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Uganda Health Supply Chain

Annual Report

October 1, 2017 to September 30, 2018

1. ACTIVITY INFORMATION

Activity Name:	**Uganda Health Supply Chain (UHSC)**
Project:	**Market Systems**
Activity Start Date and End Date:	**August 25, 2014–August 24, 2019**
Name of Prime Implementing Partner:	**Management Sciences for Health**
Agreement Number:	**AID-617-A-14-00007**
Name of Sub-awardees and Dollar Amounts:	**- Euro Health Group : $1,295,578** **- Makerere University College of Health Sciences: $1,289,249** **- Harvard Pilgrim Health Care, Inc.: $ 533,627** **- HEPS Coalition for Health Promotion and Social Development: $230,896** **- Imperial Health Sciences: $100,841**
Major Counterpart Organizations:	**Ministry of Health (Pharmacy Department, health programs, Division of Health Information), medical bureaus, Joint Medical Store, National Medical Store, US Government health implementing partners (RHITES-EC, RHITES-E, RHITES-SW, RHITES Acholi, RHITES Lango, IDI, TASO), local governments (Chief Administrative Officers and District Health Officers), and health sector organizations (UNICEF, UNFPA, Global Fund Country Coordination Mechanism)**
Geographic Coverage (districts. Also note any changes):	**89 districts**
Reporting Period:	**October 1, 2017 to September 30, 2018**

2. Acronyms and Abbreviations

AMELP	activity monitoring evaluation and learning plan
AMU	Appropriate Medicines Unit
ARV	antiretroviral
ART	antiretroviral therapy
CDCS	Country Development Cooperation Strategy
DHI	Division of Health Information
DHIS2	district health information system, version 2
EMHS	essential medicines and health supplies
GDP	good distribution practices
GPP	good pharmacy practices
HC	health center
HMIS	health management information system
iCCM	integrated community case management
IFS	Industry and Financial Systems (enterprise resource solution)
JMS	Joint Medical Store
MAPD	Malaria Action Program for Districts
MB MMS	medical bureau medicines management supervisors
M&E	monitoring and evaluation
MDR	multi-drug resistant
MMS	medicines management supervisors
MoH	Ministry of Health
MSH	Management Sciences for Health
MTC	medicines and therapeutic committee
NMS	National Medical Stores
PEPFAR	US President's Emergency Plan for AIDS Relief
PFM	pharmaceutical financial management
PIP	pharmaceutical information portal
PNFP	private not-for-profit
QPPU	Quantification and Procurement Planning Unit
RMNCAH	reproductive, maternal, newborn, child, and adolescent health
SPARS	supervision, performance assessment, recognition strategy
TB	tuberculosis
TLD	tenofovir disoproxil fumarate, lamivudine, and dolutegravir
TWOS	TB web-based ordering system
UHSC	Uganda Health Supply Chain [program]
USAID	US Agency for International Development
WAOS	web-based ARV ordering and reporting system

1.0 INTRODUCTION

1.1 Activity Description

UHSC is the lead technical assistance mechanism for supply chain management systems development in Uganda with funding from various sources including the US President's Emergency Plan for AIDS Relief (PEPFAR) and other USAID health streams (malaria, tuberculosis, family planning, etc.).

The goal of the Uganda Health Supply Chain activity is to contribute to improving the health status of the Ugandan population by increasing the availability, affordability, accessibility, and appropriate use of good quality essential medicines and health supplies (EMHS).

To achieve this goal, UHSC investments are focused on improving supply chain management practices and outcomes at all levels of the system by introducing new supply chain strategies, appropriate tools, policies, and procedures that improve efficiency and transparency, promote effective collaboration, and provide evidence to guide policy change.

To do so, UHSC applies four main strategies, which include developing informed policies and procedures, improving ability to manage systems and resources efficiently, building capacity of human resources, and generating information for decision-making. Those strategies are applied across five specific objectives:

1. National policies developed and implemented to improve EMHS affordability, availability, and accessibility in alignment to national health goals
2. Country systems to effectively and sustainably manage EMHS strengthened at all levels (public and private not-for profit [PNFP] sectors)
3. Increased availability and accountability of reproductive, maternal, newborn, child, and adolescent health (RMNCAH) commodities among priority populations
4. Supporting scale up of Uganda's HIV/AID response
5. Strengthening the national supply chain for outbreak and epidemic preparedness

By implementing the four different approaches that combine policy, regulatory, managerial, financial, and educational interventions with routine performance monitoring, UHSC and other EMHS stakeholders are transforming the pharmaceutical systems and practices in Uganda. To ensure sustainability of these achievements, Ministry of Health (MoH) staff from the Pharmacy Department, technical programs, district-level health managers and providers, are an integral part of designing and implementing UHSC activities.

1.2 Performance Analysis to Date

USAID/Uganda Performance Analysis Table											
CDCS Links	**Results**	**Disaggregation**	**Baseline data Value**	**FY 2018 Annual target**	**FY 2018 Annual Actual**	**Q1**	**Q2**	**Q3**	**Q4**	**Performance to date (%)**	**Comment**
Results Area 1: National policies developed and implemented to improve EMHS affordability, availability and accessibility in alignment to national health goals											
IR 3.4	**Numbers of policies completing each process/step of development as a result of USG assistance.**	**Analysis**	**-**	**5**	**6**				**6**	**120%**	**Annual indicator on track**
		Stakeholder consultation	**-**	**5**	**6**				**6**	**120%**	
		Drafting	**-**	**5**	**5**				**5**	**100%**	
		Approval	**-**	**4**	**4**				**4**	**100%**	
		Implementation	**-**	**4**	**3**				**3**	**75%**	
Result Area 2: Country systems to effectively and sustainably manage EMHS strengthened at all levels in public and PNFP sector											
IR 3.4	**Percentage availability of supplies for a basket of 41 medicines and health supplies in last 3 months at National Medical Stores (NMS) and Joint Medical Store (JMS)**	**EMHS**	**-**	**75%**	**87.0%**	**79%**	**92%**	**88%**	**90%**	**116%**	
		antiretroviral (ARVs)	**-**	**75%**	**63.3%**	**65%**	**60%**	**65%**	**65%**	**84%**	
		TB	**-**	**75%**	**61.3%**	**67%**	**67%**	**33%**	**50%**	**82%**	
		LAB	**-**	**75%**	**64.7%**	**57%**	**67%**	**64%**	**70%**	**86%**	
		RMNCAH	**-**	**75%**	**60.7%**	**78%**	**48%**	**44%**	**56%**	**81%**	

USAID/Uganda Performance Analysis Table											
CDCS Links	**Results**	**Disaggregation**	**Baseline data Value**	**FY 2018 Annual target**	**FY 2018 Annual Actual**	**Q1**	**Q2**	**Q3**	**Q4**	**Performance to date (%)**	**Comment**
IR 3.4	Average percentage availability of a basket of 41 commodities based on all reporting facilities in the previous quarter	EMHS	-	89%	83.9%	91%	85%	81%	79%	94%	
		ARVs	-	89%	87.7%	90%	86%	87%	88%	99%	
		TB	-	89%	83.5%	89%	90%	79%	76%	94%	
		LAB		89%	80.4%	71%	84%	83%	84%	90%	
		RMNCH	-	89%	83.9%	88%	92%	79%	77%	94%	
Sub-IR 2.1: Central level systems for EMHS management enhanced											
IR 3.4	Number of wholesalers licensed according to the new Good Dispensing Practice (GDP) guidelines developed		0	350	484		445		484	138%	
IR 3.4	Number of government and PNFP health facility pharmacies inspected for Good Pharmaceutical Practices (GPP)	Government	797	1500	1560		1412		1560	104%	
		PNFP	142	500	277		244		277	55%	
IR 3.4	Percentage of government and PNFP health facility pharmacies certified according to GPP	Government	54%	60%	0.59		56%		59%	98%	
		PNFP	59%	65%	0.65		63%		65%	100%	

USAID/Uganda Performance Analysis Table											
CDCS Links	**Results**	**Disaggregation**	**Baseline data Value**	**FY 2018 Annual target**	**FY 2018 Annual Actual**	**Q1**	**Q2**	**Q3**	**Q4**	**Performance to date (%)**	**Comment**
IR 3.4	Number of facilities with a computerized functional logistics management information system (total number of hospitals/health center [HC]4)	Government	28	45	91				91	202%	With increased roll out of the revised RxSolution and further scale up of electronic ordering to JMS we expect the number of PNFPs to increase.
		PNFP	15	40	10				10	25%	
IR 3.4	Number of health workers trained in electronic stock management	Gender	-	662	541	60			80	82%	
Sub-IR: 2.2 District level systems for EMHS management enhanced											
IR 3.4	Number of individuals trained to conduct supply chain, inventory management, and supportive supervision.	Supportive supervision	0	455	364	24	25	24		80%	Achieved Target
		Medicines management	0	150	173				27	115%	
		pharmaceutical financial management (PFM)	0	325	351	50	26		30	108%	
IR 3.4	Percentage of facilities with a supervision, performance assessment and recognition strategy (SPARS) score of 20 and above	Government	41%	60%	69%	61%	63%	66%	69%	115%	Achieved target
		PNFP	35%	50%	67%	57%	61%	66%	67%	134%	
IR 3.4		Hospitals	63%	50%	27%	21%	29%	22%	27%	54%	Performance still low because

USAID/Uganda Performance Analysis Table											
CDCS Links	**Results**	**Disaggregation**	**Baseline data Value**	**FY 2018 Annual target**	**FY 2018 Annual Actual**	**Q1**	**Q2**	**Q3**	**Q4**	**Performance to date (%)**	**Comment**
	Percentage of order based facilities with a PFM score of 80% and above	**HC4**	**51%**	**50%**	**30%**	**28%**	**24%**	**25%**	**30%**	**60%**	**Facilities have only received visit 1 and 2 but with additional visits performance expected to improve**
IR 3.4	**Average percentage of cases of priority diseases treated in compliance with standard treatment guidelines in reporting period**	**Malaria**	**70%**	**70%**	**90%**	**86%**	**87%**	**88%**	**90%**	**129%**	**Achieved Target**
		Upper respiratory tract infection	**41%**	**70%**	**58%**	**55%**	**52%**	**59%**	**58%**	**83%**	
		Diarrhea	**45%**	**70%**	**70%**	**66%**	**68%**	**70%**	**70%**	**100%**	**Achieved Target**
Result Area 3: Increased availability and accountability of RMNCH commodities among priority populations											
IR 2.1	**Percentage of health facilities submitting a quarterly integrated community case management (iCCM) report**		**10%**	**40%**	**10.5%**	**10%**	**10%**	**11%**	**11%**	**26%**	
Sub-IR 2.1.2	**Average stock out rate of contraceptive commodities at family planning service delivery points**	**Depo-Provera**		**0%**	**38%**				**38%**		**Annual indicator**
		Implanon		**0%**	**53%**				**53%**		**Annual indicator**
Result Area 4: Supporting scale up of Uganda's HIV/AIDS response											
IR 1.2 IR 1.3	**The percentage of antiretroviral therapy**	**Government**	**0%**	**50%**	**49%**	**8%**	**26%**	**34%**	**49%**	**98%**	

USAID/Uganda Performance Analysis Table											
CDCS Links	**Results**	**Disaggregation**	**Baseline data Value**	**FY 2018 Annual target**	**FY 2018 Annual Actual**	**Q1**	**Q2**	**Q3**	**Q4**	**Performance to date (%)**	**Comment**
	(ART) sites initiated on ART SPARS	**PNFP**	**0%**	**50%**	**11%**	**1%**	**4%**	**7%**	**11%**	**22%**	
IR 1.2 IR 1.3	**Percentage of facilities scoring at least 80% of the maximum ART SPARS score**	**Government**	**0%**	**50%**	**44%**	**12%**	**19%**	**33%**	**44%**	**87%**	
		PNFP	**0%**	**50%**	**28%**	**1%**	**7%**	**19%**	**28%**	**57%**	
IR 1.2 IR 1.3	**Average percentage availability of a basket of ART commodities in the last three months**	**Government**	**90%**	**93%**	**76%**	**78%**	**69%**	**77%**	**79%**	**81%**	
		PNFP	**90%**	**93%**	**85%**	**93%**	**71%**	**94%**	**84%**	**92%**	
IR 1.2 IR 1.3	**Percentage of facilities with accurate orders**	**Government**	**0%**	**50%**	**26%**	**9%**	**16%**	**31%**	**50%**	**53%**	
		PNFP	**0%**	**50%**	**30%**	**20%**	**17%**	**36%**	**47%**	**60%**	
IR 1.2 IR 1.3	**Percentage of facilities with traceability of first line ARVs**	**Government**	**0%**	**50%**	**24%**	**18%**	**15%**	**31%**	**31%**	**48%**	
		PNFP	**0%**	**50%**	**29%**	**20%**	**7%**	**55%**	**33%**	**58%**	
Result 5: Strengthen supply chain systems to respond to public health emergencies											
IR 5.1.1 Establish a national stockpile strategy											
	A national stockpile strategy of medical countermeasures for use during a public health emergency in place										**Y5 new indictors**
5.1.2 Establish a national public health emergencies supply chain coordination mechanism											

USAID/Uganda Performance Analysis Table											
CDCS Links	**Results**	**Disaggregation**	**Baseline data Value**	**FY 2018 Annual target**	**FY 2018 Annual Actual**	**Q1**	**Q2**	**Q3**	**Q4**	**Performance to date (%)**	**Comment**
	Number of procedures and memorandum of understanding for transferring (sending and receiving) and coordinating the supply of medical countermeasures during public health emergencies										**Y5 new indictors**
IR5.1.3 Adapt logistics management information systems for emergency response											
	Presence of an emergency electronic logistics management information system										**Y5 new indictors**
IR5.1.4 strengthen capacity of supply chain systems and actors for public health emergency preparedness											
	Number of individuals trained in supply chain related to sending and receiving medical countermeasures during public health emergency										**Y5 new indictors**
IR 5.2 Conduct simulations to test the Global Health Security Agenda (GHSA) frame work adapted for Uganda											
	Presence of simulation plan and schedule										**Y5 new indictors**

USAID/Uganda Performance Analysis Table											
CDCS Links	**Results**	**Disaggregation**	**Baseline data Value**	**FY 2018 Annual target**	**FY 2018 Annual Actual**	**Q1**	**Q2**	**Q3**	**Q4**	**Performance to date (%)**	**Comment**
	Number of simulations conducted to test the GHSA framework										**Y5 new indictors**
Context, President's Malaria Initiative and PEPFAR performance indicator table											
	Number of artemisinin-based combination therapy (ACT) treatments purchased with USG funds			**1,600,000**	**2,617,899**				**2,617,899**	**164%**	**Annual indicator**
	Number of ACT treatments purchased in any fiscal year with USG funds that were distributed in this reported fiscal year.			**1,600,000**	**1,070,695**				**1,070,695**	**67%**	**Annual indicator**
	Number of rapid diagnostic tests (RDTs) purchased with USG funds that were distributed to health facilities			**2,000,000**	**1,972,000**				**1,972,000**	**99%**	**Annual indicator**
	Number of malaria RDTs purchased with USG funds			**2,000,000**	**3,562,125**				**3,562,125**	**178%**	**Annual indicator**

USAID/Uganda Performance Analysis Table											
CDCS Links	**Results**	**Disaggregation**	**Baseline data Value**	**FY 2018 Annual target**	**FY 2018 Annual Actual**	**Q1**	**Q2**	**Q3**	**Q4**	**Performance to date (%)**	**Comment**
	Number of insecticide treated nets purchased with USG funds			**1,575,000**	**2,000,000**					**127%**	
	Number of insecticide treated nets purchased with USG funds that were distributed			**1,575,000**	**1,643,411**					**104%**	

1.3 Contribution to CDCS Results Framework Progress Narrative

In Year 4, UHSC continued to contribute to making the country's key systems more accountable and responsive to Uganda's development needs. We contributed to the Country Development Cooperation Strategy (CDCS) intermediate result 3.3 by strengthening health and pharmaceutical management systems in a way that increases access to lifesaving medicines and other health commodities.

Our policy work directly contributed to IR 3.4 by creating an enabling environment that enhances the pharmaceutical sector regulatory framework and financial and technical management, oversight and monitoring of the supply chain system at all levels.

Our progress in increasing access to RMNCAH commodities, particularly at the community level, contributed to the achievement of CDCS Result 2. Our work to improve access and availability of commodities for healthy reproductive practices for women of all ages and to treat most common child diseases directly supports IR 2.1.

In the last quarter of Year 4, in addition to supporting scale up of Uganda's response to the HIV epidemic, we began collaborating with GHSA stakeholders to strengthen the national supply chain for outbreaks and epidemics, which directly contributes to CDCS intermediate results 1.2 and 1.3, which aim to increase national capacity to manage risk and enhance prevention and treatment of HIV, malaria, and other epidemics.

2 ACTIVITY IMPLEMENTATION PROGRESS

Annex 10.4 contains a detailed narrative of all of our Year 4 activities.

2.1 Summary of Implementation Status

Activity Result Areas	**Summary of planned activities in work plan for the reporting year**	**Actual key activities/tasks conducted during the year**	**Link to CDCS** [1]
1.1. Policies that improve affordability, availability, and accessibility of EMHS	Support the Pharmacy Department to conduct the mid-term review of the *National Pharmaceutical Sector Strategic Plan* (NPSSP) III	UHSC analyzed pharmaceutical sector performance data and facilitated three task force meetings and two national stakeholder meetings to assess progress in achieving NPSSP III objectives	IR 3.4
	Obtain consensus within the MoH and wider health sector on the adoption of a needs-based formula to allocate EMHS resources to health facilities	Our evidence and advocacy resulted in the MoH setting up an Equity Task Force to correct the inequities with the formula used since 2005 for allocating EMHS funds to government facilities. We provided technical assistance to develop a new allocation formula which was endorsed in a stakeholders meeting	IR 3.4
	Finalize implementation of the push-pull pilot study in 50 facilities in 10 districts and disseminate the results in a national meeting	We completed and evaluated the pilot study and disseminated results to stakeholders. Findings indicated that lower-level facilities can produce accurate, timely orders and optimize their EMHS budgets, and NMS has the potential to handle the expected increased work load from the transition	IR 3.4
	Collaborate with the MoH and partners to ensure issues of medicines affordability are adequately addressed in national plans	With WHO and MoH, we analyzed data from the 2016/17 Uganda National Household Survey to estimate the effect of direct household out-of-pocket payments on the population. We disseminated results from our health services cost study to guide the selection of an affordable medicines benefit package	IR 3.4

[1] Which IRs and Sub-IRs in CDCS 2016-2021 does the activity results contribute to?

Activity Result Areas	Summary of planned activities in work plan for the reporting year	Actual key activities/tasks conducted during the year	Link to CDCS [1]
	Work with MoH Department of Planning and Policy to support the development of guidelines for cost recovery as Uganda prepares to implement the NHIS and results-based financing	We drafted cost recovery guidelines for PNFP facilities in consultation with the medical bureaus	IR 3.4
	Work with the Pharmacy Department to draft a concept paper on access to high cost medicines and obtain endorsement from the Medicines and Procurement Management Technical Working Group	We drafted and shared a concept strategy with the MoH on how to ensure access to high cost medicines for non-communicable diseases, chronic illnesses, and neglected and rare conditions. Further steps have been cancelled because of lack of funds	IR 3.4
1.2. Pharmaceutical sector research and advocacy	Finalize three articles and submit to peer-reviewed journals	We published two articles in the *Journal of Pharmaceutical Policy and Practice* and submitted a third article for peer review; we also contributed a chapter in a book about equitable access to high-cost pharmaceuticals	IR 3.4
	Conduct impact studies to measure the outcomes and effectiveness of four UHSC-supported interventions	We completed four impact studies to measure effectiveness of our pilot interventions: – Push-pull transition pilot – TB SPARS – Lab SPARS – Community supply chain tools and procedures Results of the three studies were disseminated in national stakeholder meetings	IR 3.4
2.1. Central supply chain management systems strengthened 2.1.1 Joint Medical Store	Support the smooth implementation of the primary health care EMHS credit line	UHSC seconded a financial analyst and logistics specialist to assist JMS implementation of the credit line. First year performance of credit line met or exceeded first year targets: 100% of the 7.4 billion shilling funding was used, 97% of facilities submitted orders on time, and JMS fulfilled 99% of the items ordered	IR 3.4
	Train medical bureau medicines management supervisors (MB MMS) and JMS technical representatives in PFM	We trained 46 MB MMS and JMS technical representatives on PFM and procurement planning, so they can provide	IR 3.4

Activity Result Areas	Summary of planned activities in work plan for the reporting year	Actual key activities/tasks conducted during the year	Link to CDCS [1]
		on-job support to PNFP facility staff on EMHS credit line	
	Review the implementation status of actions recommended from previous UHSC-funded technical assessments/assistance activities	We completed a review of JMS implementation of 60 recommendations made by three UHSC consultants in 2014-2015 to strengthen the functionality of the IFS (enterprise resource solution) and distribution services. JMS has implemented 83% of the recommendations and clearly made good use of UHSC support to improve their efficiency and financial performance	IR 3.4
2.1.2 National Drug Authority	Continue co-funding GPP inspections to expand coverage of the public and PNFP health facilities. Transition the server with the GPP database to National Drug Authority (NDA) and train NDA staff to manage and maintain the server and GPP/GDP databases	With our support, NDA has made 1,837 GPP facility inspections to date, including at 137 high-volume ART sites. The servers were transferred to NDA and the system is being managed entirely by NDA staff	IR 3.4
	Support NDA to roll-out the second phase of GDP standards in preparation for 2018 licensing of approximately 400 pharmaceutical wholesalers	With UHSC support, NDA implemented Phase 2 GDP standards and 445 wholesalers received their 2018 license. The GDP inspection tool was incorporated into the NDA inspection manual	IR 3.4
2.1.3 Private not-for-profit (PNFP) sector	Support the medical bureaus to strengthen their implementation of essential medicines (EM) SPARS in the PNFP sector	99% of PNFP facilities have received at least one EM SPARS visit, 69% have had five or more visits and 62% of the facilities have achieved the target score of 20	IR 3.4
	Support roll out of PFM in PNFP sector	We finalized the PFM cost recovery module and training materials and trained 44 MB MMS and JMS staff to scale-up PFM and help credit line facilities do their procurement planning. To date, 148 (25%) of PNFP facilities have received one or more PFM visits.	IR 3.4
2.1.4 Pharmaceutical Information Portal (PIP)	Build capacity of MoH Division of Health Information (DHI) staff to operate, manage and maintain the PIP and enhance information technology infrastructure	We trained the DHI team on the operation and maintenance of the system and developed PIP system administration manuals. We initiated migration	IR 3.4

Activity Result Areas	Summary of planned activities in work plan for the reporting year	Actual key activities/tasks conducted during the year	Link to CDCS [1]
		of the PIP to the health.go.ug domain, and procured and installed 60 high-capacity back-up power batteries for the MoH server room	
	Strengthen use of PIP data at national and district levels	We developed health facility and central warehouse stock status reports and dashboards in the PIP, including the new weekly ART stock status report. We set-up real-time synchronization of data from RxSolution sites so reports can be automatically uploaded into the PIP. To enhance data accuracy, we built in data quality validations and entry checks within the electronic SPARS forms	IR 3.4
2.1.5 Pharmacy Department and other MoH technical programs	Support the collection of annual indicator data to measure progress of the Pharmaceutical Sector Strategic Plan and continue to support data quality improvements and analysis of health management information system (HMIS) supply chain related-data	Our UHSC staff seconded to the Pharmacy Department's monitoring ad evaluation (M&E) unit finalized the FY 2015/16 and 2016/17 annual pharmaceutical sector reports and produced bimonthly national stock status reports from HMIS 105 data; we were very involved in the MoH review of HMIS logistics management records and reporting tools; our standard operating procedures and data reviews on the HMIS 105 commodity section increased the completion rate from 51% in October-November 2017 to 71% in June-July 2018	IR 3.4
	The Quantification and Procurement Planning Unit (QPPU) will conduct monthly Commodity Security Group meetings and produce bimonthly national bimonthly stock status reports throughout the year	Our QPPU seconded staff held 10 monthly Commodity Security Group meetings and produced national stock status reports as planned	IR 3.4
	Support QPPU to work with MoH programs and stakeholders to conduct and update quantifications, supply plans and funding gap analyses for malaria,	Our team updated national quantifications, supply plans, and gap analyses for ARVs, opportunistic infection medicines, laboratory commodities, anti-TB medicines, and antimalarial	IR 3.4

Activity Result Areas	Summary of planned activities in work plan for the reporting year	Actual key activities/tasks conducted during the year	Link to CDCS [1]
	TB, ART, laboratory and RMHCAH commodities.	commodities. They also led a national quantification exercise for EMHS needed to manage severe acute malnutrition and common non-communicable diseases	
	Finalize TB SPARS electronic reporting tool, support the training of the 20 pilot district TB SPARS supervisors, and fund bimonthly TB SPARS facility visits to provide oversight of TB diagnostic and treatment services	With the National Tuberculosis and Leprosy Program (NTLP) we finalized the TB SPARS e-reporting system, trained 20 supervisors, and funded 500 TB SPARS facility visits; 83% of the 190 pilot facilities have been visited at least 3 times. At pilot end, the average facility score was 21.1 of the target of 25	IR 3.4
	Train district biostatisticians and other key stakeholders on the TB web-based ordering system (TWOS), provide follow-up support to users, and prepare and disseminate bimonthly TWOS reports. Plan to transition the management and maintenance of TWOS to NTLP during the year	We trained all 122 biostatisticians on the use of TWOS plus 14 regional referral hospital logisticians, 20 partner logistics advisors, 5 regional TB supervisors, and 25 NMS customer care staff. The first bimonthly TWOS report was issued in Q16. The system will be transitioned to NTLP in Year 5	IR 3.4
	Fund and disseminate results of two end-user verification (EUV) surveys (# 7 and 8)	We conducted two EUV surveys and disseminated results to President's Malaria Initiative and other stakeholders	IR 1.2, IR 1.3
	Complete development of the electronic Lab SPARS reporting system, train all Lab SPARS supervisors, supply motorcycles, computers and modems and support implementation of Lab SPARS in 20 pilot districts	We implemented the e-Lab SPARS reporting system, trained and equipped 42 Lab SPARS supervisors, and supported 1,258 facility supervisory visits; 51% of the 292 pilot facilities have been visited at least 5 times. The average facility performance score improved from 49% at baseline 79% at 5th visit	IR 3.4
	Train Uganda National Health Laboratory Services staff on Lab SPARS system and integrate system into the laboratory logistics management information system	Lab SPARS tools have been integrated into the logistics management information system. We will train Uganda National Health Laboratory Services staff on the system in Year 5	IR 3.4

Activity Result Areas	Summary of planned activities in work plan for the reporting year	Actual key activities/tasks conducted during the year	Link to CDCS [1]
2.2 District-level capacity for EMHS management and utilization strengthened 2.2.1 District-level basic package for EMHS management	Support routine EM SPARS facility visits in government facilities in the 84 UHSC-focus districts. Train 75 new and replacement MMS; finalize replacement of all old MMS motorbikes; do final distribution of recognition items to well-performing MMS and facilities	We trained 25 new MMS, funded 4,021 EM SPARS supervision visits to 2,058 facilities in the 89 districts; 94% of government facilities have received at least five EM SPARS visits, and 94% of the facilities have achieved the desired SPARS score of 20. We piloted a new integrated supervision and mentorship approach in four regional and national referral hospitals	IR 3.4
2.2.2. SPARS implementing partners in 38 districts	Plan the transition of the district level management interventions to district-based implementing partners	UHSC held 4 monthly webinar teleconferences and 3 coordination meetings with partner logistics advisors to share current operational policies and procedures so approaches are standardized. Following a preparedness assessment, we finalized joint work plans and budgets with 9 partners to take over support for district medicine management interventions	IR 3.4
2.2.3 SPARS efficiency, effectiveness and sustainability	Hold eight regional review meetings with district health officers, MMS, regional pharmacists to discuss and plan how district SPARS activities can be maintained with support of implementing partners	UHSC held eight regional review meetings to discuss the strategy for transitioning and sustaining support for medicines management interventions; participants included district health officers, chief administrative officers, MMS, and regional implementing partners	IR 3.4
2.2.4. PFM in government facilities	Train all MMS in PFM and support rollout of PFM facility supervision visits; print PFM materials and develop PFM roll-out guidelines	To date, we have trained 295 MMS on PFM and funded 3,707 PFM supervision visits in 1,351 health facilities in 89 districts; 141 (10%) of the facilities have achieved the target 80% score. We drafted PFM guidelines to support transition to other district partners	IR 3.4
	Support use of PFM information at district level	We developed the PFM e-reporting system with data check validations; this has greatly improved the quality of PFM data submitted. PFM reports are generated and	IR 3.4

Activity Result Areas	Summary of planned activities in work plan for the reporting year	Actual key activities/tasks conducted during the year	Link to CDCS [1]
		shared with district health officials and MMS in regional review meetings and district monthly meetings	
2.2.5 Appropriate medicines use	Support the Appropriate Medicines Use (AMU) unit to strengthen and coordinate the AMU advisory group	UHSC staff at the AMU unit and the Pharmacy Department obtained MoH approval to appoint the AMU advisory group. Our staff led the antimicrobial consumption and use steering group and contributed to the development the national antimicrobial resistance national action plan	IR 3.4
	Distribute the *Uganda Clinical Guidelines 2016* and *Essential Medicines and Health Supplies List of Uganda 2016* to all facilities	We printed and distributed to all public and PNFP facilities 40,000 copies of the *Uganda Clinical Guidelines 2016* and 10,000 copies of the *Essential Medicines and Health Supplies List of Uganda 2016*	IR 3.4
	Train staff of pilot hospital medicines and therapeutics committees (MTCs) and assist them to carry out AMU research in their facilities	We trained 114 staff of 7 hospital MTCs on AMU principles and investigation methods. We held a national stakeholders meeting to present results of MTC interventions and our draft national MTC guidelines on how to scale up support for MTCs	IR 3.4
	Collect and analyze consumption data of artemisinin-based combination therapies and artesunate to determine possible misuse of resources by facilities	UHSC conducted a study to triangulate data on reported malaria cases and commodity use which revealed discrepancies between commodity consumption and malaria cases that could be due to leakage or wastage. Data from a follow-up field study will be analyzed and presented in Year 5	IR 1.2, IR 1.3
IR 2.3 Country capacity to manage EMHS enhanced through pre-service education	Provide computers to four pharmacy and pharmacy technician schools to support preservice training of staff and students on RxSolution	In Q14, we provided 17 computers with accessories to four pharmacy training schools in Makerere University, Mbarara University, Kampala International University, Uganda Institute of Allied Health and Management Sciences	IR 3.4

Activity Result Areas	Summary of planned activities in work plan for the reporting year	Actual key activities/tasks conducted during the year	Link to CDCS [1]
IR 3.1 Increased access to RMNCAH commodities	Complete pilot of standardized community supply chain management procedures and tools and conduct end-line assessment	In 5 pilot districts, we trained 18 national trainers, 539 community health workers, 52 health facility staff members, and 28 district health team members to implement the standardized community logistics management tools and procedures. Results of the pilot assessment were disseminated in a stakeholder meeting. Scale up began in one district, 16 more planned.	IR 2, IR 2.1
	Finalize the community SCM training materials and tools, develop an implementation manual, and integrate the SCM record and report forms into the HMIS during the 2019 revision exercise	UHSC drafted the community SCM training module to include in the iCCM curriculum. The MoH approved the integration of the community SCM tools in the HMIS and donor partners have adopted the tools and procedures for use in iCCM districts	IR 2, IR 2.1
	Support the development of a summary report with key community health logistics data indicators for central level use	As a result of UHSC efforts, facility iCCM commodity stock status reports are included in all iCCM technical working group meetings. We conducted a data quality assessment on RMNCAH facility data reported in HMIS 105 reports (45% are complete and accurate); we prepared 4 USAID procurement planning and monitoring reports for contraceptives	IR 2, IR 2.1
	Support procurement and supply management for scale up of iCCM program	During the year, UHSC assisted the MoH and donor partners in monitoring and coordinating the supply planning and distribution of iCCM commodities to facilities in 34 districts	IR 2, IR 2.1
IR 4.1 Strengthen national capacity to manage HIV/AIDS commodities	Support the rollout of tenofovir/lamivudine/dolutegravir (TLD) as a new first-line treatment regimen	Our QPPU staff quantified national TLD requirements, developed the transition plan and contributed to the ART guidelines addendum for TLD. In Year 4, UHSC helped the MoH to mobilize more than $80 million to fill the public sector funding gap for HIV commodities in 2018-2019	IR 1.2, IR 1.3

Activity Result Areas	Summary of planned activities in work plan for the reporting year	Actual key activities/tasks conducted during the year	Link to CDCS [1]
	Support NMS to develop an appropriate fee schedule for services	We funded two NMS staff members to participate in a central warehouse study tour in Lesotho and South Africa	IR 1.2, IR 1.3
	Continue supporting the smooth functioning of the web-based antiretroviral ordering and reporting system (WAOS) and data quality improvements	UHSC trained all 122 biostatisticians on the use of the upgraded WAOS form	IR 1.2, IR 1.3
IR 4.2 Strengthen district and health facility capacity to manage HIV/AIDS commodities	Roll out ART SPARS to all 118 districts, prioritizing districts with the 63 high-volume ART facilities	319 MMS (71%) have been trained in ART SPARS, and 438 facilities have been supervised at least once. The average facility performance score improved from 12% at baseline visit to average of 52% at visit 4; 27% have achieved the target 80% performance score	IR 1.2, IR 1.3
	Develop and implement tools and procedures to improve stock visibility and monitoring of ART commodities at facility level	We developed and implemented two new tools and a third is under development: – Bimonthly order delivery analysis – weekly MMS ART stock status report – Instant notification of stock outs and overstocks using Mtrac We printed and distributed 5,000 revised dispensing logs, 3,000 supervision report books, 2,000 supervision tool books, 2,600 plastic spider graphs, stock cards, and stock books. ART registers were procured and are being distributed	IR 1.2, IR 1.3
4.2.2 Scale-up of facility electronic pharmaceutical logistics management system	Roll out RxSolution in 63 high priority facilities	We have installed RxSolution in 60 of the 63 priority ART sites. The remaining three sites are military hospitals, and we could not get clearance for the installation	IR 1.2, IR 1.3
	Improve RxSolution data quality and use at all levels	We completed a standardized product catalog of 1,000+ items, revised RxSolution reports to support facility work requirements, and setup PIP to automatically upload facility stock status reports from	IR 1.2, IR 1.3

Activity Result Areas	Summary of planned activities in work plan for the reporting year	Actual key activities/tasks conducted during the year	Link to CDCS [1]
		RxSolution. We also successfully tested electronic ordering between 10 PNFP facilities with RxSolution and JMS and trained 27 clinicians from 5 hospitals on the RxSolution dispensing module in preparation for piloting of electronic dispensing	
	Expand the role and capacity of counterparts to support and supervise the use of RxSolution	In collaboration with implementing partners, we trained 107 people as RxSolution trainers and 226 health facility staff. We developed an RxSolution eLearning course for partners	IR 1.2, IR 1.3
IR 4.3 Expand and improve storage facilities in selected sites	Complete the construction of 26 storage units	Although we planned to construct 26 sites, we could only initiate construction in 5 sites because the procurement process and obtaining USAID approvals took much longer than we anticipated	IR 1.2, IR 1.3
IR 5 Strengthen national supply chain for outbreak and epidemic preparedness	Respond to USAID request to expand UHSC's original scope of work and revise Year 4 work plan to include this new result area	USAID approved our expanded scope of work at the end of June. We finalized Y4 and Y5 work plans with input from the One Health Platform members. As a new member of the national Ebola task force, we successfully advocated to establish a logistics subcommittee. We assisted in quantifying supplies needed by the country in preparedness and response to the Ebola outbreak in the Democratic Republic of Congo	IR 1.2, IR 1.3

2.3 Progress Narrative

We successfully completed our Year 4 priority work activities and expanded our original scope of work at USAID's request to include two new result areas (4 and 5).

In the policy arena, after almost two years of trying, we succeeded in getting the MoH to officially establish a task force to make decisions about changing the outdated and inequitable formula for allocating funds for EMHS to government health facilities. At a meeting in September 2018, participants agreed on the elements of a new more equitable formula. The next steps with the MoH task force will be a priority in the coming months. Based on the promising results of the complementary 'push-pull' transition pilot study, many other stakeholders have reached consensus on a needs-based approach to supplying EMHS.

The first year performance of the Government of Uganda-funded EMHS credit line for PNFP facilities at JMS has been outstanding. Set up and implemented with UHSC assistance, JMS supplied 7.5 billion shillings' worth of EMHS to 535 facilities ensuring all have a basic supply of vital health commodities. JMS exceeded the annual targets by fulfilling 99% of ordered items and delivering 97% of orders on time. Facilities, many of whom had never ordered by a set schedule, also stepped up with 97% submitting their orders on time to JMS. This smooth implementation is the result of 12 months of detailed planning and continued collaboration of a working group made up of members from JMS, MoH, medical bureaus, UHSC, and the Kampala City Council Authority.

We wrapped up five important facility-level pilot interventions that will inform future pharmaceutical system strengthening policies and efforts. In collaboration with our Harvard partner, impact studies were completed for three of the interventions ('push-pull' transition, Lab SPARS, TB SPARS) and an assessment of the pilot study of community supply chain management tools. The results of the evaluations were presented in different meetings to several hundred national and district stakeholders for discussion and scale-up planning. Scale up of the community supply chain management tools has already begun in one district and is planned for another 16 iCCM districts.

Although we experienced some delays to be able to amend the contract of our training provider, Makerere University, we nevertheless quickly scaled up our district-level ART SPARS and PFM interventions in government health facilities. The 148 MMS trained on ART SPARS have made one or more supervisory visits to 663 of the 830 ART sites (77%), and already 27% of the supervised facilities have achieved the target score of 80%, which is a major improvement compared to the average facility score of less than 12% at baseline. The better staff knowledge and practices will positively affect the availability of and accountability for HIV commodities as well as the quality of data reported for central monitoring and planning. For PFM, we exceeded all of our annual targets: PFM has been implemented in 1,351 health facilities in 89 UHSC districts, including 170 of the 178 priority high-level facilities. So far, 141 of the supervised facilities (10%) have achieved the target 80% PFM score. The greatest improvements were in tracking of budget allocations and expenditures and the ordering process.

We made a concerted push this year to expand the availability, visibility, quality, and use of supply chain data at all levels with the aim of improving accountability and decision-making. For example, because of our new reports and dashboards in PIP, users can now get weekly updates on ART stock in about 200 facilities or monthly updates on key tracer EMHS in stock at central warehouses.

Users can also generate their own tailored reports with EM SPARS and PFM data. Because of these new features, use of the PIP more than doubled this year to more than 25,000, with the greatest increase by MMS. Our team was also involved in the MoH review of supply chain-related HMIS reports and records to ensure that more and better data is available for quantification and supply planning exercises and monitoring of pharmaceutical sector performance.

Following our training of 114 staff of seven hospital MTCs on AMU principles and investigation methods, the MTCs were able to carry out their own medicines use studies and develop and implement interventions to correct inappropriate prescribing practices in the facilities. USAID selected our success story on one MTC's major reduction of the unnecessary prescribing of antimalarial medicines for publication. We presented the results of the MTC intervention in a national stakeholders meeting.

We completed the handover of the e-GPP and e-GDP servers and databases to NDA. The NDA staff are now managing them on their own.
In preparation for our final year, we completed work plans and budgets with nine of 11 implementing partners who will take over support for district-level medicines management interventions. The transition plans take into account an assessment of the partners' preparedness as well as district details to ensure as smooth a transition as possible. The transition is expected to be completed by May 2019.

We undertook the procurement, selection and contracting of a construction company to build 26 prefabricated medicines storage units in 20 districts across Uganda. Those units will improve the storage capacity of health centers that are managing high volumes of HIV patients and thus need to store large quantities of medicines and health supplies. Because we underestimated the time it would take to complete the procurement process and obtain USAID approvals for construction, by the end of Year 4 we had only initiated the construction of an initial set of 5 units.

We also were off track in the scale up of PFM in PNFP facilities. As mentioned above, the timeline to amend our contract with Makerere University, our PFM training provider, took longer than we had originally planned. Because of the delay, Makerere was able to train only 46 of the active 85 MB MMS and JMS technical representatives. With less than half of the needed MMS, we could only achieve 33% of our annual target of 600 PFM supervision visits.

2.3 Partnership, Collaboration, and Stakeholder Engagement

The highly successful first year of implementation of the EMHS credit line for PNFP facilities at JMS is due to the collaborative partnership between the MoH, JMS, four faith-based medical bureaus, diocese representatives, Kampala City Council Authority, and UHSC. All of the Government of Uganda funds (7.4 billion shillings) were expended; 97% of the 600 eligible facilities adhered to order schedules, and JMS delivered 97% of facility orders on time and fulfilled 99% of the items ordered by facilities, which exceeded the annual targets.

Our establishment of a public-private partnership between the NDA and pharmaceutical wholesalers accelerated the smooth implementation of Good Distribution Practice standards; 484 of the private sector suppliers passed NDA inspections and were licensed to operate in 2018. NDA will use this approach to introduce future regulations.

A diverse task force set up by UHSC completed the design and pilot of standardized community supply chain tools, procedures, and training materials in five districts with the aim of increasing access to lifesaving maternal and child health commodities among hard-to-reach communities. The task force, led by the Pharmacy Department, brought together the skills and experience of representatives of three MoH departments; child health organizations (UNICEF, Save the Children, And Malaria Action Program for Districts); reproductive health organizations (FHI 360 and Path); and health service partners (RHITES-SW). Over the past 18 months, we worked together to train and supervise hundreds of health facility staff and village health team workers to assess the acceptability and effectiveness of the new tools and procedures in increasing the availability and accountability of commodities used in iCCM and family planning programs operating at the community level.

We collaborated with implementing partners funded by USAID and the US Centers for Disease Control and Prevention to strengthen RxSolution use through joint support supervision visits in Eastern Uganda with RHITES-E and TASO, IDI in the Western region, and Mildmay and IDI in the Central region. We also conducted a training of trainers' course with RHITES-ACHOLI in the North and collaborated with RHSP, MAUL, UPMB, and MUWRP to train new RxSolution health facility users.

2.4 Learning and Adaptation

With our Harvard partners, we published two articles in the *Journal of Pharmaceutical Policy and Practice*, "Longitudinal study assessing the one-year effects of supervision performance assessment and recognition strategy to improve medicines management in Uganda health facilities" and "Competency in supportive supervision: A study of public sector medicines management supervisors in Uganda." We also contributed a chapter, "Improving Access to High Cost Medicines in Low Income Countries in Africa: Creating a Functioning Pharmaceutical System in Uganda," to a book on equitable access to high-cost pharmaceuticals.

This year, we assessed the impact and effectiveness of five UHSC-designed interventions and disseminated the results and lessons learned through national stakeholder meetings. The interventions include the push-pull supply system for lower-level health facilities, implementation of TB SPARS and Lab SPARS in selected districts, the revitalization of MTCs in hospitals, and the standardized community supply chain procedures and tools. Hundreds of stakeholders participated in the learning opportunities.

Over the past two years we have experimented on how best to build the knowledge and skills of MTC members in seven regional hospitals on appropriate medicines use principles and help them to independently conduct their own investigations and devise solutions to inappropriate practices in their facilities. The lessons we learned have resulted in a practical manual and training approach to revitalizing MTCs that future stakeholders can use.

We returned to JMS this year to follow up on whether key recommendations made by three UHSC consultants in 2014-2016 had been implemented and what impact our assistance had. We learned that 1) JMS had implemented 83% of the 60 UHSC consultant recommendations and that this assistance directly and substantially improved JMS business, financial, and operational performance; 2) JMS is a responsive, responsible counterpart, making our investments to strengthen their capabilities very worthwhile; and 3) conducting this kind of systematic follow up is a valuable exercise.

We could see that only a small proportion of facilities with RxSolution were routinely updating and submitting their stock data to the central level. To figure out a way to address the issue, we established an internal task force with information technology, logistics management, and AMU staff to bring different perspectives on how we could make RxSolution data more used and useful to facilities and central level managers. The task force visited facilities to get feedback from RxSolution users and on that basis, developed a much smaller set of RxSolution reports that are specifically tailored to the work needs of facility staff and managers. We subsequently piloted the reports in seven facilities; users were enthusiastic about the changes—especially the automated generation of the HMIS 105 monthly stock report, ART weekly stock status report, and list of short-dated and excess items to redistribute. The task force will continue working to increase use of RxSolution data and implement the new RxSolution package in all sites countrywide.

2.5 Inclusive Development

UHSC's overall mandate is to increase the availability, affordability, accessibility, and appropriate use of good quality EMHS for all citizens, and as such, UHSC activities are inclusive by nature. It is worth noting that UHSC's focus is on systems and not diseases; this means that we aim to strengthen systems that can handle any type of health-related commodity. This ensures that all categories of citizens—women, youth, elderly, and other vulnerable populations—can find the commodities that they need for the prevention, treatment, and care of conditions likely to affect them. Our community-based activities aim to improve EMHS access for harder-to-reach populations, as not all citizens are able to seek services at a health center.

This year, we worked closely with the AIDS Control Program, National Advisory Committee, development partners, and a civil society group, Women Living with HIV, to resolve an issue regarding access to the new antiretroviral regimen (DTG) that Uganda has adopted as a preferred first-line ART regimen: preliminary results from a Botswana study showed an increased risk of neural tube defects in babies born to women taking DTG. At this year's International AIDS Conference, most, if not all, African countries had decided to exclude women of reproductive age from using DTG; countries are waiting for further communication from the World Health Organization in March 2019 on the issue. In the meantime, the Ugandan Women Living with HIV group insisted that all women need to be given a choice on whether to use DTG, because it has fewer side effects than efavirenz in the current regiment. We worked with the AIDS Control Program to develop standard operating procedures to guide health workers on how to implement the agreed solution, which is to obtain informed consent should a woman of reproductive age choose to use DTG.

2.6 Science, Technology, and Innovation Impacts

Activity result area	Science, technology, innovation activity/task description	Planned outcome	Achievements
IR 2.1.4	UHSC's PIP is a data warehouse for pharmaceutical sector information and data	Expand the functionality and user-friendly features of the PIP to increase data visibility and use for monitoring and decision making	PIP enables aggregation and display of all SPARS interventions, RxSolution, and ART weekly report data from all districts. More than twice as many users have accessed PIP this year compared to last year
IR 2.1.4	Interactive, easy-to-use dashboards with key supply chain indicators and data	Improved visibility and accountability of supply chain performance	Dashboard with current data on central warehouse stocks available to all PIP users
IR 2.1.5	Lab SPARS reporting systems and database	Improve use of lab SPARS data	Supervision data has been used to address stock-outs of selected lab items at facility level through redistribution
IR 2.1.5	Web-based TB order and reporting system and database	Improve facility stock status visibility at national level	Districts and partners use the data to redistribute facility stocks where needed. Data also used to compare forecast and consumption accuracy
IR 2.1.5	Enhancement of WAOS	Reflect more validation rules and new HIV guidelines	New formulations such as TLD were included. Stock-out days were included to improve reorder accuracy
IR 2.1.2	NDA e-GPP and e-GDP reporting system and database	Just-in-time reporting and efficiency during inspections	This is one of the few electronic systems installed and running at NDA
IR 2.1.3	Electronic ordering from facilities to JMS	Reduce the time to place and process EMHS orders	Set up tested successfully in 10 facilities; roll out to others in Year 5
IR 3.1	Magic calculator for community distribution	Enable facility staff to quickly and accurately calculate the quantities community health workers need for their catchment areas	Piloted in 5 districts, scale-up planned in 17 more districts. Approved by MoH to include in HMIS

2.7 Transparency and Accountability

UHSC conducted a study to triangulate central and regional data on reported malaria cases and commodity use, which revealed discrepancies between commodity consumption and malaria cases that could be due to poor reporting practices, inappropriate use, or leakage. In Year 5, UHSC will complete a field assessment to identify the main causes of the discrepancies and develop approaches to address the problems.

Together with the Pharmacy Department, we closed an accountability gap by revising the existing HMIS facility dispensing log, so that pharmacy dispensers have to record details of what they receive and dispense to clients. Our ART SPARS performance assessment tool also includes indicators on how well a facility can trace and account for commodities from receipt to when they are dispensed to clients.

Our WAOS team now calculates and routinely reports on ARV order fulfillment rates by the three central warehouses, making their performance visible to all stakeholders.

Our PFM program has enabled 1,499 government and PNFP health facilities to track their EMHS expenditures and balances owed by NMS across the year, which helps them manage their budgets more efficiently and empowers them to demand the full budget amount allocated to them.

The EMHS credit line for PNFPs brought 100% visibility and accountability to how Government of Uganda primary health care funds are spent in the PNFP sector. Prior to establishing the credit line at JMS, it was estimated that PNFPs spent 35% of their primary health care funds allocated for procuring EMHS on other things; in addition, no controls were in place to ensure good product quality or good value for money.

3.0 LEADERSHIP DEVELOPMENT

UHSC does not have activities related to leadership development so this section is not applicable.

Leadership development activity/task	Planned outcome for the reporting year	Indications/examples results

4.0 ENVIRONMENTAL COMPLIANCE

UHSC completed all the required compliance steps to construct 26 prefabricated storage units at selected high-volume ART sites. Environmental monitoring and mitigation plans were developed and approved by USAID. The mitigation actions included the site not exceeding 150 meters, fertile soil being retained, and construction undertaken in a manner that does not negatively impact the environment and communities. We will assure that the construction fully complies with Government of Uganda and USAID environmental regulations and standards.

5.0 AWARD-SPECIFIC REPORTING REQUIREMENTS

UHSC submits routine reports as required through the performance reporting system, TRAINET, VAT reporting, and Hybrid DATIM. We will also report as required through the separate GHSA work plan and reporting mechanisms.

6.0 ACTIVITY MEL PLAN UPDATE

UHSC revised its activity monitoring, evaluation, and learning plan (AMELP) to align with the new CDCS 2016–2021 and its performance monitoring plan, which includes a new indicator for guiding principles. Two award modifications—IR 4 Supporting scale up of Uganda's HIV/AIDS response and IR 5 Strengthen supply chain capacity to respond to public health emergencies—were made in Year 4. Indicators for IR 3, IR 4, and IR 5 have been added to our AMELP. UHSC falls under DO 3 Market Systems but we have not yet received the indicators.

In Year 4, UHSC had a set of learning agendas to assess the impact and effectiveness of five UHSC-designed interventions, including push-pull supply system for lower-level health facilities, implementation of TB SPARS and Lab SPARS in pilot districts, the revitalization of MTCs in hospitals, and the standardized community supply chain procedures and tools. We are using the findings from the learning products to inform the improvement and scale up of medicines management interventions in the country.

7.0 SUMMARY FINANCIAL MANAGEMENT REPORT

Activity Financial Analysis

Award Details:

a. Total Estimated Cost	$	36,390,862
b. Start/End Dates	08/25/2014	08/24/2019
c. Total Obligated Amount	$	30,664,700
d. Total estimated cost share (if applicable)		$1,819,543
e. Total estimated leverage to date (If applicable)		$0
f. Total Expenditure billed to USAID/Uganda		27,377,727
g. Expenditure incurred but not yet billed		$130,000

f. Total Accrued Expenditure (both billed and not yet billed); sum of lines f and g	27,507,727

	Actual 1st Quarter	Actual 2nd Quarter	Actual 3nd Quarter	Provisional Actuals for the 4th Quarter
	Oct-Dec 2017	Jan-Mar 2018	Apr-Jun 2018	Jul-Sep 2018
Quarterly Expenditure Rate	$ 2,444,071	$ 1,248,196	$ 3,479,865	$ 2,380,694

Expenditure rate by funding source

	Total four quarters
FP	$ 514,171
MA	$ 177,477
MH	$ 344,593
NT	$ 16,605
OPHT	$ 2,795
PEFS	$ 8,378,822
TB	$ 118,361
Total four quarters	**$ 9,552,825**

8.0 MANAGEMENT AND ADMINISTRATIVE ISSUES

8.1 Key management issues

Two key personnel left UHSC this year. The Supply Chain System Specialist position was filled with an existing UHSC employee. The second position, Senior Technical Advisor-Health Financing, became vacant at the end of August 2018. Given that UHSC is entering its last year, and in light of both activities planned for the coming year as well as budget constraints, we have proposed to not fill this position in Year 5.

8.2 Resolved management issues

No issues were raised in the last report.

9.0 PLANNED ACTIVITIES FOR NEXT YEAR INCLUDING UPCOMING EVENTS

Major Task/Event	Brief description of purpose	Planned date(s)	As applicable, specify what kind of support may be required from USAID/Uganda
Approval to construct 21 prefabricated medicines storage units	After learning from the first five structures constructed, UHSC will move forward with construction of 21 additional units	October 2018	AOR approval
Hand-over of medicines stores	National event to hand over 26 prefabricated medicines stores to MoH/ district governments	February 2019	Participation of US Ambassador or USAID mission director
Medicines infrastructure conference	Disseminate findings from a national stores infrastructure assessment highlighting the current gap to advocate for donor support	March 2019	
MTC conference	Disseminate progress and results of MTC revitalization intervention	April 2019	
Regional review meetings	Discuss the UHSC district support milestones reached and the new support strategy in place for continuation	November 2018	

Major Task/Event	Brief description of purpose	Planned date(s)	As applicable, specify what kind of support may be required from USAID/Uganda
Conduct close out meeting for medical bureau support	Discuss new strategy to continue medical bureaus support after end of UHSC program	May 2019	Participation of USAID staff (Kampala meeting)
Close-out event	Discuss the impact of UHSC activities; disseminate materials that summarize program achievements, research, lessons learned; present awards to best-performing districts, health facilities, and health workers; show video documentary that highlights success stories and positive impact of UHSC on strengthening Uganda's health supply chain system	July 2019	Participation of US Ambassador or USAID mission director and other USAID staff

10.0 ANNEXES

10.1 USAID/Uganda Activity Work Plan Table

USAID/Uganda Performance Analysis Table					
CDCS Links	**Results**	**Disaggregation**	**Baseline data value**	**FY 2017 Annual actual**	**FY 2018 Annual target**
Results Area 1: National policies developed and implemented to improve EMHS affordability, availability and accessibility in alignment to national health goals					
IR 3.4	**Numbers of policies completing each process/step of development as a result of USG assistance.**	**Analysis**	**-**	**6**	**5**
		Stakeholder consultation	**-**	**4**	**5**
		Drafting	**-**	**3**	**5**
		Approval	**-**	**3**	**4**
		Implementation	**-**	**3**	**4**
Result Area 2: Country systems to effectively and sustainably manage EMHS strengthened at all levels in public and PNFP sector					
IR 3.4	**Percentage availability of supplies for a basket of 41 medicines and health supplies in last 3 months at NMS and JMS**	**EMHS**	**-**	**68%**	**75%**
		ARVs	**-**	**67%**	**75%**
		TB	**-**	**73%**	**75%**
		LAB	**-**	**59%**	**75%**
		RMNCH	**-**	**66%**	**75%**
IR 3.4	**Average percentage availability of a basket of 41 commodities based on all reporting facilities in the previous quarter**	**EMHS**	**-**	**86%**	**89%**
		ARVs	**-**	**82%**	**89%**
		TB	**-**	**79%**	**89%**
		LAB		**84%**	**89%**
		RMNCH	**-**	**83%**	**89%**
Sub-IR 2.1: Central level systems for EMHS management enhanced					
IR 3.4	**Number of wholesalers licensed according to the new GDP guidelines developed**		**0**	**497**	**350**
IR 3.4	**Number of government and PNFP health facility pharmacies inspected for GPP**	**Government**	**797**	**1363**	**1500**
		PNFP	**142**	**255**	**500**
IR 3.4		**Government**	**54%**	**55%**	**60%**

USAID/Uganda Performance Analysis Table					
CDCS Links	**Results**	**Disaggregation**	**Baseline data value**	**FY 2017 Annual actual**	**FY 2018 Annual target**
	Percentage of government and PNFP health facility pharmacies certified according to GPP	PNFP	59%	64%	65%
IR 3.4	Number of facilities with a computerized functional Logistics Management Information System (Total number of Hospitals/HC4)	Government	28	18	45
		PNFP	15	12	40
IR 3.4	Number of health workers trained in electronic stock management	Gender	-	401	662
IR 3.4					
IR 3.4	Number of individuals trained to conduct supply chain, inventory management, and supportive supervision.	Supportive supervision	0	291	455
		Medicines Management	0	146	150
		PFM	0	245	325
IR 3.4	Percentage of facilities with a SPARS score of 20 and above	Government	41%	68%	60%
		PNFP	35%	50%	50%
IR 3.4	Percentage of order based facilities with a PFM score of 80% and above	Hospitals	63%	17%	50%
		HC4	51%	25%	50%
IR 3.4	Average percentage of cases of priority diseases treated in compliance with standard treatment guidelines in reporting period	Malaria	70%	85%	70%
		Upper respiratory tract infection	41%	51%	70%
		Diarrhea	45%	66%	70%
Result Area 3: Increased availability and accountability of RMNCH commodities among priority populations					
IR 2.1	Percentage of health facilities submitting a quarterly iCCM report		10%	12%	40%
Sub-IR 2.1.2	Average stock out rate of contraceptive commodities at family planning service delivery points	Depo-Provera		20%	0%
		Implanon		-	0%
	Result Area 4: Supporting scale up of Uganda's HIV/AIDS response				
IR 1.2, IR 1.3	The percentage of ART sites initiated on ART SPARS	Government	0%	-	50%
		PNFP	0%	-	50%

USAID/Uganda Performance Analysis Table					
CDCS Links	**Results**	**Disaggregation**	**Baseline data value**	**FY 2017 Annual actual**	**FY 2018 Annual target**
IR 1.2, IR 1.3	**Percentage of facilities scoring at least 80% of the maximum ART SPARS score**	**Government**	**0%**	**-**	**50%**
		PNFP	**0%**	**-**	**50%**
IR 1.2, IR 1.3	**Average percentage availability of a basket of ART commodities in the last three months**	**Government**	**90%**	**-**	**93%**
		PNFP	**90%**	**-**	**93%**
IR 1.2, IR 1.3	**Percentage of facilities with accurate orders**	**Government**	**0%**	**-**	**50%**
		PNFP	**0%**	**-**	**50%**
IR 1.2, IR 1.3	**Percentage of facilities with traceability of first line ARVs**	**Government**	**0%**	**-**	**50%**
		PNFP	**0%**	**-**	**50%**
Result 5: Strengthen supply chain systems to respond to public health emergencies					
IR 5.1 Support customization of the Global Health Security Agenda (GHSA) framework for Uganda context					
IR 5.1.1 Establish a national stockpile strategy					
	A national stockpile strategy of medical countermeasures for use during a public health emergency in place			**-**	**-**
5.1.2 Establish a national public health emergencies supply chain coordination mechanism					
	Number of procedures and memorandum of understanding for transferring (sending and receiving) and coordinating the supply of medical countermeasures during public health emergencies			**-**	**-**
IR5.1.3 Adapt logistics management information systems for emergency response					
	Presence of an emergency electronic logistics management information system			**-**	**-**
IR5.1.4 strengthen capacity of supply chain systems and actors for public health emergency preparedness					
	Number of individuals trained in supply chain related to sending and receiving medical countermeasures during public health emergency			**-**	**-**
IR 5.2 Conduct simulations to test the GHSA frame work adapted for Uganda					
	Presence of simulation plan and schedule			**-**	**-**

USAID/Uganda Performance Analysis Table					
CDCS Links	**Results**	**Disaggregation**	**Baseline data value**	**FY 2017 Annual actual**	**FY 2018 Annual target**
	UHSC Presence of simulation plan and schedule **UHSC Number of simulations conducted to test the GHSA framework**			**-**	**-**
Context, PMI and PEPFAR performance indicator table					
	Number of ACT treatments purchased with USG funds			**2,063,160**	**1,600,000**
	Number of ACT treatments purchased in any fiscal year with USG funds that were distributed in this reported fiscal year			**1,241,040**	**1,600,000**
	Number of RDTs purchased with USG funds that were distributed to health facilities			**1,725,300**	**2,000,000**
	Number of malaria RDTs purchased with USG funds			**947,600**	**2,000,000**
	Number of insecticide treated nets purchased with USG funds			**1,000,000**	**1,575,000**
	Number of insecticide treated nets purchased with USG funds that were distributed			**1,914,744**	**1,575,000**

10.2 Special reporting requirements

Relevant indicators for UHSC have been incorporated into the Activity Work Plan Table and Activity Performance Analysis Table.

10.3 Success story

Operating Unit: ____USAID/Uganda_____

Headline: Mentorship and supportive supervision improves management of laboratory commodities

Program Element: Health

Key Issues: Laboratory commodities management, evidence-based decision making

Title: No more "guesswork": Lab staff and patients benefit from Lab SPARS

The Apapai Health Centre IV laboratory in Serere district, Eastern Uganda, is busy today with ten patients waiting to have their lab tests taken. The laboratory technician, Samuel Oule, is confident that he has enough of the right laboratory supplies to run tests for all the patients he will see today, a welcome change from 12 months ago when he would have had to turn some patients away because he lacked one or more of the laboratory supplies needed.

Oule's previous situation was common across the country. A 2016 survey of 120 laboratories found that virtually all of them were stocked out of one or more of the supplies required to diagnosis HIV, tuberculosis, malaria and other common diseases.

Efficient and reliable laboratory services are an essential and fundamental component of any strong and effective health system and diagnostic testing is essential for appropriate treatment and the rational use of drugs. UHSC's investment in improving the appropriate management and use of laboratory commodities directly contributes to better health outcomes and more efficient use of limited national resources.

Although a chronic funding gap for laboratory commodities is the primary reason for frequent stock outs, there are other reasons too. "We had no systems in place. Because our stock cards were not filled out correctly, we relied on guesswork to place our orders of laboratory items and we often ran out of supplies. Now we have enough supplies available because we carefully track and record our commodities, know the minimum and maximum stock levels and can plan orders and make timely requests based on actual consumption," says Oule.

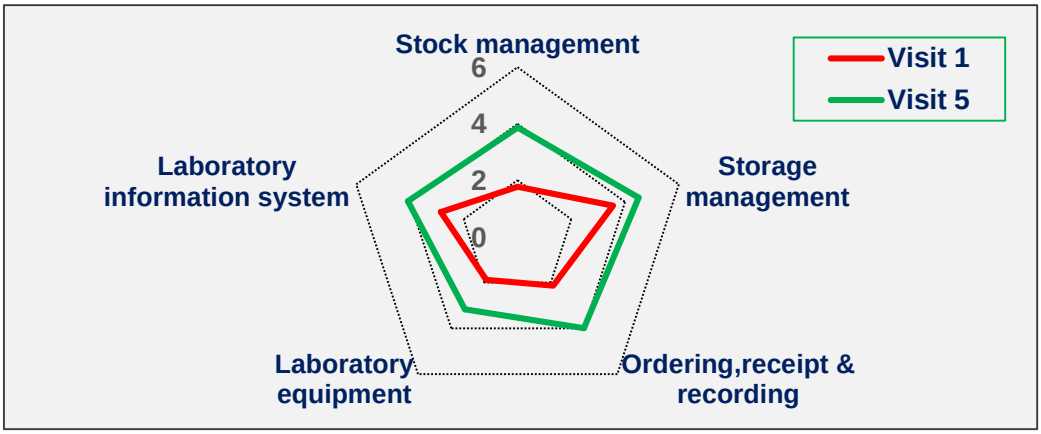
Oule's new-found confidence is widely shared by his colleagues in the 292 health facilities that were part of the pilot test of an intervention designed to resolve the root problems that can cause frequent stock outs. Designed by the USAID Uganda Health Supply Chain project and Uganda National Health Laboratory Services, the pilot intervention of the Laboratory Supervision, Performance Assessment and Recognition Strategy—Lab SPARS— combines a supportive supervision approach with targeted performance assessments and recognition to improve the knowledge, skills and practices of laboratory staff in five critical areas: storage management, laboratory information systems, ordering, receipt and recording, and equipment management.

Over the past 14 months, 42 trained district Lab SPARS supervisors assessed each facility's performance in the five areas every two months and worked with the lab staff to develop and implement tailored, practical action plans to improve the facility's weakest areas.

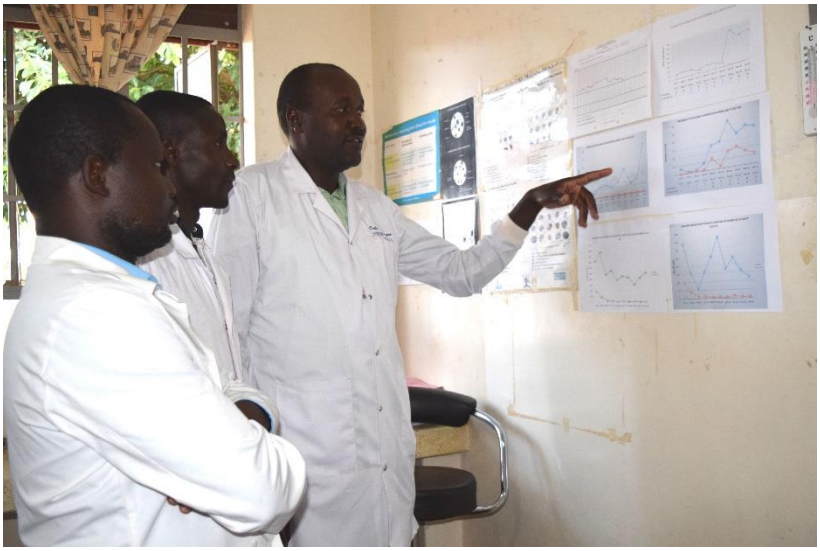
Sam Opio, the Lab SPARS supervisor for Apapai Health Centre IV, explains: "The purpose of the first visit was simply to unearth the issues. We observed the lab data was incomplete, inaccurate and was not used in planning. There were poor reorder calculations and the worst performing domain was ordering, receipt and recording. We discussed the challenges we had identified and cleaned and rearranged the lab and store. On subsequent visits, we reviewed the progress that had been made and encouraged the staff. The idea is that you push together with everyone in the health facility, you can't do it on your own."

Performance has dramatically improved in all 292 pilot facilities over the five Lab SPARS supervision visits (Figure 1). These improvements are a direct result of the Lab SPARS intervention, as the performance of 'control' facilities—which are similar to those in the pilot study but did not receive Lab SPARS supervision visits-- did not show improvements on any of the 27 indicators during the pilot period.

Figure 1. Average Lab SPARS performance scores of pilot facilities at Visit 1 and 5, August, 2017 – September, 2018



The number of stock out days decreased markedly for some key laboratory supplies because staff now have the right knowledge and skills of staff on how to correctly maintain stock cards, calculate their average monthly consumption, and calculate the correct quantities to order.



Laboratory technician, Samuel Oule discusses laboratory data with the facility in-charge, Dr. Denis Omiat at Apapai HC IV, Serere district. Photo Credit: Sheila Mwebaze

10.4 Special reporting requirements of Activities undertaking construction

ACTIVITY NAME: **UHSC ART-scale-up: Construction of medicines storage units**	**Start Date:** **August 31, 2018**	**End Date:** **November 30, 2018**
Narrative Description of Progress Completed in Year 4, referencing the Schedule of Works:		
Site name: Kangulumira HC IV. Total USD Cost: $83,886. % Completion Planned: 35%, Completion Actual: 35%. We experienced delays in starting slab construction at Kangulumira HC IV due to issues related to available quality of construction materials. **Site Name:** Namayumba HC IV. Total USD Cost: $83,573. % Completion Planned: 35, % Completion Actual: 25. **Site Name:** Kasangati HC IV. Total USD Cost: $68,001. % Completion Planned: 35%, Completion Actual: 35%. **Site Name:** Luwunga HC IV. Total USD Cost: $83,424. % Completion Planned: 35%, Completion Actual: 35%. **Site Name:** Wakiso HC IV. Total USD Cost: USD $67,902. % Completion Planned: 35%, Completion Actual: 35%. This year, we obtained the following approvals: clearance from the MoH; approval for construction from USAID, approval from USAID for Environment Monitoring and Mitigation Plans (EMMPs), approval of drawings/designs for the awarded storage units by respective district leaders and their technical team leads; and handing over of the sites by district leaderships. Following the bid evaluation, we contracted Fiditidis Group of Companies (U) Limited to carry out the construction Day–to-day technical supervision was provided by UHSC engineers. In addition, an initial monthly supervision visit was conducted by joint teams composed of USAID/MSH/MoH/Local Government staff. During the visit, both technical and management support were provided.		
Narrative Description of Work Scheduled for Next Quarter, referencing the Schedule of Works:		
Description of Work Scheduled for Next Quarter: We plan to provide continuous supervision of the superstructure fabrication on all the three sites of Wakiso HCIV, Luwunga Barracks HCIII, Kasangati HCIV in Wakiso district and one site at Kangulumira HCIV in Kayunga district. We will continue supervising the substructure construction at Namayumba HCIV in Wakiso district. Work schedule includes: materials production (+procurement), mobilization, assemblers, erectors (electrical roof sheet insulation), external cladding + insulation, internal wall & ceiling cladding + insulation, painting works, hardware & security doors works, clearing /retouching while waiting for other group.		