SC4CHW Toolkit

Implementation Toolkit for Supply Chain for Community Health Workers Project
Table of Contents

SC4CHW Toolkit

Acronyms .................................................................................................................. 5

Background ................................................................................................................. 6

DOCUMENT OBJECTIVES ....................................................................................... 6
PROBLEM STATEMENT ............................................................................................. 7
THEORY OF CHANGE ............................................................................................... 8
PROJECT GOVERNANCE .......................................................................................... 8

Description of Project Objectives ............................................................................. 8

▪ Transportation ....................................................................................................... 9
  KEY POINTS REGARDING PICKING, PACKING, AND DELIVERY OF KITS: .......... 11
  CRITICAL SUCCESS FACTORS FOR KIT DELIVERY SYSTEM ......................... 13
  LESSONS LEARNED PIOTING THE KIT DELIVERY SYSTEM ............................. 13

▪ Data Visibility- eCBIS .......................................................................................... 14
  WHAT IS THE ECBIS SUPPLY CHAIN MODULE? .............................................. 14
  WHY IMPLEMENT THE ECBIS? .......................................................................... 18
  WHAT BENEFITS CAN THE ECBIS SUPPLY CHAIN MODULE HAVE? ............. 19
  HOW WAS THE ECBIS DEVELOPED AND DEPLOYED? ..................................... 19
  KEY APPROACHES AND LESSONS LEARNED FROM ECBIS DEVELOPMENT: .... 20
  FUTURE CONSIDERATIONS FOR A SUCCESSFUL ECBIS ................................. 21

▪ Human Resources ................................................................................................ 21
  WHAT KEY ACTIVITIES WERE CONDUCTED TO BUILD HUMAN RESOURCE CAPACITY IN SUPPLY CHAIN MANAGEMENT FOR CHWS? ................................................................. 21
  LESSONS LEARNED FROM HUMAN RESOURCES DEVELOPMENT ACTIVITIES: 22

▪ Advocacy .............................................................................................................. 23
  WHAT ADVOCACY ACTIVITIES DO PROJECT STAFF ENGAGE IN? ................... 23
  WHAT ADVOCACY-RELATED WINS HAVE WE SEEN? ....................................... 24
Annexes: Standard Operating Procedures (SOPs) ............24

▪ Quality management SoP .................................................................24
▪ Partner coordination SoP .................................................................25
▪ Training of CHSS SoP .................................................................27
▪ On the Job Training and Mentorship SOP .........................30
▪ Program Monitoring & Evaluation SoP ..........................32
▪ Kitting and Commodity Distribution SoP .......................35
▪ Data tracking SoP .................................................................36

Conclusion .........................................................................................37

SC4CHW Document Library ...............................................................37

FOLDER STRUCTURE OF SC4CHW DOCUMENT LIBRARY .........................38
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*VillageReach transforms health care delivery to reach everyone.*
## Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>CHA</td>
<td>Community Health Assistant</td>
</tr>
<tr>
<td>CHSS</td>
<td>Community Health Services Supervisor</td>
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<tr>
<td>CHT</td>
<td>Community Health Team</td>
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<tr>
<td>CMS</td>
<td>Central Medical Stores</td>
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<tr>
<td>eCBIS</td>
<td>Electronic Community Based Information System</td>
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<tr>
<td>eLMIS</td>
<td>Electronic Logistics Management Information System</td>
</tr>
<tr>
<td>FHIR</td>
<td>Fast Healthcare Interoperability Resource</td>
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<td>LMH</td>
<td>Last Mile Health</td>
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<td>MoH</td>
<td>Ministry of Health of Liberia</td>
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<tr>
<td>OpenSRP</td>
<td>Open Smart Register Platform</td>
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<tr>
<td>SOH</td>
<td>Stock on Hand</td>
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<tr>
<td>SOP</td>
<td>Standard Operating Procedure</td>
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<tr>
<td>SC4CHW</td>
<td>Supply Chain for Community Health Worker Project</td>
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<tr>
<td>SCMU</td>
<td>Supply Chain Management Unit (MoH)</td>
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<tr>
<td>WFP</td>
<td>World Food Programme</td>
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Introduction to the Supply Chain for Community Health Workers (SC4CHW) Toolkit

Background

Community Health Workers (CHWs) play an essential role in extending critical healthcare interventions to under-reached communities by ensuring that products reach the people who need them. By design, CHW programs improve access to primary healthcare (PHC) services, particularly in low and middle income countries (LMICs). During the pandemic, CHWs have proven to be a sought-after resource for COVID-related care and essential health services. To ensure CHWs can deliver beneficial services to the communities they support, they require skills, access to essential commodities, and support from governance structures to set them up for success and improve PHC.

The Supply Chain for Community Health Workers (SC4CHWs) program in Margibi and Bomi counties was launched by the Liberian Ministry of Health (MoH) and VillageReach in November 2021, with support from The Global Fund. It built upon the key successes and lessons learned in 3 other counties in Liberia. The Supply Chain for Community Health Workers program aims to create an environment that ensures CHWs consistently have the products needed to provide health services at the community level. The program focuses on enhancing community health supply chains, improving performance, and generating evidence to make products routinely available among CHWs. Additionally, the program aims to support the integration of CHW product and information flows into the broader health system. This includes governance, capacity building, continuous improvements, data quality, and visibility to ensure that CHWs are better resourced, offered more training, and viewed as a formal part of the health sector.

The MOH’s vision of CHW supply chains incorporates seamless data and product flows to and from national levels and the community (Figure 1). Oversight by supply chain experts can help fill identified gaps in technical expertise, develop accountability mechanisms for roles and responsibilities and facilitate improved planning for supply chain activities. Accurate data can help CHAs, CHA supervisors and national supply chain managers and national community health departments make better decisions about how to manage health supply chains.

Figure 1: Community Health Worker Supply Chain

DOCUMENT OBJECTIVES

This Solutions Toolkit describes the tools, processes and methodology behind the SC4CHW program. It shows how these interconnect towards achieving the program impact of improving health at the community level. The overall objective is to ensure the Ministry of Health and key partners have the materials needed to continue the activities in high-quality beyond the life of the project.
Who should use it? This toolkit is designed to be used by key government and non-government stakeholders in Liberia.

How should this toolkit be used? This document contains a high level overview of the key project interventions, and can be used as a standalone resource. The Annexes at the end of this toolkit provide more detailed step-wise process guidance for specific topics in the form of Standard Operating Procedures (SOPs). For deeper level of detail, this toolkit is designed to be used in close coordination with the SC4CHW Document Library, where all detailed supporting documents (ie: training materials, technical reference documents, presentations, etc.) are available for reference.

PROBLEM STATEMENT

Community health workers do not have a consistent supply of the full-range of commodities they need to provide appropriate care at the community level. The commodity needs of CHWs are not prioritized during planning activities such as quantification, forecasting, or budgeting processes. There is also not enough quality data to specify what the specific commodity needs of CHWs are, since CHW data has historically been combined with facility-level commodity data, leaving CHW-specific needs hidden in the data. Since specific allocations for CHWs are not being made, CHWs rely on provisions from health facilities or other parallel programs that support CHW interventions. Consequently, CHWs often rely on provisions meant for health facilities or parallel programs that support CHW interventions, leading to an inadequate supply of the full range of necessary commodities.

In Liberia, CHWs and supervisors were experiencing consistent stockouts of essential medicines due to transportation challenges, lack of government financing for commodities, and lack of recognition of CHWs in national supply chain systems and policies. While community health supply chain standard operating procedures (SOPs) were developed, county and health district actors struggled with adherence – particularly around requesting the needed CHA program supplies and disbursing drugs to community health services supervisors. LMH designed and piloted a County Capacity Assessment Tool that evaluates County readiness to independently manage and oversee CHA program activities, while highlighting areas where external support should be directed. Evaluation results showed limitations in technical skills, staffing, oversight capacity and storage and distribution logistics undermine full compliance. These limitations included:

➢ Not all relevant members of the Community Health Teams were adequately trained based on demonstrated gaps in knowledge about forms and processes present.
➢ Limited visibility into demand impeded consistent and complete commodity forecasts, which negatively impacted sufficiency of commodities procured for the country.
➢ Space and resources challenges limit commodity transportation and storage capacity, which could potentially be addressed through better planning.
➢ Lack of data on commodity needs and commodity availability limits country governments’ and their partners’ ability to ensure CHAs are supplied adequately.
➢ Lack of integration of CHAs into the national system. The government departments which oversee CHA activities function in a silo separate from departments which manage the supply chain, so CHA supply needs were not incorporated as part of national supply chain planning.

To address these challenges, there was a need to increase data availability and prioritize CHW needs in planning activities and ensure that specific allocations are made for their commodities. This will help to ensure a consistent and adequate supply of the full range of essential commodities, enabling CHWs to provide appropriate care to the communities they serve.
THEORY OF CHANGE

SC4CHW Theory of Change

**Root Causes:**
- CHW supply chains are weak and often not integrated into the national public health supply chain, resulting in lack of visibility, fragmentation, duplication, and inconsistent investments in community health supplies, meeting only a fraction of the need.
- Products are not being purchased in sufficient quantity to meet the needs of communities.

**Problem:**
CHWs do not have a consistent supply of the full range of health products they need to provide appropriate care at the community level.

**Approaches:**
- Supply Chain Optimization
  - Optimize transportation and routes to efficiently and reliably resupply CHWs.
  - Deploy digital solutions to simplify community-level data collection, analysis and use.
  - Increase supply chain skills amongst health workers at the last mile.
  - Advocate for integration of community supply chains, policies and processes into the supply chain national strategy.

**Short-Term Outcomes:**
- Optimized CHW supply process with reliable distribution.
- Quality data from the community level is available and used for resupply decisions.
- Last mile staff can successfully apply supply chain skills and knowledge in their jobs.
- CHWs recognized as part of the national health system with an integrated supply chain.

**Advocate for Increased Funding of Health Products / Supplies**
- Aimed with visibility into CHW product needs and gaps, partner with government and other organizations to advocate for increased funding so products / supplies for CHWs are procured efficiently and consistently.

**Long-term Outcomes:**
- Increased performance of the CHW supply chain.
- Increased investment in supplies for CHWs.
- Improved health at the community level.

**Assumptions:**
- National will for CHWs to be an integral part of delivering health to communities is present.
- VillageReach’s work addresses 7 of 10 program components identified in the CHW HAP Functionality Matrix to optimize design for community-based health worker programs. It is important that other actions in the health system support program components such as accreditation, training, and incentives for CHW program effectiveness.

PROJECT GOVERNANCE

The Government of Liberia, through the Ministry of Health, provides leadership and stewardship of the SC4CHW solution. VillageReach was responsible for bolstering supply chain activities in Bomi and Margibi counties.

Description of Project Objectives

The SC4CHW solution focuses on transforming the national supply chain to incorporate the needs of CHWs, and focuses on four key areas; Human Resources, Transportation, Data, and Financing. All of these elements are supported by a strong advocacy function to ensure that national policies, strategies, and funding are aligned to increase visibility of CHW commodity needs. The specific project objectives are to:

1. **Transportation:** Transform how medicines and supplies get to CHAs
2. **Data visibility:** Improve data quality and visibility needed to manage CHA supply chains
3. **Human Resources:** Strengthen government and workforce capacity to sustain improvement in the CHA supply chain
4. **Advocacy & Financing:** Enhance sustainability and absorption of solutions

*The contents of this toolkit are organized by these four overarching objectives.*
TRANSPORTATION
Project objective: To transform how medicines and supplies get to CHAs. Create and deploy a CHW Kit-based delivery system.

What is a CHW Commodity Kit?
The MOH worked with VillageReach and Last Mile Health to create a kit-based CHA supply chain that can be integrated into national systems and work to outsource transportation of kits to the health facility and community level.

The CHA commodity kits are packed centrally at the CMS. The redesigned system shifted picking, packing, and sealing of kits to the county level. The picking, packing and dispatch process is resource intensive and demands that all key personnel ranging from daily hires to warehouse supervisors are readily available to complete their respective tasks. The delivery for both Bomi and Margibi county to the health facility is done by the World Food Programme.

This new kitting system has improved our ability to tailor to the disparate needs of each county. It also helped reduce theft, and it provides an equitable distribution of medicines to each CHAs as the kits are packed based on their consumption data.

*for more detail on processes required, see our Commodity Kit Job aid in the SC4CHW Document Library and the Kitting and Commodity Distribution SOP.

Why use CHW Commodity Kits?
The previous resupply design had been a bottleneck for CHAs to access commodities allocated to them for several reasons such as pilferage at the health facility level, CHA consumption data is aggregated to facility data hence the true commodity needs are not known for decision making at the national level. To solve these challenges this project designed and launched a kit based distribution system to facilitate commodity availability for CHAs. Some of the major challenges with the previous system noted by stakeholders include:

- Lack of adequate personnel and commodities at Central Medical Stores,
- CHA data aggregated to facility data hence difficult to approve CHA commodity needs in the system
- CHA quantification based on service data not consumption data
- Current 20% commodity allotment to the CHA program not sustainable
- Limited knowledge about CHA program at the county level

CHA KIT: WHAT’S INCLUDED
The proposed kit will contain 12 items targeting Malaria, Diarrhea, Pneumonia, and Family Planning services
➢ CHSS not conducting routine deliveries due to unfunctional bikes

### Implementation Steps for developing and deploying CHA Commodity Kits:

1. **Assess if the supply system is appropriate for a kitting system**
2. **Choose the health service delivery units to be supplied with kits**
3. **Prepare a list of medicines & supplies to go in each kit**
4. **Determine the quantities needed for each kit & estimate the number of kits needed**
5. **Develop the individual CHA kit requisitions for approval**
6. **Submit approved requisitions to each & develop a kit picking & packing plan**
7. **Generate waybills and other recording procedures**
8. **Develop delivery schedules to the county depot**
9. **Plan for commodity reception at the county depot & for last mile distribution to facilities**
10. **Delivery of kit to the community from the facility**
11. **Monitor & adjust delivery intervals & routinely revise the kit contents**
12. **Periodically assess the need for kits**

To kick off the CHW commodity kitting system process, a three-day human centered style design workshop was conducted to 1) design a CHA commodity kit and 2) draft required processes for delivering the commodities to CHAs in line with the national supply chain standard operating procedures and policies. This was a multistakeholder design workshop to engage with critical voices and users to co-identify and develop the right kit system processes and principles to delivering commodities to the CHAs. Engaging stakeholders during the design phase is key to ensuring the design is feasible, viable and solving a critical need and overall to ensure acceptability by users.

Following the brainstorm, prototyping and field research the stakeholders identified the following three key solutions to addressing the data challenge:

1. **Redesign the CHA Logistic Management Information System (LMIS) Data flow**: Each CHA should be treated as a service delivery point and the LMIS data from the CHA should flow two ways 1) Aggregated to the facility data and submitted to the County Health Teams (CHT) to ensure data visibility and monitoring at the subnational level 2) disaggregated and directly submitted into the e-LMIS for the supply chain management unit to approve for CMS to issue

2. **Approving CHA requisitions**: Identify a CHA focal person to approve CHA requisitions at the national level based at the supply chain management unit

3. **Excel based CHA Requisitions tracker**: Since the e-LMIS and M-supply aren’t interoperable there is need to develop an excel based tracker to track all CHA requisitions at the county, SCMU and CMS level. This is to ensure that all submitted requisitions are timely reviewed, processed and approved for picking and packing.
The major change in the design was that the packaging of CHA kits at the CMS and all the other processes (including transportation) will remain the same. This is to ensure the initiative is sustainable and can be easily adopted by the government long term.

Since the distribution systems are different in Bomi and Margibi counties the new kitting system will utilize the set systems to deliver commodities to the CHAs. See the figures below for county specific distribution approaches:

**Illustration of World Food Program's transportation role in Margibi County**

**Illustration of World Food Program's transportation role in Bomi County**

**KEY POINTS REGARDING PICKING, PACKING, AND DELIVERY OF KITS:**

**CMS data requirements for picking and packing:**

a) Each CHA unique identifiers entered the m-supply to facilitate the preparation for picking and packing process  
b) Pre-approved requisition quantities from SCMU for each individual CHA SCMU data requirements  
c) Facility CHA SSRR reports for at least three quarters to determine the average consumption per facility/county  
d) Number of approved/verified CHAs per facility per supervisor  
e) CHA SSRR reports sent through the e-LMIS platform
Minimum number of products to be packaged:

a) There is no set minimum number of products to be packaged in the kit to avoid creating more bottlenecks for accessing medicines for the CHAs

Shelf-life requirements:

b) To reduce expiries all products going into a kit should have a minimum shelf life of 6 months. This considers the long lead times in Liberia.

Human Resource Requirements:

a) Training: CMS uses the warehouse SOPs to train pickers and packers. There is no training guide or curriculum for daily hires. They have adequate staff who are trained in the key processes hence no need for any trainings now however should this stance change, we will conduct trainings for daily laborer’s

b) # of people needed to pick & pack kits: Based on the two county kits the CMS will need at least 20 people to pick and pack kits however they will utilize the current staff. The kits will be picked and packed before the normal picking and packing process begins to ensure there is enough supply allotted to the CHAs

c) CMS technical staff; CMS is currently understaffed for technical staff, and they are in the process of developing a workforce and staffing plan to meet their operational needs. The packaging of kits will require the involvement of the quality assurance officers, data officers, warehouse supervisor, and operations manager to oversee and approve the picking and packing of the CHA kits

d) Forklift drivers: Just like routine picking and packing, based on rough estimates, there will be a need for one full time forklift driver during the quarterly picking and packing exercise to support moving commodities from the shelves to the packaging areas.

Kit picking, packing, labeling, verification, and dispatch:

a) Internal CMS processes: The CMS will use SOP/MOHRL/CMS/010 to guide the picking, packing, verification, and dispatch of commodities from the warehouse

b) Labeling kits: Special branded (Community Health Assistant kit) cartons and non tampering tape will be used to package and seal the cartons to avoid tampering with the kits at any level.

c) The CMS will use the picking list to generate a contents sticker that will be put on each kit prior to dispatch. The CMS IT team will design the stickers and unique tracking numbers for each kit. The sticker information will include the following information; list of commodities with their quantities and expiry date information.

d) World Food Program processes: The partnership with WFP team stipulates that they will follow their internal processes to verify the number of packages received from CMS based on the waybills

e) The CHA kit waybills will be generated after the picking and packing process in line with the SOP/MOHRL/CMS/008

f) Management of kits at cross dock facilities: The WFP temporary warehouse, county depot and health facility storeroom will be treated as cross dock facilities for the kits. At the WFP warehouse, the kits are to be warehoused for less than a week prior to dispatch. At the county and health facilities, the kits should be stored for not more than two weeks before onward last mile distribution.

g) At these facilities, the kits cannot be repackaged or opened, untamper tape will be used to avoid tampering with the packages in transit to the CHAs. The kits will be managed using the WFP, county, and facility inventory management SOPs. However, at the county level the supply chain unit will verify the waybills against the kit packages and photocopy all waybills before transporting the kits to the respective facilities.

Delivery of kits to CHAs:

Just like all commodities received from the medicine’s stores, kits will be accompanied with two waybills; an original and copy and one that must be returned to the county for filling to confirm receipt of goods by CHA. These waybills
will be sent to the county team by the facility officer in charge and/or CHSS. The CHSS and CHA will follow the supply chain SOP on receiving medicines and supplies.

CRITICAL SUCCESS FACTORS FOR KIT DELIVERY SYSTEM

<table>
<thead>
<tr>
<th>Ministry of Health Buy-In &amp; Support</th>
<th>Digital CHA LMIS and e-LMIS uptake</th>
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<tr>
<td>• High level of commitment and support from the MOH including confidence in the pilot</td>
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<tr>
<td>• Ability for MOH to dedicate time/resources/feedback to the process</td>
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<tr>
<td>• Support stakeholder engagement and buy-in</td>
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<tr>
<td>• Strengthen the paper-based reporting and data quality in the e-LMIS</td>
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<tr>
<td>• Support the deployment of the digital CHA LMIS</td>
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<tr>
<td>• Strengthen the use of the M-Supply and commit to interoperability of the key supply chain systems</td>
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Linkages with system users

- Routine engagements with system users from CMS to CHAs to monitor the implementation of the kit system
- Conduct trainings for all system users
- Develop strengthening & continuous improvement plans

Commodity Availability

- Quantify and forecast NCHAP commodity needs
- MOH and donors to procure commodities based on forecasts
- Allocate medicines and supplies to the NCHAP

LESSONS LEARNED PILOTING THE KIT DELIVERY SYSTEM

General
- A kit delivery system can only function if it has commodities to be distributed and trained workforce managing it
- This system is cost-effective however high stock outs have contributed to wastage in the chain
- Picking and packing at the county level reduces the lead time by 80%

Commodity procurement & resupply intervals
- Predictable and reliable procurement and distribution cycles at the national level
- Lack of it affects implementation of key inventory mgmt policies ie safety and buffer stock, resupply intervals and LMIS reporting timelines

Storage and transport capacity enhancements
- Dedicated storage and staging space for CHA supplies to monitor stock levels and to have an efficient picking process
- Availability of transport for prompt dispatch after packing to reduce the holding costs

Human resource capacity
- Picking, packing and dispatch is resource intensive
- Plan and estimate the labor needs for each cycle and unveil the resources at the requisite time to ensure process is efficient
- Routine training for staff involved in the process
Picking and packing at county level

> Shifting the kit picking and packing to county level has the following advantages
> Reduce lead time for CHAs to receive supplies by 80%
> Easy to redistribute and allocate supplies equitably plus based on consumption data
> Strong ownership and better incentives to fill commodity gaps

Continuous improvement reviews and planning

> Routine reviews and improvement planning with key stakeholders is essential for continued success
> Room for innovation to enhance the kit delivery system ie traceability

Leverage expertise of CHSS

> CHSS engagement during packing and verification process for their individual CHAs to increase visibility and reduce queries

DATA VISIBILITY - ECBIS

**Project Objective:** To improve and increase community health and supply chain data availability, visibility and use by digitizing the paper-based community health system and including supply chain and logistics management features. The inclusion of the supply chain in the electronic Community Based Information System (eCBIS) aims to support CHAs and CHSS to more effectively manage commodities and provide better data visibility to supervisors and decision-makers at the county and national level to improve planning, forecasting, and quantification.

**WHAT IS THE ECBIS SUPPLY CHAIN MODULE?**

With collaboration from the MOH, LMH, and CHWs/CHSS, the eCBIS supply chain module was developed as part of the overall eCBIS to ensure that CHWs have the commodities they need to serve their communities. eCBIS is built on OpenSRP - a global good - and took a human centered design approach: prioritizing the needs and preferences of CHWs to ensure the application was valuable and user friendly.

**Application Overview**

The eCBIS is built on the Open Smart Register Platform (OpenSRP) FHIR platform, including the OpenSRP FHIR Web and OpenSRP FHIR Core based on Android FHIR SDK. The eCBIS consists of the web portal for reporting and system administration (such as managing users, locations, and commodities) and mobile applications for the CHSS and CHA. The minimum configuration requirement for mobile phones is Android version 8 and three-gigabyte device memory.

The mobile application is fully offline-capable after the initialization and initial log in. Offline data transfer, referred to as Peer-to-peer sync (P2P), is used to allow CHSSs to collect data from CHAs even when network connectivity is not available. P2P involves the synchronization of data using Android's hotspot (wifi-direct) functions to connect one device to another and enable sharing of data.

Reports are available on web-based dashboards for county and central-level officials, and directly on the supervisors’ devices for the CHWs they oversee. The eCBIS supply chain module was also designed to align and integrate with national systems including the eLMIS and DHIS2, to reduce data duplication and improve visibility. The application has been piloted in 4 counties in Liberia. All corresponding technical documentation can be found in the SC4CHW Document Library including: technical requirements, Beta Test Report, UAT Test reports, training materials, module schematics, etc.
eCBIS Report Dashboard

A web-based dashboard was developed on the Superset platform, and includes a set of key supply chain indicators to create data visualizations and enable data based decision making. The dashboard aggregates and displays data in a tabular format (data tables) to aid supply chain stakeholders at the county and national levels. The data per indicator can be disaggregated by county, district, health facility, CHA, CHSS, and community (see example screenshots below).

Figure: eCBIS dashboard showing the Consumption trends of CHA commodities over a three-month period
eCBIS Users & Features

There are two targeted end-users for the eCBIS mobile application, and corresponding versions of the application tailored for each of the users:

1) CHA application - mobile application used by the CHA for household registration, task management, service delivery, and inventory management in their day to day activities and during supervisor visits. The Supply Chain Module allows health workers to:
   a) View their inventory and record physical count
   b) Account for adjustments, damaged commodities, or expiries
   c) Record new stock (resupply)
   d) Record consumption - the stock on hand (SOH) of commodities is automatically updated based on consumption in the service delivery modules

2) CHSS (Supervisor) application - Mobile application used by the CHSS in conducting their supervisory visits and collecting data from their CHAs. The supervision application gives CHSS access to data from their CHAs and allows them to:
   a) Record supervision visits and specify if a restock was completed
   b) Collect data from CHA device while offline
   c) View service delivery and supply chain reports to support supervision

In addition to the CHAs and CHSSs, who are the main end-users of the eCBIS, there are a variety of program managers and officials at the facility, county, and national level who use the web-based reports and dashboards available from the eCBIS to support informed decision-making, supervision, and program management.

See below for sample screenshots:
Stock Inventory & Commodity Profile

Stock Inventory & Physical Count/Restock
WHY IMPLEMENT THE ECBIS?

The goal is to provide CHAs, CHSS, and stakeholders with accurate, timely, and actionable data that can be used to make informed decisions about CHW supply chain management.

Digital solutions offer significant potential to support CHA’s work and improve data quality and visibility by simplifying community-level data collection, analysis, and use. Mobile applications and electronic reporting systems can be used to gather and analyze data at the source, in real-time, as well as improving data accuracy and completeness with built in logic, automated calculations and validation, and training and capacity building. Digital systems can make data available to CHAs, supervisors, and other stakeholders much more quickly and with more granularity than paper-based systems Automating much of the data collection and analysis also reduces the data burden on CHAs/CHSS: CHAs don’t have to manually update the stock on hand after they complete a visit; CHSS don’t have to manually collate and aggregate data for each visit to a CHA for all their CHAs to complete their regular reports. They can spend more time on delivering services or supervision.

While individual CHW programs may not be able to resolve all the challenges that affect national-level product availability, it is important to ensure that CHW supply chain management and data are aligned and integrated into national-level processes and tools. Data visibility is critical for such integration, enabling national-level stakeholders to consider CHW product needs and consumption in their supply chain management decisions, forecasting, and procurement.
WHAT BENEFITS CAN THE ECBIS SUPPLY CHAIN MODULE HAVE?

We expect that the eCBIS will benefit CHAs, CHSSs and MoH stakeholders:

**CHAs and CHSSs:**

- By digitizing data entry and commodity management, the CBIS supply chain module will make CHAs’ and CHSS’ jobs easier. It will reduce data burden, provide decision support to ensure commodities are being used appropriately in line with treatment protocols, and facilitate timely reporting, reduce arithmetic or data entry errors, and improve commodity data accuracy.
- It will also provide both CHAs and CHSS with better visibility into their own data/the data of the CHAs they supervise; such as their stock on hand and stock status, the last time a restock was completed, and how much has been used. This insight can help CHAs know when to communicate with their CHSS if they are going to run out of supplies, and CHSS determine if and how to restock the CHAs, and any areas where CHAs may benefit from additional training or support.

**MoH stakeholders:**

- Improved data visibility, accuracy, timeliness, and improved reporting rates will benefit decision makers by providing them with reliable, routine CHW commodity data that can be used for decision-making. The eCBIS provides interactive, web-based dashboards that will provide officials with access to data much more quickly and with more granularity. The additional insight will support more responsive and evidence-based program management and planning.
- Data from the eCBIS can be used to populate the eLMIS, reducing data burden for the County Health Team, and will facilitate better integration of community level supply data into the national eLMIS system; accurately accounting for CHW commodity needs.

HOW WAS THE ECBIS DEVELOPED AND DEPLOYED?

Key Steps in the Development and deployment of the eCBIS application

1) **Preparation:**
   - a) LMH Liberia and VillageReach engaged with several government bodies in Liberia to co design and validate components of the eCBIS application. This included: ICT, HMER, Supply Chain Management Unit (SCMU), the Community Health Services Department (CHSD) and more
   - b) Define the requirements and identified tool requirements: Initial requirements were defined based on extensive reviews of existing tools, processes, and procedures. This included desk reviews of documentation, as well as key informant interviews. A gap analysis was also conducted to identify pain points or bottlenecks in the current processes and tools.
   - c) User personas were developed to ensure requirements were tailored to the specific needs of different types of users
   - d) **Requirements** were documented in user stories and prioritized as **MVP** (minimum viable product), high, medium, or low
   - e) Requirements were validated by MOH stakeholders

2) **Application Development:**
   - a) Ona was contracted as a technology service provider to support eCBIS development process from design to implementation using the OpenSRP platform.
   - b) Ona completed a review of the requirements and technical scoping, design, and specifications
   - c) Application development began, using an Agile, iterative development process with regular check-ins between developers and LMH/VillageReach
d) MOH engagement continued with regular check-ins and updates from LMH and VillageReach, testing and approval of key milestones, and a regular eCBIS technical working group that also included other NCHAP implementing partners (such as IRC, Plan, and Unicef)
e) Each version of the app that was released was tested thoroughly by VillageReach and LMH to identify any bugs or areas for updates. The MOH also tested key milestone releases for approval to proceed with user testing activities
f) In parallel with mobile app development, development was completed on the web-portal for online dashboards and system administration
g) Several rounds of user testing were completed to gather CHA and CHSS feedback, suggestions, and input for the application to ensure it was valuable and user-friendly:
h) Alpha-testing was completed with a small group of CHAs/CHSS
i) Upon completion of all major CHA and CHSS workflows (supervision, supply chain, data flow, and reports) 2 rounds of beta testing completed
j) A usability assessment (SUS) was completed as part of the beta-test
k) Additional feedback was gathered, prioritized, and addressed to ensure the application was pilot ready
l) Assessment and technical design for integration approach with national systems (eLMIS, DHIS2) is in progress

3) eCBIS Pilot Deployment: The pilot of the eCBIS is underway following several key activities:
a) National TOT training (August 2023)
b) CHT and CHSS TOT training in 4 counties (September 2023)
c) Pilot training- (Sept 2023)
d) 71 CHAs Bomi and 115 CHAs Margibi trained on the application and use of the mobile device including how to navigate the mobile device, log in to eCBIS, completing the workflows, addressing their task lists, and entering data into the application, as well as device management protocols including solar panel charging, and storage/protection.
e) CHA Training (106 and 145) CHAs in Bomi and Margibi (Sept 2023)
f) Pilot go-live (Oct 2023)

As CHAs and CHSS begin using the application to support service delivery, supply chain management, and data collection, VillageReach, LMH, and CHTs will follow up with pilot participants to provide additional support, gather feedback, and assess the performance of the application to inform plans for scale up and further development.

KEY APPROACHES AND LESSONS LEARNED FROM ECBIS DEVELOPMENT:

➢ MOH ownership – Multiple departments of the MOH and County Health Teams (CHT) were/are involved extensively in application development, design decisions, testing, and rollout. The MoH:
  - Participated in beta testing and feedback in four counties
  - Collaborated on tools review and approval (e.g. version 1 of the national pilot)
  - Provided input on eCBIS indicators to guide dashboard creation

➢ Iterative, user-centered design – multiple rounds of testing and feedback sessions for CHAs and CHWs to provide input into the app to ensure it was user-friendly and met their needs

➢ Design for context – Data can be collected offline and wirelessly transferred from CHA to CHSS device; mobile phones provided with waterproof bags, extra battery pack, and solar panel for charging. Device management policy is included as part of capacity building efforts

➢ Prioritization of features - It is hard to say no to things, but it is critical to identify what features or data is absolutely critical: what is needed vs. what is nice-to-have to avoid over-burdening users and manage costs and timelines.

➢ Partner & stakeholder engagement – Other implementing partners supporting the CHA program in other counties were engaged with eCBIS development and had opportunities to provide feedback to ensure scalability
Flexibility – feedback, competing activities, process variations and more can impact plans and timelines. Ongoing communication and adapting to new requirements or timelines was necessary to ensure the application was well-designed, tested, and all key stakeholders were engaged.

FUTURE CONSIDERATIONS FOR A SUCCESSFUL ECBIS

➢ **Refresher training** - The provision of refresher training for CHAs on the use of the eCBIS, and perhaps integrating the eCBIS training into routine CHA training, will be important to ensure all CHAs knowledge and skills remain fresh. Also recognizing that CHW turnover is high, thus regular training will ensure that all incoming CHAs are oriented to the eCBIS.

➢ **System maintenance** - Planning and budget for ongoing operating costs if the system is strongly recommended. The system requires ongoing hosting and routine technical maintenance. Another assumption is that users will need support when they run into issues, necessitating some additional human resources to provide that support. Ideally there should be ongoing investment in small improvements and application updates to ensure the application remains valuable and continues meeting needs of the MoH. Addressing user feedback and leveraging user feedback to inform technological improvements is important for avoiding attrition or the application falling out of date.

➢ **Ongoing Costs**. Open source ≠ free. The eCBIS is built on an open source platform (OpenSRP) however that does not mean it is completely free of costs. Open source platforms have many benefits, but it is critical to plan for development and ongoing hosting, support and basic maintenance costs to ensure the system can sustain itself over time without technical failures.

➢ **MoH leadership** - Ongoing leadership from the MoH will remain important to guide stakeholder coordination, lead conversations related to technical maintenance, and encourage analysis and data based decision making based on the data from the eCBIS.

HUMAN RESOURCES

Project Objective: Strengthen government capacity to sustain improvement in the CHA supply chain

WHAT KEY ACTIVITIES WERE CONDUCTED TO BUILD HUMAN RESOURCE CAPACITY IN SUPPLY CHAIN MANAGEMENT FOR CHWS?

The human resource and capacity development activities for the project are supported by a *Supply Chain Specialist* based in each county. The specialists work closely with the government county health team (CHT), VillageReach and LMH to support and strengthen supply chain practices. Specific, routine activities or intervention components that they support in addition to general management include:

➢ **Restock visits**: Specialists work closely with county and LMH staff to plan and conduct monthly visits to restock the community health program each month with necessary health commodities. Supplies are delivered to the health facilities, where they are received and managed by community health services supervisors (CHSS) and stored separately from all other facility supplies. CHSS’ in turn resupply each CHA whom they supervise, restocking their community health products up to a predefined “top up” level.

➢ **SCTWGs**: Each month, counties hold a supply chain technical working group meeting (SCTWG). This meeting is attended by CHT staff as well as partners and provides a venue to coordinate supply chain activities and address challenges that have been identified over the prior month. County TWG is a crucial platform where partners come together to discuss supply chain challenges and activities. They help to coordinate partners as well as create accountability for supply chain issues that arise. Topics discussed range each month, but examples include:
  - Kit delivery updates
  - eLMIS data challenges
  - product shortages
  - equipment (if fridge repairs needed, etc.)
*example SCTWG meeting minutes and notes can be found in the SC4CHW Document Library

- **Data reviews:** Each quarter, data is sent from the community and facility levels up to the CHT to be entered into the national electronic logistic management information system (eLMIS). When data is received each quarter, it is carefully reviewed to correct errors and improve the accuracy of data that is ultimately entered into the national system. This involves close review of all forms received and frequent follow-up with CHSSs and other facility staff to review inconsistent data points and correct errors.

- **Training:** In each county, VillageReach and the county specialist hosted a training at the beginning of the project on the logistic management information system (LMIS). These trainings were designed for CHSSs and relevant facility staff, and covered how to properly use each paper form produced by the national government to track community health commodities. The data entered into these forms is ultimately what is entered into eLMIS and viewed at the national level. Accurate use of these forms is what will enable a clear view of commodity consumption and needs.

- **Supervision and mentorship:** Supply chain specialists visit a subset of health facilities each month to supervise supply chain practices and provide mentorship where needed to address challenges and improve practices. These visits cover topics ranging from proper commodity storage to proper use of logistic management forms. When data reviews are conducted each quarter, facilities that have submitted inaccurate data are identified and prioritized for mentorship the following month to improve practices over time.

Each month, Supply Chain Specialists would elaborate a Monthly Report summarizing their monthly activities, progress toward project objectives, and priorities for the following month. Examples of these reports can be found in the SC4CHW Document Library.

**LESSONS LEARNED FROM HUMAN RESOURCES DEVELOPMENT ACTIVITIES:**

**Training and mentorship:**

- Ensuring that all current CHA and CHSS staff are trained can be a challenge. The training schedule has not aligned with frequent staff turnover, meaning many people are learning on the job through occasional mentorship. Trainings as part of this intervention were conducted once for each county, which means any staff hired after the initial have not participated in any formal LMIS training. This leads to CHAs and CHSSs not understanding how to fill out LMIS forms

- CHTs expressed a desire for both increased mentorship and more regular access to training. One of the informants suggested adding a supply chain module to the overall training for all new CHAs and CHSSs. CHAs and CHSSs also reinforced the importance of routine mentorship and expressed a desire for more training.

**Commodity resupply:**

- We note the importance of supplying CHAs and CHSSs based on consumption. During the course of much of the project, all CHSSs were topped up to the same level during restock visits, regardless of whether they supervise four or fifteen CHAs. Those with more CHAs are forced to ration how much product they give each CHA. CHAs are supplied based on a standard top up rate that is not linked to consumption in their community and is understood to be linked to outdated population estimates. CHSSs reiterated the importance of adjusting top up rates based upon the number of CHAs they serve, and also provided examples of where adaptations need to be made based on community consumption trends. For example, CHAs at one facility described being stocked out of Sayana Press (a long-acting reversible contraceptive) and experiencing high demand, whereas CHAs at another facility said they always had it in stock but there was no community demand. *We expect the rollout of the eCBIS will enable consumption based re-supply to occur and alleviate these issues.

**Data quality:**
Data that is entered into the eLMIS is often not accurate. During each quarterly data validation exercise, county teams reported finding serious issues when reviewing the data. All made it clear that improving data quality is a priority.

Staff support and motivation:

It’s important to ensure proper motivation for staff who are critical to the program’s success, including CHAs, CHSS, dispensers and data clerks. This includes ensuring timely and appropriate pay for all roles where possible, and providing necessary stipends (e.g., for overnight stays when on multiple day travel), safety protections (e.g., life jackets for river crossings, insurance) and transportation (e.g., bicycles to reduce time CHAs spend in transit) to minimize the burden on staff as they do their jobs. CHAs reinforced the importance of on-time pay. Staff who are not paid on time feel demotivated and that they are not respected in their roles.

Highlighted Human Resource related documents included in the SC4CHW Document Library include: Mentorship Guide, and CHA/CHSS training curriculum. *For more detailed information and processes, reference our SOPs on Capacity Building and SOP on On-the-Job Training and Mentorship in the Annex to this toolkit

ADVOCACY

Why does the project engage in Advocacy activities?

Financing: Without adequate resourcing and a plan for long-term sustainability, this solution on its own will not drive the desired change. Even if all available products are secured, CHWs still need support outside of supply to effectively deliver health products and services.

Integration of CHWs into relevant supply chain plans and strategies: Without policy recognition, there will continue to be no government accountability for frequent CHW stockouts. Policies and plans that highlight CHW commodity needs, and encourage processes, investments (such as the eCBIS), and plans to address them, will improve and sustain project outcomes over the long term.

Influence government and other partners to create the enabling environment for uptake of high-impact CHW programs, in line with the USAID CHW AIM quality tool that includes CHWs that are well-supplied and integrated with the health system.

WHAT ADVOCACY ACTIVITIES DO PROJECT STAFF ENGAGE IN?

At the national level, the SC4CHW program team conducts numerous other activities. These include but are not limited to supporting a national SCTWG, strengthening eLMIS management and use, and advocating for supply chains for community health assistants to be formally recognized in master plans and adequately funded.

Routine stakeholder coordination and engagement activities have been key to raising the profile of community health supply chain challenges and coordinating with partners to ensure alignment in activities, funding, and setting priorities. Routine stakeholder activities included:

- Monthly Supply Chain Technical Working Groups (SCTWG): These are held monthly at the county level to discuss supply chain priorities, resolve bottlenecks, and provide policy guidance towards implementation of supply chain related activities.

- Quarterly capacity assessment and commodity verification exercises: The government takes the lead on this activity to ensure comprehensive documentation, elevation and immediate action of the supply chain bottlenecks. CMS staff occasionally participate to appreciate the impact of their work on commodity availability in the public health service delivery system.
WHAT ADVOCACY-RELATED WINS HAVE WE SEEN?

Supply Chain Master Plan (SCMP) (2023-2027): In this new SCMP, the CHWs and community level has been recognized as part of the national health system and have been fully integrated into the supply chain design. This has positioned the CHAP to:

- Leverage on government strong infrastructure and allocation of funds towards procurement of medicines and supplies, utilizing human resources for supply chain at the different health system levels, as the CHW supply chain are currently mostly partner-led with little to no support from government.
- Increase investment for CHW supplies.
- Measure performance and hold accountability for the performance of the CHW supply chain because performance metrics and associated score cards have been developed for each supply chain tier including the community tier.

National Community Health Policy: This prioritizes supply chain as critical to the success of the community health program specifically the delivery of primary health services to achieve universal health care coverage. In the policy digitalization and innovations to improve commodity delivery take center stage for community health supply chains.

National Community Health Strategy: VillageReach led the work of costing the CHW commodity needs for the strategy period, and this will be used as a key advocacy tool for mobilizing resources to procure commodities for the program. This is important to ensuring that commodity procurement is government driven therefore it eliminates the current parallel supply chain systems managed by partners which differ per county.

Annexes: Standard Operating Procedures (SOPs)

This annexed section provides detailed, structured information on project administrative procedures and routine activities to help assure program quality, efficiency, transparency, and coordination with relevant stakeholders.

QUALITY MANAGEMENT SOP

This SOP represents the quality management steps and processes required for the CHA program.

| Purpose | The SOP’s goal is to aid the Liberian Ministry of Health in adopting the SC4CHW solution that VR has implemented in five counties in Liberia, as well as other partners who want to scale the solution in other countries or replicate it in other countries. These are high level recommendations for quality project implementation |
| Responsible Person | Liberia Ministry of Health: Department of Pharmaceutical Services (DPS) County Health Services Division (CHSD) County Health Teams (CHTs) Community Health Services Supervisors (CHSS) The Health Monitoring Evaluation and Research (HMER) |
| Target Audience | DPS, CHSD, CHTs, (CHSS), Community Health Implementing Partners |
| Minimum Requirement | To ensure quality in supply chain systems and processes of the CHA, the following steps in the quality management SOP must be executed: |
All CHSS and CHAs must complete an integrated and standardized competency modular training package.

All CHSS and CHAs should be provided with logistics and incentives for quality output.

CHSS must supervise his/her CHA at least twice a month.

County Pharmacist/District Health Officers/Community Health Focal Person should supervise the performance of the CHSS at the health facilities monthly.

The Department of Pharmaceutical Services (DPS) and the Community Health Services Division (CHSD) should conduct supervision of CHSS and CHAs quarterly.

Resource Materials

Community Health Services Policy 2021-2030 draftv5June30.docx

Procedure Implementing Steps (PIS) for Quality Management

- All CHSS must undergo a specialized integrated competency modular training package, with emphasis on mentorship, supply, operations, monitoring, and supervisory functions shall be provided as essential skills for successful program management, quality supervision, and coordination with planned outreach services. These CHSS must be a professional health worker (Registered Nurse-RN, Physician Assistant-PA, Certified/Registered Midwife-CM/RM).
- All CHAs must as well undergo an integrated and standardized, competency modular training using the national CHA curriculum
- In-service training interventions may be initiated but should be based on findings from supportive supervisory field visits, as well as training needs assessments.
- Community Health Services Supervisor shall be assigned to the health facility and supervised by the facility Officer In Charge (OIC).
- CHSS shall perform supervision to their assigned CHAs at least twice a month. Supervision shall also enable continuous monitoring, mentoring, coaching, data collection and serve as a mechanism for other critical support functions such as re-supply of commodities for service provision.
- Integrated and standardized Supervisory Checklists and Tools shall be used for the supportive supervision of all community health activities.
- Integrated and standardized Community Health Services Monitoring and Evaluation Tools will be developed and used for the monitoring and evaluation of all community health activities.
- The HMER unit shall collaborate with the CHSD to ensure an integrated and functional community-based information system (CBIS).
- Develop standardized community logistic and supply chain management forms that will feed into Logistics Management Information System (LMIS) and provide coaching and mentorship on the utilization of these forms.
- Conduct ongoing evaluation of programmatic effectiveness and implementation fidelity

PARTNER COORDINATION SOP

This SOP represents the partner coordination and engagement needed for the CHA program.

<p>| Purpose | The SOP’s goal is to aid the Liberian Ministry of Health in routinely engaging with relevant stakeholders who participate in supply chain and community health activities, and should be coordinated with regularly to ensure that activities are aligned, inputs are received when needed, and that there is no duplication of efforts between partners. |
| Responsible Person | Liberia Ministry of Health: |</p>
<table>
<thead>
<tr>
<th>Department of Pharmaceutical Services (DPS)</th>
<th>County Health Services Division (CHSD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>County Health Teams (CHT)</td>
<td></td>
</tr>
</tbody>
</table>

**Target Audience**
- DPS, CHSD, CHTs, (CHSS), Supply Chain partners, Community Health Implementing Partners

**Minimum Requirement**
To ensure coordinated engagements amongst the supply chain and community health implementing partners to guarantee availability of medicines and supplies for the CHA program. The following key steps and considerations should be made:

- The Directorate of Pharmaceutical Services and CHSD should each hold a monthly CH implementing partner coordination meeting where MOH priorities will be shared, and partners will provide implementation updates in their respective counties.

- The County Pharmacists should hold monthly supply chain technical working group (SCTWG) meetings and share the meeting notes with the DPS.

**Resource Materials**
- Supply Chain Technical Working Group TOR

**Definitions**
Supply Chain Technical Working Group: A multidisciplinary group of supply chain experts working to improve the Liberia supply chain. This group is mandated by the Ministry of Health.

Technical oversight committee: A small group of senior management team at MOH and key supply chain stakeholders that meets to solve strategic challenges affecting the supply chain.

**Procedure Implementing Steps (PIS) for Partner Coordination**

**Leadership and governance**
- The Chief Pharmacist will serve as the Chairperson for the national supply chain coordinating body known as the Supply Chain Technical Working Group.
- The DPS must develop and update the SCTWG terms of reference and share with all partners and county stakeholders.
- The DPS must appoint a supply chain partner to serve as a Secretary to the SCTWG. The leadership of the SCTWG should follow the TORs guide.
- The SCMU director must provide oversight to the county supply chain technical working group and ensure they submit monthly minutes to the MOH-DPS.
- The SCTWG has the mandate to approve technical committee and their TORs to achieve/solve persistent implementation challenges.
- The SCTWG chairperson must elevate all the supply chain challenges that cannot be solved in the forum to the technical oversight committee headed by the Chief Medical Officer and co-chaired by a key MOH donor.

**Meeting cadence and documentation**
- The DPS must hold one meeting every month to discuss the MOH supply chain priorities and for partners to share implementation updates and challenges.
- The annual meeting schedule should be developed in the last month of the year.
- The SCTWG meeting minutes must be documented using the approved templates and should be circulated to all partners and uploaded in the right google drive.
- The CHSD director must convene a monthly CH stakeholder meeting to share monthly MOH priorities and updates from partners.
Knowledge management

- All meeting minutes and terms of reference should be stored in the SCMU google drive managed by the SCTWG secretary and two key PSM officer appointed by the Chief Pharmacist

### TRAINING OF CHSS SOP

This SOP provides guidance on initial training of CHSS utilizing existing training materials for the CHW program and ensure that all staff with direct and indirect supply chain roles are properly trained.

<table>
<thead>
<tr>
<th>Purpose</th>
<th>The SOP's goal is to aid the Liberian Ministry of Health and other stakeholders on the capacity building that has been done for CHSS staff. It is recommended that this process is repeated in the future in the form of refresher training to keep skills fresh and address any changes from CHSS staff turnover.</th>
</tr>
</thead>
</table>
| Responsible Person | ➢ Liberia Ministry of Health:  
➢ Department of Pharmaceutical Services (DPS)  
➢ Central Medical Stores  
Community Health Services Division (CHSD)  
➢ County Health Teams (CHT)  
➢ Health Facilities |
| Target Audience | DPS, CHSD, CHTs, (CHSS), Supply Chain partners, Community Health Implementing Partners, |
| Minimum Requirement | To ensure that CHSS receive the necessary training and skills development required to manage the supply chain for healthcare products for the CHW program.  

*The relevant supply chain experts are required to deliver this training for each specific module based on their area of expertise.*
<table>
<thead>
<tr>
<th>Resource Materials</th>
<th>All relevant SOPs for Managing Health Products in Liberia</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td><em>CHA System and Data Flow</em></td>
</tr>
<tr>
<td>2.</td>
<td><em>Completing CHA – SSR &amp; Monthly Restock Form</em></td>
</tr>
<tr>
<td>3.</td>
<td><em>Routine Data Quality Monitoring</em></td>
</tr>
<tr>
<td>4.</td>
<td><em>Introduction to LMIS</em></td>
</tr>
<tr>
<td>5.</td>
<td><em>Liberian LMIS</em></td>
</tr>
<tr>
<td>6.</td>
<td><em>Completing SRC</em></td>
</tr>
<tr>
<td>7.</td>
<td><em>Storage Practices</em></td>
</tr>
<tr>
<td>8.</td>
<td><em>Assessing stock status and placing EO</em></td>
</tr>
<tr>
<td>9.</td>
<td><em>Warehouse and Storage Practices</em></td>
</tr>
</tbody>
</table>

Initial Training and Skills Development in supply chain management for CHWs refers to the structured and comprehensive program designed to equip CHWs with the necessary knowledge, competencies, and practical skills required to manage the supply chain of healthcare products for the CHW program. CHWs undergo this training when they first start their roles to ensure they are adequately prepared and capable of performing their supply chain management responsibilities. One initial training is conducted and then followed by ongoing training and mentorship. A pre-post training assessment to be conducted amongst participants.

1. Pre-Training Preparations:

- Identify the target group of CHWs who will undergo the training.
- Select a team of qualified trainers with expertise in health products supply chain management.
- Secure appropriate training facilities and necessary audio-visual equipment.

2) Delivering the Training

Module 1: Introduction to Health Supply Chain Management

- Overview of the healthcare supply chain in Liberia.
- Roles and responsibilities of CHWs in the supply chain.
- Trainer: Supply Chain Management Expert

Module 2: Health Commodities and Inventory Management

- Types of health commodities and their proper handling.
- Techniques for inventory management, including stock counts and expiration tracking.
- Warehousing, visual inspection and physical inventory
- Completing stock record cards
- Completing the Stock Status Report and Requisition Form (SSRR)
- Completing the Monthly restock form
- Assessing Stock Status and placing emergency orders
• Good storage practices
  Trainer: Supply Chain Management Expert

Module 3: Data Collection and Reporting
  • Importance of accurate data collection and reporting.
  • Introduction to LMIS
  • Understanding the Liberian LMIS (LMIS Data)
  • Using appropriate tools for data collection and reporting (LMIS Tools)
  • Routine Data Quality Monitoring
  • Trainer: Monitoring and Evaluation Specialist

Module 4: Quality Assurance and Cold Chain Management (only if temperature sensitive products are included)
  • Ensuring the quality and integrity of health commodities.
  • Cold chain requirements for temperature-sensitive items.
  • Trainer: Cold Chain Specialist

Module 5: Distribution and Transportation
  • Safe and efficient distribution practices within communities.
  • Transportation considerations for health commodities.
  • Trainer: Logistics and Distribution Specialist

Module 6: Emergency Preparedness
  • Responding to emergencies and crises.
  • Ensuring continuity of the supply chain during disasters.
  • Trainer: Emergency Response Specialist

Module 7: Record Keeping and Documentation
  • Proper record-keeping practices and documentation requirements.
  • Trainer: Data Management Expert

Module 8: Communication and Collaboration
  • Effective communication with healthcare workers and stakeholders.
  • Collaborating within the health system for better supply chain management.
  • Trainer: Health Communication Specialist

Practical Exercises and Simulations
  • Conducting hands-on activities and simulations to reinforce theoretical knowledge.
  • Trainer: Training Facilitators (Rotating trainers for each practical exercise)

Post-Training Evaluation and Assessment
  • Conducting a post-training assessment to gauge CHWs' understanding and retention of the training content.
  • Trainer: Monitoring and Evaluation Specialist

Follow-up and Continuous Learning
  • Providing opportunities for continuous learning through refresher courses and updates on best practices.
• On the Job Trainings, supportive supervision and mentorship
• Trainer: Supply Chain Management Expert or Continuous Learning Facilitator

Conclusion
• Reviewing the key takeaways from the training.
• Reiterating the importance of CHWs’ role in supply chain management.
• Trainer: Training Facilitator or Training Coordinator

ON THE JOB TRAINING AND MENTORSHIP SOP

<table>
<thead>
<tr>
<th>Purpose</th>
<th>The SOP's goal is to aid the Liberian Ministry of Health and other stakeholders to sustain the on-the-job training (OJT) and mentorship visits to support supply chain capacity building for CHAs and CHSS staff.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsible Person</td>
<td>Liberia Ministry of Health: Department of Pharmaceutical Services (DPS) County Health Services Division (CHSD) County Health Teams (CHTs) Community Health Services Supervisors (CHSS) The Health Monitoring Evaluation and Research (HMER)</td>
</tr>
<tr>
<td>Target Audience</td>
<td>DPS, CHSD, CHTs, (CHSS), Community Health Implementing Partners</td>
</tr>
</tbody>
</table>
| Minimum Requirement | To ensure quality in supply chain systems and processes of the CHA, the following mentorship steps must be executed:  
  * Mentors and mentees (CHAs) must take time to build relationships to ensure successful mentorship.  
  * The mentor must assess the needs of the mentees (CHAs) through a quick assessment.  
  * The mentor and mentee must be able to set clear goals and objectives at the start of the mentorship program.  
  * The mentor and mentee should agree on dedicated visit days and time towards achieving the set objectives and goals.  
  * The mentor must review and evaluate to assess progress on the program objectives and goals. |
| Resource Materials | Supply Chain Mentorship Guide |

**Definition of “Mentorship”**: refers to transferring of knowledge, experience, and skills in management of medicines and medical supplies, information and logistics & supply chain from a supply chain coordinator/specialist to mentee in facilities.

**Mentorship in the SC4CHW Solution:**
• Who are the mentors? County Supply Chain Specialists *this may change in the future
• Who is being mentored? CHAs
• Frequency of Mentorship visits: recommend at least 3 times per quarter, duration of approximately 3 hours

Procedure Implementing the Mentorship for Capacity Building

1) Needs Assessment:
Before engaging in routine mentorship, mentors must first conduct a ‘Needs Assessment’ to assess the knowledge, skills, and performance gaps of mentee through interviews, observations, or using the Facility and Mentee Need Assessment Tool.
Mentors should then identify specific areas where mentoring support is required by mentee. Mentor should focus on one or more of the following topic areas, where support is typically needed:

a. Storeroom organization
b. Stock cards and information management
c. Commodity ordering, receiving and issuing.
d. Conducting physical inventory
e. LMIS data collection and reporting

If the mentee does not have specific gaps related to an area mentioned above, the mentor and mentee should agree on the next topic area to focus on. The mentee should be provided with a Mentee Checklist.
Based on the Mentorship Needs Assessment, mentors must develop mentoring plans for mentees. The plan should include clear objectives, activities, timelines, and evaluation criteria. The plan should be developed using the Mentee Goal Setting Tool.

2) Mentoring Sessions
The mentor should visit the mentee at least 3 times in a quarter and each visit will last approximately 3 hours.
The mentor should establish a standardized visit structure. The visits should focus on the following:

- **Review**: Mentor must review learnings from the previous session, a review of learnings put into practice and a review of goals for the current visit.
- **Instructions**: Mentors should share knowledge to address mentee goals. Knowledge sharing and instructive teaching can occur through case studies, role playing and other exercises.
- **Hands-On Help**: Mentor should provide hands-on, on the job training to help mentee gain practical skills, while also helping to improve the pharmacy situation at the mentee facility.
- **Put in Practice**: Mentors should assign mentee tasks to put learning into practice, scheduling the next visit and confirming the agenda for the next visit.

The mentor must develop handouts and tools for each topic area addressing the overall goal and objectives, stating clear instructions, activity suggestions for hands-on help and put-in-practice for the mentee.
In addition to following the structure guidelines above, it is critical for the mentor to make courtesy visits to the facility in charge to inform him/her of arrival and take his/her leave when the visit is over.
The mentor must review the goals and activities for each visit and prepare for the next visit well in advance.
Furthermore, the Instruction and Hands on Help section need to be customized and tailored to address mentee’s goals and needs. The mentor must complete the “Mentor Visit Report” and ensure that the mentee also completes the “Mentee Visit Report.”

3) Review and Evaluation Visit
At the end of the 4 months mentorship program, mentor and mentee must reflect and reinforce on the knowledge and skills gained through the Mentorship Program through the following:

- Mentors must carry out post mentorship assessment using the Supervisor’s Checklist.
- Mentee must complete the Self Assessment using the Mentee Checklist.
➢ Mentor and mentee should discuss progress on mentee’s goals using the needs assessment and Mentee Goal Setting Tool at the beginning of the mentorship program.
➢ Mentors should work with mentees to identify remaining a) skills gaps and b) gaps in theoretical knowledge.

PROGRAM MONITORING & EVALUATION SOP

<table>
<thead>
<tr>
<th>Purpose</th>
<th>The purpose of this SOP is to help implementers monitor whether SC4CHW is being implemented as intended and having the desired effects.</th>
</tr>
</thead>
</table>
| Responsible Person | Liberia Ministry of Health:  
Department of Pharmaceutical Services (DPS)  
County Health Services Division (CHSD)  
County Health Teams (CHTs)  
Community Health Services Supervisors (CHSS)  
The Health Monitoring Evaluation and Research (HMER) |
| Target Audience | DPS, CHSD, CHTs, (CHSS), Community Health Implementing Partners |
| Minimum Requirement | At minimum, M&E for this project should determine whether SC4CHW is being consistently implemented and whether CHAs have necessary health commodities available. Minimum questions for M&E are:  
- Are SCTWGs being held consistently? These have been identified as a critical forum for coordination. Additional M&E efforts could look at their effectiveness.  
- Are mentorship and supervision visits occurring? Mentorship and supervision have been essential for addressing challenges with LMIS data entry and will play an important role during the transition to eCBIS. These visits are sometimes difficult to arrange due to logistics challenges but should be maintained. Monitoring can help identify concerning declines in frequency. Additional M&E efforts could look at the quality of mentorship provided or progress or how to better target visits.  
- Are facilities adhering to SC SOPs? Facilities have recently maintained strong adherence. Monitoring should continue to detect any unexpected dips in adherence so that these can be addressed should they occur.  
- Is eCBIS being used? Is data submitted via eCBIS of high quality? This will need to be especially closely monitored during the early stages of eCBIS use.  
- Do CHAs have commodities available? Many other factors contribute to commodity availability outside the control of SC4CHW. However, this should be monitored to detect any unexpected or unexplained declines in commodity availability so that these can be investigated and addressed. |
| Resource Materials | Data collection tool  
Indicator list (See below) |

Procedure Implementing Steps (PIS) for Monitoring & Evaluation

➢ At the end of each month, supply chain specialists or staff complete the monthly data collection tool and submit it to the M&E officer.
➢ The M&E officer inputs data from the data collection tool into a master database. In the most recent years of the project, we have been collecting data primarily via Kobo forms and transferring it to a Coda page for data visualizations. However, we have encountered challenges with both and use of Excel and basic Excel graphs may minimize technical challenges going forward.
On a quarterly basis, the M&E officer convenes a data review meeting to review trends in the number of SCTWG meetings held, the number of mentorship and supervision visits conducted and SOP adherence and review this data with county SC staff (all collected via data collection tool). At the same meeting, the M&E officer should present eCBIS usage data from the eCBIS dashboard. This group should discuss any challenges meeting targets and determine actions necessary to mitigate these challenges in the next quarter.

Biannually, the M&E officer will analyze commodity availability data from the Implementation Fidelity Initiative dataset. This dataset includes historical data. The M&E officer will analyze availability by year and look to detect any declines in commodity availability. The reason for these declines should be discussed with county SC staff and actions taken to address identified challenges. Analyses should include:

- % of CHAs with commodity available, by commodity: (# of CHAs with each commodity in stock on day of visit / total # of CHAs visited) * 100
- % of CHAs with all life-saving commodities available: ( # of CHAs with ACT 25 AND ACT 50 AND Amoxicillin AND ORS AND Zinc in stock on the day of the visit / total # of CHAs visited ) * 100

NOTE: This can be supplemented by collection of additional commodity availability data from CHAs and facilities each quarter if resources allow to provide a more complete picture of where commodities sit. A Kobo form is available for this activity if desired.

Here is a condensed list of routine indicators used to gauge project progress and impact:

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Target</th>
<th>Source</th>
<th>Frequency</th>
<th>Notes</th>
</tr>
</thead>
</table>
| % of counties that held a SCTWG meeting each month | 100% | Collected monthly via SC specialists | Monthly | Ideally would also monitor % of SCTWG meetings:  
- at which critical stakeholders were present and involved  
- from which meeting minutes were shared  
- from which action items completed prior to next meeting  
- where commodity data was presented and discussed |
<table>
<thead>
<tr>
<th>% of facilities that adhere to SC SOPs:</th>
<th>100%</th>
<th>Collected monthly via SC specialists</th>
<th>Monthly</th>
</tr>
</thead>
<tbody>
<tr>
<td>• % of HFṣ with stockcards available</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• % of HFṣ that performed a physical inventory of the 4 tracer commodities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• % of HFṣ with accurate physical inventory of the 4 tracer commodities</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This data has been collected by specialists during supervision visits each month and submitted via an electronic Kobo form. We can make this form available if desired. Alternatively, it can be collected via a simple Excel document.

<table>
<thead>
<tr>
<th>eCBIS use:</th>
<th>100%</th>
<th>eCBIS dashboard</th>
<th>Quarterly</th>
</tr>
</thead>
<tbody>
<tr>
<td>• # and % of CHAs who have access to eCBIS (who have functioning mobile phones with app installed)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• % of trained CHAs who are submitting data via eCBIS</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• % of trained CHSSs who are submitting data via eCBIS</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• % variance between data submitted via eCBIS and paper forms</td>
<td>0%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

We have not been tracking these indicators since eCBIS was only recently introduced, but these indicators should be closely monitored now that the app is available.

% variance will have to be manually calculated during data quality audits completed each quarter. Facilities with significant variance should be prioritized for supervision during the following quarterly to address issues.

<table>
<thead>
<tr>
<th># of people coached or mentored</th>
<th>N/A</th>
<th>Collected monthly via SC specialists</th>
<th>Monthly</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th># of health facilities visited for supervision</th>
<th>Varies</th>
<th>Collected monthly via SC specialists</th>
<th>Monthly</th>
</tr>
</thead>
</table>

Target should be set each quarter based on data quality audits. Facilities with significant data issues should be prioritized for supervision during the following quarter.

## Outcome Indicators

<table>
<thead>
<tr>
<th>% of CHAs with commodity in stock on day of visit, disaggregated by commodity</th>
<th>90%</th>
<th>IFI</th>
<th>Bi-annually</th>
</tr>
</thead>
</table>

Historically this has remained consistently high for LMH counties and low for other counties due to
| % of CHAs with all life-saving commodities in stock on day of visit | 90% | IFI | Bi-annually | national-level stockouts. Any unusual decreases should be investigated. |

**KITTING AND COMMODITY DISTRIBUTION SOP**

This SOP represents the processes required to implement the CHA Kitting process.

<table>
<thead>
<tr>
<th>Purpose</th>
<th>The SOP’s goal is to aid the Liberian Ministry of Health and other stakeholders to understand the key processes that go into the CHA kitting process. This includes: How requisitions are processed, picking &amp; packing of the kits at CMS, and distribution of the kits to CHAs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsible Person</td>
<td>Liberia Ministry of Health: Department of Pharmaceutical Services (DPS) Central Medical Stores Community Health Services Division (CHSD) County Health Teams (CHT) Health Facilities</td>
</tr>
<tr>
<td>Target Audience</td>
<td>DPS, CHSD, CHTs, (CHSS), Supply Chain partners, Community Health Implementing Partners,</td>
</tr>
</tbody>
</table>
| Minimum Requirement | To ensure commodity distribution allocation is based on reliable and recent consumption data from the CHA program on the e-LMIS. The following key steps and considerations should be made:

- The DPS-CHA PSM officer should approve all CHA commodity requisitions
- The CMS should share the inventory report with the PSM officer prior to approving requisitions
- The CMS should pick, and pack based on approved requisitions from the DPS
- Distributions should be completed on a quarterly basis |
| Resource Materials | CMS Warehouse Management SOP |

**Definitions:**

Requisition: a formal written request from the end user requesting that a commodity be replenished.

Procurement and Supply Management Officer: MoH staff who are responsible for directing and coordinating the purchasing, warehousing, distribution and forecasting of health commodities

**Procedure Implementing Steps (PIS) for Kit based commodity Distribution & Resupply**

**Approving and Processing Requisitions**

- Support the facility CHSS to complete and submit a quarterly CHA-SSRR requisition to the county supply chain unit.
- Support the county M&E teams to enter the CHA-SSRR information into the e-LMIS and the county pharmacist to publish it into the e-LMIS for national stakeholders to view it.
- The national CHA-PSM officer should review and approve the requisition and re-allocate commodities to be resupplied based on the CMS inventory report.
- The national CHA-PSM Officer should submit the approved CHA requisitions to the CMS for picking and packing.
Picking, Packing and Dispatch at CMS

➢ The CMS should use the government picking and packing SOP to prepare a picking and packing list for the CHA commodities and label them accordingly
➢ The CMS should use the government commodity verification and dispatch SOPs to dispatch the commodities to the transport team responsible for delivery to the respective counties
➢ The CMS Operations Manager should send a written communication to county supply chain units notifying them of scheduled delivery dates to their respective counties

Distribution and Delivery of CHA Kits to Counties and Facilities

➢ The transport team should verify the quantities against waybills provided by the CMS before loading vehicles for distribution
➢ The transport and county supply chain team should use the verification SOP to verify the consignment contents against the waybill
➢ Upon reception and verification, the county should develop a last mile distribution plan with key program focal persons
➢ Last Mile distribution should be completed following the last mile distribution guide
➢ CHA commodities should be delivered to the CHSS using the CHA commodity management SOP
➢ Distribution of CHA Kits to Communities
➢ The CHSS should tie resupply activities to the bi-weekly CHA supervisions
➢ The resupply to CHAs should follow the resupply guide in the CHAP policy

DATA TRACKING SOP

This SOP represents the steps and process use in managing supply chain data flow for the CHA program.

<table>
<thead>
<tr>
<th>Purpose</th>
<th>The SOP’s goal is to provide guidance on how data is to be entered by CHAs and consolidated on a monthly basis. It details which forms are to be used and the timing for data reporting and consolidation at different levels.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsible Person</td>
<td>Liberia Ministry of Health: Department of Pharmaceutical Services (DPS) County Health Services Division (CHSD) County Health Teams (CHTs)</td>
</tr>
<tr>
<td>Target Audience</td>
<td>DPS, CHSD, CHTs, Community Health Services Supervisors (CHSS) Division, Community Health Implementing Partners</td>
</tr>
<tr>
<td>Minimum Requirement</td>
<td>To ensure data availability from the last mile, the following steps in the data tracking SOP must be executed: CHSS must complete the CHSS Monthly Restock Form during all CHSS-CHA restock visits. CHSS must enter monthly consumption data for each CHA on the CHA-SSRR. At the end of every quarter, one CHSS should coordinate with the other other CHSS’s to aggregate the monthly CHA consumption data for all commodities, and this should be entered on the facility CHA-SSRR form. On a quarterly basis the CHSS should submit the CHA-SSRR to the district data entry clerk. The data clerks must timely enter all CHA-SSRR in the eLMIS quarterly, and the County Pharmacist must publish all reports entered.</td>
</tr>
</tbody>
</table>
Procedure Implementing Steps (PIS) for Data Tracking

a) CHAs will record services delivered and commodities used when performing the services on the appropriate Community-Based Information System (CBIS) and Logistics Management Information System (LMIS) data collection forms:
   ➢ Family Planning Tracker
   ➢ Sick Child Management Form
   ➢ CHAs Commodities Tracking Sheet

b) The CHSS will enter CHAs commodities resupply and consumption data on the “CHSS Monthly Restock Form” every time a restock takes place.

c) On a monthly basis, the CHSS will enter the monthly consumption of each commodity from all his/her assigned CHAs CHSS Monthly Restock Form onto the LMIS Stock Status Report & Requisition (SSRR) form.

d) On a quarterly basis, the CHSS will complete the LMIS CHA-SSRR form by entering aggregated monthly consumption, loss/adjustments (damaged/expired stock), closing balance and days stock out for each commodity from all his/her CHAs.

e) The CHA-SSRR form should be submitted to the County supply chain unit and/or Monitoring and Evaluation department for entry and publication in the eLMIS.

f) Once the data is entered and published in the eLMIS, it will automatically be used by Program Procurement and Supply Management (PSM) officers for resupply requisition approvals and onward used by CMS for resupply to the counties.

g) The County Pharmacist and Community Health Focal Person (CHFP) working with the Community Health Department will work with all Officers in Charge (OIC) and CHSS to ensure that reports are submitted before the 5th of the new month following the end of the quarter.

h) ALL CHA-SSRR must be entered and published in the eLMIS before the 17th of the new month following the end of the quarter.

i) Reporting data and stock requisitions for the entire county will be submitted using the CHA-SSRR forms.

Conclusion

The SC4CHW was a successful project which applied an array of interventions across 4 key thematic areas (Transportation, Data, Human Resources, Advocacy) to positively impact health supply availability for the CHAs in Liberia. The interventions resulted in the establishment of updated supply chain policies, data systems (eCBIS), and the establishment of a new CHA Commodity kitting system. As this project culminates, it is important to recognize that in order to successfully sustain these new processes and systems, tasks will need to be shifted from VillageReach to other Liberia-based stakeholders, such as from Last Mile Health and/or the Ministry of Health, to ensure that these interventions are maintained and continually implemented in a high quality manner. We hope and expect that this toolkit, as well as the supporting documentation in the SC4CHW Document Library, will be used as a reference by such stakeholders to sustain and continually build on these interventions in the years to come.

SC4CHW Document Library

Link to be added
FOLDER STRUCTURE OF SC4CHW DOCUMENT LIBRARY

Links to be added