



# RECOMMENDATIONS TO IMPROVE COMMODITY AVAILABILITY AT THE LAST MILE THROUGH A MORE RESILIENT SUPPLY CHAIN

January 2024

Submitted to:

United States Agency for International Development under  
Cooperative Agreement # 7200AA20CA00005

Submitted by:

IMA World Health, with JSI Research & Training Institute, Inc.; Pathfinder International; Cooperative for Assistance and Relief Everywhere, Inc.; GOAL USA Fund; and the Africa Christian Health Associations Platform

*This recommendations document is one in a series of three products presenting MOMENTUM Integrated Health Resilience experiences with supply chains at the last mile.*

MOMENTUM Integrated Health Resilience is funded by the U.S. Agency for International Development (USAID) as part of the MOMENTUM suite of awards and implemented by IMA World Health (IMA) with partners JSI Research & Training Institute, Inc. (JSI), Pathfinder International, GOAL USA Fund, CARE, and Africa Christian Health Associations Platform (ACHAP), along with Premise Data, Harvard T.H. Chan School of Public Health Department of Global Health and Population, Johns Hopkins Bloomberg School of Public Health Department of International Health, and Brigham Young University as resource partners, under USAID cooperative agreement #7200AA20CA00005. For more information about MOMENTUM, visit [www.USAIDMomentum.org](http://www.USAIDMomentum.org). The contents of this document are the sole responsibility of IMA World Health and do not necessarily reflect the views of USAID or the United States Government.



**USAID**  
FROM THE AMERICAN PEOPLE



## RECOMMENDATIONS TO IMPROVE COMMODITY AVAILABILITY AT THE LAST MILE THROUGH A MORE RESILIENT SUPPLY CHAIN

This document provides recommendations and resources for various activities, initiatives, and suggestions to strengthen the supply chain for those working in fragile and conflict-affected settings. Recommendations are grouped into seven categories: supply chain skills, preparedness, data, standardization, distribution, storage, and leadership. Improving the interdependent components of the supply chain as part of commodity security is one facet to increasing the availability of maternal, newborn, and child health (MNCH), voluntary family planning (FP), reproductive health (RH), and nutrition commodities.

### IMPROVE AND BUILD SUPPLY CHAIN “FLUENCY,” AWARENESS, AND CAPACITY AMONG HEALTH WORKERS

Increasing supply chain skills requires training and educating health workers, depending on where they are in their career. A spectrum of activities can be implemented to instill good supply chain practices among staff.

- Pre-service training
  - Create Supply Chain 101 courses as part of university, nursing, pharmacy, and other health worker course work integrated into school curricula.
  - Use online guides such as [\*Building a Strong Supply Chain Workforce: The Role of Pre-Service Training\*](#), which was developed to assist institutions of higher learning, governments, nongovernmental organizations, and other stakeholders to establish pre-service training programs for the supply chain management of health commodities.
- On-the-job training and in-service training
  - Promote use of online courses for continuing education, such as [\*Lessons in Logistics Management for Health Commodities\*](#), a self-directed e-learning course. (Requires account sign up/log in)
  - [\*Online Technical Discussions on Health Supply Chains in Humanitarian Crisis Settings\*](#).
  - Form [\*Quality Improvement Teams\*](#) to strengthen the supply chain practices of community health workers (CHWs).
  - Standardize job descriptions by integrating specific supply chain and logistics tasks into job descriptions, so that health workers and supervisors understand their logistics management responsibilities.
  - Include training funding as part of annual budgeting to build training into supply chain improvement activities.

- Identify, train, and develop (re)deployment procedures for emergency surge staff (i.e., during a rapid onset emergency, sending staff from an unaffected area to an affected area to give temporary support).
- Supportive supervision
  - Incorporate review of the supply chain as part of supervision visits.
    - [Supervision and On-the-Job Training for Supply Chain Management at the Health Facility.](#)
  - [Standardize supervision checklists](#) (see *Annex 10 in that document: Supervision Checklist for Health Facility Visits*, p. 160).
  - Use supervision logistics monitoring and supervision tools when conducting site visits to provide targeted feedback and on-the-job training:
    - [Tanzania National Family Planning Supervision Checklist](#)
    - [Tanzania RMNCH Integrated Supportive Supervision Tool for Health Centers](#)
    - [Fiji supervision tools and job aid examples](#)
- Staff Retention
  - Implement [performance-based incentives](#) and staff retention strategies.

## PROACTIVE SUPPLY CHAIN PREPAREDNESS STEPS

Several actions and steps can be taken to prepare the supply chain to ensure continuity and availability of RH and FP commodities.

- Formalize and standardize emergency procedures into the logistics management system's standard operating procedures (SOPs) so they can be ready to use during an emergency.
- Ensure that emergency supplies are tracked separately, to minimize duplication and maintain the integrity of routine logistics data. (See [Ready to Save Lives: A Preparedness Toolkit for Sexual and Reproductive Health Care in Emergencies](#) for additional guidance and resources.)
- Where parallel supply chains are managed by other partners, inform health workers, including CHWs, of the option to obtain commodities from these supply chains, if necessary.
- Review and adapt as needed principles of supply chain management in emergency settings (see the [Logistics chapter](#) of IAWG's *Inter-Agency Field Manual on Reproductive Health in Humanitarian Settings*) and ensure that efforts are coordinated (see points below).
- Coordinate and become familiar with local, [regional, and international humanitarian coordination mechanisms and point persons](#), p.16, ahead of emergencies, to be prepared when they occur. These include national disaster management agencies (NDMAs), the [UNOCHA](#), the [Logistics Cluster](#), the [Health Cluster](#), and the [USAID Bureau for Humanitarian Assistance](#) (BHA).

- Coordinate with other organizations working in the same geographic areas to avoid duplication and seek opportunities to share resources. See the video of the [webinar on coordination in humanitarian settings](#) for more information.
- Prepare storage areas to receive [emergency commodities](#).

## **STRENGTHEN DATA USE AND ACCOUNTABILITY**

Create a culture of data use and increase awareness around the value of collecting quality logistics data at every level of the health system.

- Reinforce the proper and consistent use of stock cards, dispensing registers, and report and request (R&R) forms to capture essential logistics data (stock balance, stockouts, losses, adjustments, and consumption).
  - It is vital to track stock levels, stockout data, and consumption to understand the stock situation at the health facility. This permits staff who manage the supply chain to have insight into the pipeline, provide the correct quantities for resupply, and identify when health facilities may be having logistics management issues. Knowing what those issues are will enable them to provide on-the-job feedback and training.
  - Ensure every product has a stock card that is updated with each transaction.
- Incorporate [supply chain key performance indicators](#) (KPIs) to measure progress, assess the status of the system, and identify areas needing improvement within the system and among staff. See Table 1 for suggested KPIs for the last mile to monitor health facility and health worker performance. Additional examples of KPIs are available here:
  - [Recommended Indicators to Address In-Country Supply Chain Barriers, UNCOLSC](#).
  - Tanzania: Section 8.1.2 Logistics Indicators (available as hard copy only).

**Table 1. Selected Key Performance Indicators**

Measurement Area	Selected Indicators	Level	When
Reporting rates	Overall reporting rate (number of reports expected; number of reports received)	All levels	When analyzing LMIS data
	On-time reporting rate (number of reports expected; number of reports received on time)	All levels	When analyzing LMIS data
	Facility reporting rates	All levels	When analyzing LMIS data
Inventory management/ storage	Inventory accuracy rate	All levels	During supervision visits
	Stockout rate at end of reporting period (number of facilities; number of facilities that reported zero stock in the last 6 months)	All levels	When analyzing LMIS data
	Stockout rate during the reporting period (number of facilities; number of facilities that had a stockout during the reporting period)	All levels	When analyzing LMIS data
	Percentage of facilities stocked out of any contraceptive method on day of visit	Service delivery point	During supervision visits
	Overall stockout rate of any contraceptive method in the last 3 or 6 months	All levels	When analyzing LMIS data
	Stocked according to plan rate	All levels	During supervision visits
Data quality	Stock card <ul style="list-style-type: none"> <li>Current balance=physical count</li> </ul>	All levels	During supervision visits
	Daily attendance register <ul style="list-style-type: none"> <li>Monthly totals are correct</li> <li>Quarterly totals are correct</li> </ul>	Service delivery point	During supervision visits
	Quarterly Report & Request <ul style="list-style-type: none"> <li>Numerous indicators</li> </ul>	Service delivery point	When analyzing LMIS data During supervision visits
Forecast accuracy	For all products that the program has committed to supplying, this indicator measures the percentage of difference between forecasts previously made for a year and the actual consumption or issues data for that year.	Central level	When analyzing LMIS data

- Strengthen data visibility
  - Form IMPACT Team Networks to strengthen product availability by using [logistics data to identify problems](#) and develop solutions. IMPACT teams have been successfully used in Ethiopia, Kenya, Malawi, Rwanda, and other countries (see [Placing People, Data, & Processes at the Heart of Supply Chain Improvement](#)), and [Tanzania](#) and [Nigeria](#).
  - [Supply Chain Visibility for Informed Resupply Decisions: Using cStock to Collect Logistics Data in Crisis Settings](#).
  - [Getting Medicines to Palestinian Refugees: A Simple Tool Links Data to Monitor Stock Levels for Pharmaceuticals](#).

## STANDARDIZE SUPPLY CHAIN PROCESSES AND SYSTEMS

Having a universal set of supply chain concepts gives everyone the same language and understanding from which to work. A key reference for training health workers in supply chain management is starting with standard processes, rules, terminology, and forms.

- Standardize logistics forms, supply chain terms, and schedules to harmonize supply chain practices nationally by developing standard operating procedures for [supply chain management](#). See the following country examples:
  - *Burkina Faso*—[Management Information System Integrated Logistics of Health Products Procedures Manual](#)/Systeme D'information en Gestion Logistique Integre des Produits de Sante au Burkina Faso Manuel De Procedures
  - *Mali*—[Standard Operating Procedures Manual](#) for the Management of the Logistics Information System for Essential Drugs and Health Program Inputs
  - *Niger*—[Harmonized Procedures Manual Operational](#) for the System Information in Logistics Management (*SIGL* in French)
  - *Tanzania*—[Logistics Systems Standard Operating Procedure Manual](#)
  - *Rwanda*—[Standardizing Paper-based LMIS Tools to Optimize Inventory Strategy](#)
- Introduce a paper-based or electronic LMIS to collect logistics data from the primary level and the community level using [cStock or other mobile applications](#).
  - cStock is a digital supply-chain strengthening approach, implemented via multiple digital platforms. CHWs can use cStock to report their health product stock levels; the cStock system calculates the supplies and quantities that the CHWs need, and sends an alert to the supervisor responsible for their resupply. CHWs receive a message when their commodities are packed for resupply distribution, so they do not waste time and resources traveling when products are not available. cStock is used in [Kenya and Malawi](#).

## AUGMENT DISTRIBUTION AND TRANSPORT RESOURCES

Along with increasing funding to purchase additional vehicles, make repairs, and maintain existing vehicles, there are other strategies to consider, in which adjusting and leveraging transportation resources can improve the distribution of health commodities.

- Optimize transportation routes to increase efficiency and reduce travel times. A system design analysis can look at the efficiencies and potential cost savings of adjusting transportation routes or warehouse networks. The results do not necessarily provide a solution, but they can provide guidance to help make decisions. A system design approach has been used in for the immunization supply chain, and can be applied to any health supply chain system.
- Coordinate with other programs to share and leverage transport resources and distribution plans (i.e., health and logistics clusters, supply chain technical working groups [TWGs]).
- Use the [Transport Management: A Self-Learning Guide for Local Transport Managers of Public Health Services](#) resource, which can help ensure that good transport management practices are being implemented.
- Contract with private transportation vendors to distribute commodities; standby contracts can be established to save time in advance of an emergency.
- Define and formalize distribution plans.
- Develop and implement risk management plans. (See relevant [article on transportation management risks](#).)
- Consider formalizing reverse logistics<sup>1</sup> to maximize the use of vehicles and facilitate waste management.

## PRACTICE GOOD WAREHOUSING

Following good storage practices will prolong the life and quality of health commodities. These guidelines can facilitate the ability to maximize the space available at any level of the health system. In addition, remember that forecasting and procuring quantities that exceed the needs of the program can result in exceeding available storage space and the potential expiry of products.

- Review [Guidelines for the Storage of Essential Medicines and Other Health Commodities](#) and [Principes directeurs applicables au stockage des médicaments essentiels et autres produits de santé](#).
- Provide [storage condition posters](#) to display in storeroom and orient staff to practice good warehousing practices through supervision and on-the-job training.
- Orient and refresh staff on basic good storage practices through refresher training.
- Establish and follow good [waste management logistics practices](#).

---

<sup>1</sup> The formal definition is to return surplus goods to the retailer or manufacturer. In global health, it can also indicate taking advantage of transportation to move things from a health facility to other points.

## LEADERSHIP THROUGH ONGOING AND LONG-TERM INITIATIVES

Continued commitment and stewardship are needed to continue strengthening the supply chain at the last mile. Strategies and supportive policies that include attention and resources will facilitate better commodity availability at the community level.

- Develop a national supply chain strategic plan capturing the short- and long-term goals to strengthen and [continually evolve](#) the supply chain. An example comes from [Ethiopia](#).
- Conduct a national supply chain assessment to identify areas of strengths and weaknesses, to develop solutions, and as a baseline to assess performance.
  - [Logistics Indicators Assessment Tool \(LIAT\)](#)
  - [Logistics System Assessment Tool \(LSAT\)](#)
  - [National Supply Chain Assessment \(NSCA\) Toolkit](#)
  - [Supply Chain Compass](#)
- Create national guidelines specifically for CHWs outlining their purpose and responsibilities, the services they are to provide, and the products they can dispense within the health care system.
  - Tanzania developed the [National Operational Guideline for Community-Based Health Services](#) for their community-based health care program to provide essential information needed to guide all stakeholders responsible for overseeing, facilitating, managing, and implementing community health interventions at all levels, to ensure consistency, adherence to standards, quality, and sustainability.
- Develop a [continuity of operations plan](#) (COOP) to review and map existing supply chain operations and develop emergency protocols to maintain basic supply services for the health sector during a crisis. Developing a COOP will build risk-informed supply chains that have positive redundancies built into operation plans, making them more resilient when emergencies occur.
- Form supply chain TWGs within health areas (e.g., immunization, HIV, MNCH, malaria) to resolve issues and leverage resources among staff and partners.
- Join and participate in the [International Association for Public Health Logisticians \(IAPHL\)](#) and the [Humanitarian Commodities Logistics](#) (requires account and sign in) communities of practice to exchange professional experiences, post questions, and receive support from other practitioners of public health supply chains. (See this [infographic](#) for more statistics.)
- Formalize an after-action review process to capture and build on lessons learned from emergency response operations.



## ADDITIONAL RESOURCES

### Community Health Workers

- [CHWs and the supply chain](#)—Community Health Worker Central
- [Supply Chain for Community Health Workers \(SC4CHWs\) in Liberia](#)
- [Stock-outs of essential medicines among community health workers \(CHWs\) in low- and middle-income countries \(LMICs\): a systematic literature review of the extent, reasons, and consequences](#)

### Last Mile Interventions

- [Supply Chains for Community Case Management](#)
- [Driving Last-Mile Solutions to Ensure Access to Public Health Commodities: A report on key activities, challenges, and lessons learned](#)

### Guidelines, SOPs, and Strategies

- [Human Resources and Capacity Building in Humanitarian Organizations](#)
- [Strategies for Navigating Health Commodity Procurement in Humanitarian Settings](#)
- [UNHCR Policy on Emergency Preparedness and Response](#)

### Collections, Toolboxes, and Toolkits

- [20 Essential Resources: REPRODUCTIVE HEALTH COMMODITY SECURITY AND SUPPLY CHAIN MANAGEMENT](#)
- [Procurement & Supply Management Toolbox](#)
- [Menstrual hygiene management \(MHM\) in emergencies toolkit](#)
- [Adolescent Sexual and Reproductive Health Toolkit for Humanitarian Settings: A Companion to the Inter-Agency Field Manual on Reproductive Health in Humanitarian Settings](#)

### Service Delivery

- [Ready to Save Lives: A Preparedness Toolkit for Sexual and Reproductive Health Care in Emergencies](#)
- [SRH Clinical Outreach Refresher Trainings for Crisis Settings \(S-CORTs\)](#)
- [Minimum Initial Service Package \(MISP\) Resources](#)
- [Contraceptive Delivery Tool for Humanitarian Settings](#) (This tool consists of a wheel and jacket to be used by front-line providers to help women initiate contraception)
- [Emergency Contraception for Conflict-Affected Settings: A Reproductive Health Response in Conflict Consortium Distance Learning Module](#)