



# Institutionalizing Supply Chains for Community Case Management

January 23, 2024

*Co-hosted by the Institutionalizing iCCM and  
Commodities Subgroups of the Child Health Task  
Force*



# Speakers



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# COMMUNITY SUPPLY CHAIN.

Stock-outs of Essential Medicines  
among CHWs in LMICs - Systematic  
Literature Review

Dr. Madeleine Ballard, CEO, CHIC



# WHAT TO EXPECT.

We'll cover:

1. Context
2. Objectives & methods
3. Results
4. Implications

[joinchic.org/resources/supply-chws/](https://joinchic.org/resources/supply-chws/)


Olaniran et al. *Human Resources for Health* (2022) 20:58  
<https://doi.org/10.1186/s12960-022-00755-8>

Human Resources for Health

## RESEARCH

Open Access

# 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

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## Abstract

**Background:** This paper explores the extent of community-level stock-out of essential medicines among community health workers (CHWs) in low- and middle-income countries (LMICs) and identifies the reasons for and consequences of essential medicine stock-outs.

**Methods:** A systematic review was conducted and reported in line with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. Five electronic databases were searched with a prespecified search strategy and the grey literature examined, January 2006–March 2021. Papers containing information on (1) the percentage of CHWs stocked out or (2) reasons for stock-outs along the supply chain and consequences of stock-outs were included for risk of bias. Outcomes were quantitative data on the extent of stock-out, summary

# iCCM: POSSIBILITIES & STOCK- OUTS.

iCCM can reduce child deaths by up to 60%

Stock-outs undermine this possibility, lead to adverse outcomes.

To solve the problem we must understand its:

- Extent
- Cause
- Consequences



# OBJECTIVE & METHODS.

Objective: assess the extent of, consequences, and causes of stock-outs at community level.

- Systematic review (PRISMA guidelines)
- 5 databases & grey literature, January 2006–March 2021
- All papers appraised for risk of bias
- Outcomes:
  - *quantitative* data on stock-out extent (descriptive statistics)
  - *qualitative* insights into reasons & consequences (thematic content analysis & narrative synthesis).

# RESULTS: EXTENT.

The research concluded that the stock-outs are bad, getting worse, & that there are particular barriers at the last mile.

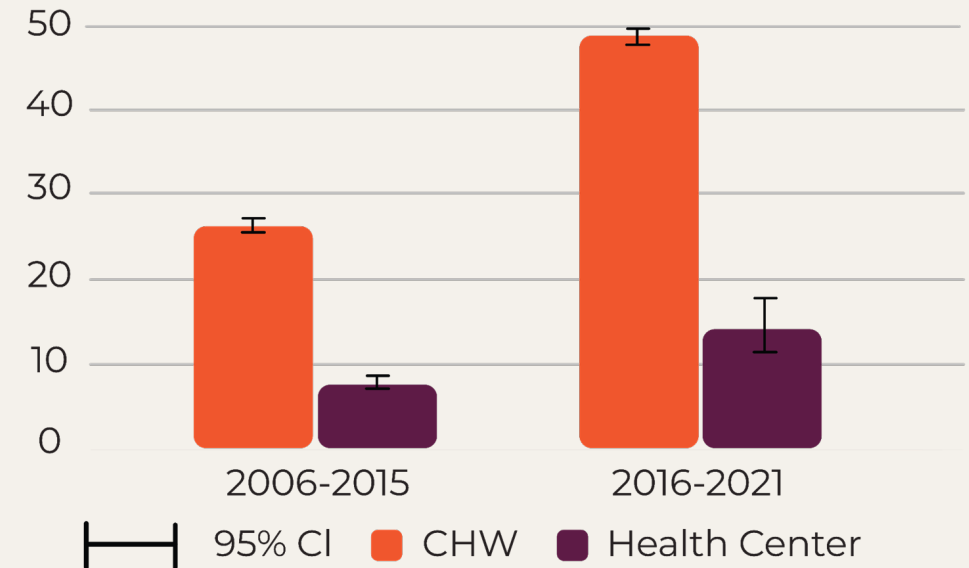
1083 record screened, 78 evaluations included

- 62,372 CHWs
- 2,383 health centers

Barriers at the last mile:

- CHW stock-outs: 28.93% [CI 95%: 28.79–29.07]
- vs. ( $p < 0.01$ )
- Health center: 9.17% [CI 95%: 8.64–9.70]

Essential medicine stock-outs in LMICs appear to be on the rise:  
48.65% in last 5 years vs previous 10.





# RESULTS: CAUSES OF STOCK-OUTS.

Issues were identified across various stages of the supply chain.

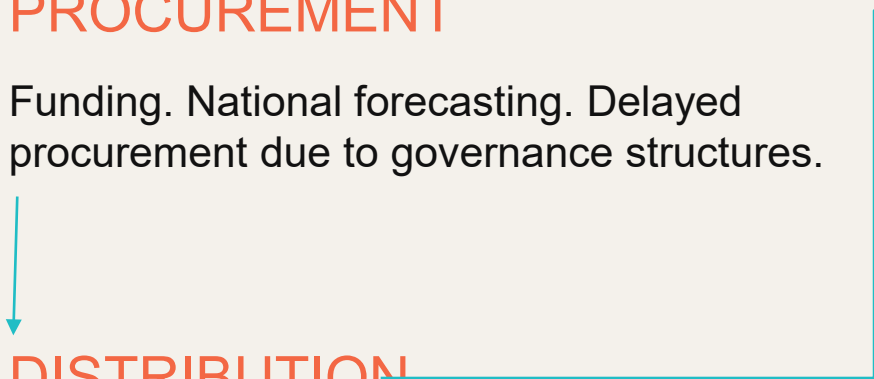
## PROCUREMENT

Funding. National forecasting. Delayed procurement due to governance structures.



## DISTRIBUTION

Lack of CHW-specific distribution policy.  
Coordination between levels.  
Fragmentation. Challenging terrain.



## WAREHOUSING/STORAGE

Inadequate/improper storage space.



## INVENTORY MANAGEMENT

Poor data management and stock planning.  
Accountability.



# THE IMPACT ON PATIENTS & CHWS.

The consequences of stockouts included:

- interruptions to iCCM
- delays
- out-of-pocket expenses
- insufficient treatment
- dosing practices that increased the risk of medicine resistance









# ANY QUESTIONS ?

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# Effective Community-Level Supply Chains for iCCM and Malaria

Grace Adeya, Task Order Director GHSC-PSM | January 23, 2024

Photo: Lan Andrian



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**PEPFAR**  
U.S. President's Emergency Plan for AIDS Relief



# Effective Community Level Supply Chains For iCCM And Malaria: Overview



PHOTO CREDIT: GHSC-PSM | Zen Photography Madagascar

- We need flexible and resilient supply chains that can deliver quality health products, including malaria commodities, to CHWs and the communities they serve to realize our objectives for Integrated community case management (iCCM).



# Effective Community Level Supply Chains For iCCM And Malaria: Overview

- As part of the U.S. President's Malaria Initiative (PMI) five-year strategy to reduce malaria mortality and morbidity and bring more countries toward malaria elimination, PMI identified strengthening community health systems as essential
- Effective Community Level Supply Chains for ICCM and Malaria

Advocacy paper reflects on overarching challenges, raises awareness of best practices, and provides recommendations to help strengthen community level supply chains





# Specific supply chain challenges of communities and CHWs that need to be addressed



## CAPACITY

- May be regulatory or programmatic limits on services or products offered
- CHWs frequently have limited formal education and training
- CHWs may not be proficient in “national” language (so materials may need to be in “local” languages)



## INFRASTRUCTURE

- Poor conditions for product Often hard to reach
- Limited infrastructure (roads, electricity, internet) storage
- CHWs are often required to travel to collect supplies



## PROGRAMMATIC

- CHWs status as part of the health system may be unclear
- Lack of remuneration
- Often weak health systems and limited data visibility

# What are the key recommendations for effective community level supply chain?

1

**Ensure that supportive policies and systems exist and are documented**

- CHWs List of Health Products
- Tools and Forms
- A document on the structure of the community-level supply chain
- Written SOPs

2

**Strengthen supply chain systems and processes**

- Forecasting and Supply Planning
- Inventory Management Systems
- Financial Systems
- Capacity Strengthening

3

**Prioritize data visibility**

- Strengthening the (LMIS) at the community level to allow visibility of disaggregated supply and demand data is vital for accurate forecasting and routine resupply.

# Examples of key questions to ask about the community-level supply chain



## AWARENESS AND PRIORITIZATION

Is the community-level supply chain a national priority?  
Do decision makers talk about it?



## DOCUMENTATION AND POLICY

What range of products and services do CHWs offer?  
Is a standardized list of products available?



## DATA VISIBILITY

Are data available on stockouts at the community level?  
Is this information routinely available?



## SUPPLY CHAIN

When national or regional quantifications are conducted, are products needs at the community level explicitly considered?



## FINANCING

Are products offered by CHWs subject to cost recovery? Are financial processes strong enough to support resupply?



# What should you do with the advocacy document?



Use it as an advocacy tool to share with country stakeholders such as donors, partners, key host government officials, etc.



Engage with key partners using information from the document.



Factor questions and recommendations from the document into country work planning and activity implementation.

USAID GLOBAL HEALTH SUPPLY CHAIN PROGRAM  
Procurement and Supply Management



Thank you





Photo credit: Jane Briggs, MSH

## USAID MEDICINES, TECHNOLOGIES, AND PHARMACEUTICAL SERVICES (MTaPS) PROGRAM

*Improved Access. Improved Services. Better Health Outcomes.*

# Financing Community Health Products

*Jane Briggs, Senior Principal Technical Advisor,  
Lead on MNCH, MTaPS*

January 23, 2024



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# Health products for use at community level need to be available at national level

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- Community health workers (CHWs) **don't work in a vacuum**
- Need dependable **national-level availability** and an **efficient supply chain** to the community
- Otherwise, there is a negative impact on the **ability of CHWs** to provide **quality services**
- To ensure sufficient supply, financing needs to be assured not only for **procurement** of commodities at national level but also for their **distribution to the last mile**



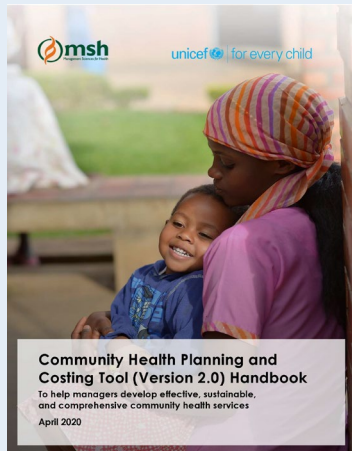
# To mobilize financial resources, we need to know how much is needed

- ❗ Community needs are often overlooked at the planning stages
- ❗ In forecasting and supply planning, community needs are not separated explicitly or are not accounted for
- ❗ Data on CHW consumption may be missing in the LMIS or aggregated with health center data
- ❗ Financing is not sufficient for health facility needs as well as community, and products intended for the community are diverted to health centers

# Tools to help countries plan for commodity use at the community level

## Community Health Planning and Costing Tool (Version 2.0)

- For planning community services and calculating the resources needed
- Covers a comprehensive package of community health care services
- Open-source spreadsheet tool to project the costs and financing



## Quantification resources such as the Quantification Analytics Tool



## Forecasting supplement on reproductive, maternal, newborn, and child health medical products

- Morbidity-focused and includes community needs for each condition where applicable
- Excel spreadsheets



# Global Fund opportunity for financing commodities (I)

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- In 2014, Global Fund agreed to fund the community platform costs for iCCM but not commodities
- However, there were still stockouts at the national level due to:



Inadequate funding



Poor data



Insufficient or inadequate quantifications and forecasting



Challenges of co-financing of non-malaria iCCM components and commodities



## Global Fund opportunity for financing commodities (II)

In January 2023, Global Fund announced they could fund non-malaria commodities for iCCM with the following conditions:

- Only commodities for **pneumonia** (amoxicillin and timers) and **diarrhea** (ORS and zinc)
- Only for **community level**, not health facility level
- Only if there was an **identified gap**
- **Countries need to describe:**
  - How commodities would arrive at the community level
  - How antimicrobial resistance would be contained
  - A strategy for continued financing beyond the three years of the Global Fund grant

## The 2023 GC7 Global Fund proposal cycle windows

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Window	Applicant Submission Deadline
1	20 March 2023
2	30 May 2023
3	21 August 2023
4	5 February 2024
5	29 April 2024
6	9 September 2024
7	TBC

# Challenges countries faced

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- 
- Country teams were not aware of the medicine needs of the community level
  - Country teams did not know whether community level commodities were fully funded
  - Advocating for part of Global Fund malaria budget was challenging as budget is limited, even for malaria needs
  - GF funding request included gap tables (patients not numbers of tablets)
  - Some country teams were not aware of the GF opportunity until too late
  - Child health and community health teams are often not involved in the GF funding request preparation process

# Support provided to countries



Quantification sheet linked to the CHW gap analysis table



Remote technical assistance



Advocacy brief



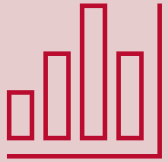
**SCAN** to access the advocacy brief





# Summary

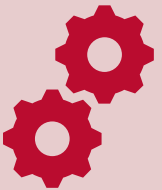
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Estimating commodity needs for the community level is needed for resource mobilization



Financing required—not just of commodity procurement but also supply chain



Global Fund is just one mechanism to leverage funds for commodities and CHW supply chain



Photo Credit: MSH staff, DRC

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# Thank you

# Questions?



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# Supply Chain for Community Health Workers

*A Systems Strengthening Project Liberia*

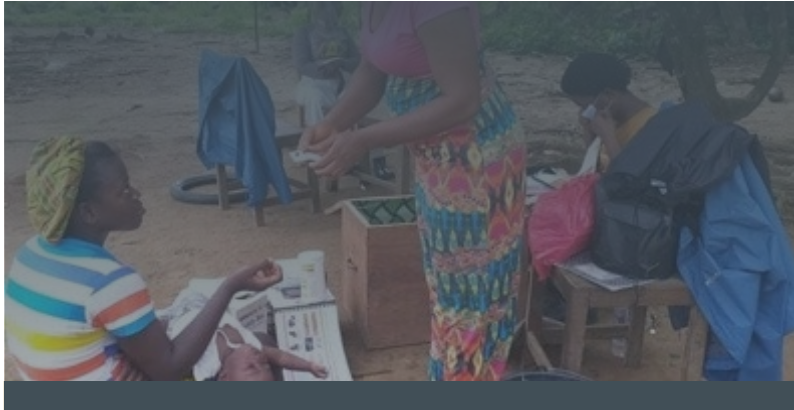


VILLAGE  
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X



# Getting Products to People: A VillageReach approach

Getting CHAs in Liberia the supplies to serve their communities



Community Health Assistants (CHAs) are the backbone of the public health system.



CHAs can dramatically expand access to health care in a cost-effective manner if they are *equipped* with the supplies, they need to serve their communities.



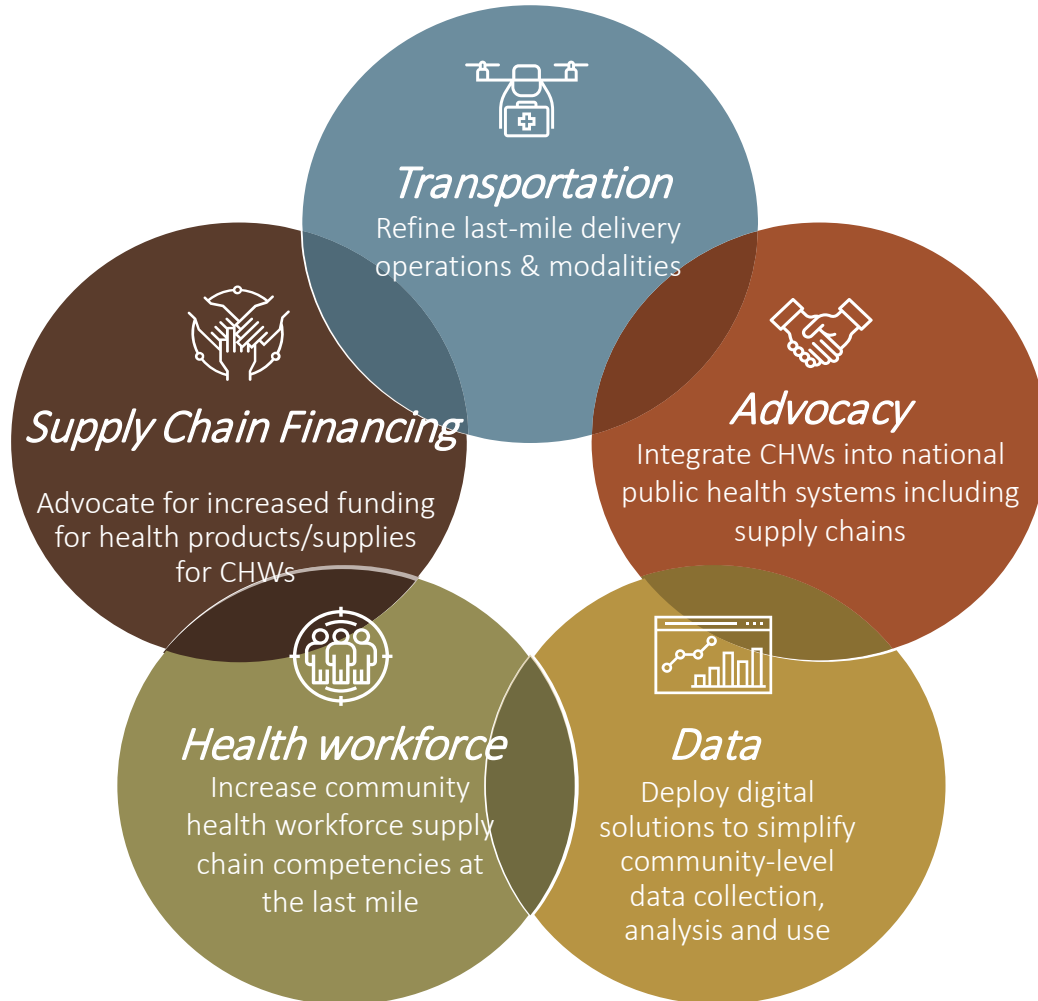
## Supply Chain Challenges:

- Lack of data for decision making
- Limited supply chain expertise
- Inconsistent delivery systems



# Overview of the Supply Chain for CHWs

Improving supply chains outside of health facility to the last mile ensures CHWs have medicines and lifesaving health products, and can serve the under-reached



## Multi-level Intervention

- **National engagement**  
Advocacy for process, strategy, policy change, prioritization of CHW supplies, financing, TWG
- **District/County**  
Support for transportation of supplies, govt engagement
- **Community level**  
HCW capacity building, support with digital tool use/deployment

# Key highlights



Integration of  
Community Health  
Supply Chain into the  
National Public Health  
Supply Chain Master  
Plan

CHA commodity needs  
and forecasts included in  
the national commodity  
quantification and  
supply plan reviews

Improved the LMIS  
reporting rates to  
100% contributing to  
systematic allocation  
of commodities to  
the NCHP by  
counties

Digitization and pilot  
deployment of the  
community-based  
information system  
(eCBIS)

Developed and  
deployed a CHA supply  
chain kit delivery  
system

Deeper understanding of CHA supply chain bottlenecks



# Lessons learnt in Liberia

- Standardizing supply chain practices to reduce fragmentation
- Development of change champions who serve as strong advocacy for integration and government adoption
- Adoption of technology to replace paper based processes, training and mentorship

## 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 and create space

## Human resource capacity

- Commodity and waste management skills
- Dedicated workforce to manage the last mile supply chain

## People centered approach

- Use people centered approach to design interventions at the community level
- Leave room for adjustments (innovations) , continuous improvement reviews and planning with end users and key stakeholders

## Invest in knowledge management

- MOH should establish repositories for the supply chain and community health initiatives to ensure that the lessons learnt, best practices, case studies, toolkits, challenges are preserved and serve as the foundation for future projects.

## Fund policy integrations and implementation

- Integration of proven interventions into national policies
- Prioritize resource mobilization for low-cost interventions that have proven to be successful in achieving policy and strategic priorities

# Potential solutions for future considerations

To ensure performance of community supply chains, invest in workforce, digitization, transport infrastructure and reliable funding for commodity procurement

## Reliable funding

Reliable funding and predictable procurements for medicines and supplies



## Workforce development

Introduce a lastmile supply chain cadre to manage the supply chain



## Digitization of key processes and information

Digitization of service delivery and supply chain workflows into a single app



## Outsourcing transport

Engage the local private sector to support with commodity deliveries to hard to reach areas







Zikomo! Thank  
you! Obrigada!  
Merci!



**Questions?**



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