes: experiences with and opportunities for gender integration in health information systems
- May 12, 2021 - Standards-based Interoperability: Country examples of testing & data exchange
- May 26, 2021 - Launch of the High Performing Health Care (HPHC) Systems Tool
- June 9, 2021 - Digital systems and data quality
- July 14, 2021 - Opportunities for Local Organizations: How they can contribute to sustainable HIS strengthening in countries

Microblogs, available on [CHISU's website](#):
- June 3, 2021 - Launch of HPHC Systems tool
- June 14, 2021 - HIS Leadership Considerations: Where to Start?
- July 1, 2021 - Gender Equity and Health Outcomes: Beyond Just "Male" and "Female"
- July 16, 2021 - Opportunities for Local Organizations: How They Can Contribute to Sustainable HIS Strengthening in Countries
- July 23, 2021 - Standards-Based Interoperability of Systems: Use Cases
- August 6, 2021 - Digital Systems and Data Quality

Success stories
- [CHISU-supported Platform Improves Delivery of COVID-19 Test Results](#)
- [The Mysterious Case of the Dead Cattle and Fish](#)
- [One Health Interoperability Layer: The Data Exchange Enabler](#)

Launched
- CHISU Website [www.chisuprogram.org](#)
- [CHISU LinkedIn](#)
- [CHISU Twitter](#)
- [CHISU Facebook](#)

Annex 5 - Changes to approved work plans

During the year, Burkina Faso had significant work plan changes, MENA re-organized the tiers for the country landscape analyses, and two cross-bureau Activities had minor Y2 work plan changes to align with Y1 work plan and USAID requirements.

BF-001 - GHSA in Burkina Faso

Approved Task	Approved start date	Approved end date	Change	Justification
Task 1.1.2 HIS resource mapping to support implementation of the national HIS Strategy	Y1 Q3	Y1 Q4	Cancelled	This task was conducted by Cooper Smith for DSS
Task 1.2.1 Conduct a national SOCI-informed review of HMIS governance structures	Y1 Q1	Y1 Q2	Change in start and end date	Delays in start up and Covid priorities pushed the start up of this activity to the end of the year. Anticipated start date is Y1 Q4 and end date Y2 Q1.
Task 2.1.3 Deploy One Health electronic platform in focus region	Y1 Q2	Y1 Q3	Change in start and end date	This activity is dependent on the procurement of ICT supplies (2.1.1). Global supply delays have pushed delivery dates until August 2021. Anticipated start date is Y1 Q4 and end in Y2 Q1.
Task 2.1.4 Deploy ENDOS at facility level in CHISU supported regions	Y1 Q3	Y1 Q4	Change in start and end date	This activity is dependent on the procurement of ICT supplies (2.1.1). Global supply delays have pushed delivery dates until August 2021. Anticipated start date is Y1 Q4 and end in Y2 Q1.
			Change one region	Boucle du Mouhoun is already trained on ENDOS and the DSS suggested to train the Centre-South instead also because they were already equipped by MEASURE Evaluation.
Task 2.2.2 Support the	Y1 Q3	Y1 Q4	Change in	Delays in start up and Covid

finalization of the national health information systems architecture			start and end date	priorities pushed the start up of this activity to the end of the year. Anticipated start date is PY1Q4 and end date PY2Q1.
Task 3.1.1 Train staff in target districts to use the One Health disease surveillance electronic platform	Y1 Q1	Y1 Q2	Change in start end date	This activity is dependent on the procurement of ICT supplies (2.1.1). Global supply delays have pushed delivery dates until August 2021. Anticipated start date is PY1Q4 and end in PY2Q1.
Task 3.1.2 Conduct EBS training for community workers from all ministries involved in One Health	Y1 Q1	Y1 Q2	Change in start and end date	This activity is dependent on the procurement of ICT supplies (2.1.1). Global supply delays have pushed delivery dates until August 2021. Anticipated start date is PY1Q4 and end in PY2Q1.
Task 3.1.3 Conduct EBS supervision and data review activities in the targeted districts	Y1 Q2	Y1 Q3	Change in start and end date	This activity is dependent on the procurement of ICT supplies (2.1.1). Global supply delays have pushed delivery dates until August 2021. Anticipated start date is PY1Q4 and end in PY2Q1.

MENA-001 - Support to GHSA information systems in MENA

Approved Task	Approved start date	Approved end date	Change	Justification
Sub-Activity 1: Strengthened governance and enabling environment of HIS	Y1 Q3	Y2 Q2	Reorganise tiering of countries	Change from "Tier 1 = Egypt, Jordan, Yemen, Morocco and Tunisia; Tier 2 = Libya, Iraq, Syria and WB/Gaza; Tier 3 = Lebanon and Algeria" to "Tier 1 - Jordan, Egypt, WB/Gaza, Libya Tier 2 - Yemen, Tunisia, Syria;

				Tier 3- Algeria, Iraq, Morocco, Lebanon" to align work plan deliverables with new submission dates.

XB-001 - Start up Operations

Approved Task	Approved start date	Approved end date	Change	Justification
1.1: Set up MIS platform and pay first year annual hosting fees	Y1 Q4	Y1 Q4	Edit name of deliverable	Change from "MIS platform set up" to "Development and testing demo" to align Y2 work plan deliverable language with Y1 work plan.

XB-003 - Monitoring, evaluation and learning

Approved Task	Approved start date	Approved end date	Change	Justification
3.7: Develop and share semi-annual and annual reports	Y1 Q4	Y2 Q2	Change in start and end date	Change in timelines, for reports to align with USAID requirements. Annual report will be submitted in Y2 Q1, and semi-annual report in Y2 Q3.