

Webinar Series

Session 1: Overview of Supply Chain Management for Community Case Management (CCM)

May 15, 2013

9:00-10:30 EDT

Supply Chain Management Subgroup
of the CCM Task Force



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SIAPS 
Improved Access. Improved Services.
Better Health Outcomes.

 **MiCHIP** | Maternal and Child Health
Integrated Program



CCM Task Force

100 + Members: Multilaterals, bilaterals, academics, non-governmental organizations, consortia, foundations

How we operate:

- Steering Committee
- Secretariat
- Working Groups
 - Supply Chain Management
 - Operations Research
 - Monitoring & Evaluation
 - New Tools

CCM Task Force: Supply Chain Management Subgroup

Objective of Sub group:

- Provide technical guidance to implementers on supply chain issues for CCM

Key Activities:

- Highlight and facilitate discussion of supply chain management issues in CCM (webinar series)
- Enhance supply chain resources and tools available on www.CCMCentral.com

Current membership includes:

SIAPS, SC4CCM, UNICEF, PSI, and MCHIP

Objective

From procuring the health products to transporting and storing them in the community, there are unique considerations and challenges at each step of the CCM supply chain.



This webinar will:

- Provide an overview of supply chain topics
- Discuss some of the major supply chain management (SCM) challenges
- Discuss experiences in addressing these challenges to improve product availability and use

Overview

1. Introduction
2. Considerations for CCM and Planning
3. Overview of Supply Chain Functions
 - Product Selection
 - Quantification / Supply Planning/Procurement
 - Standard SCM Procedures
 - Distribution and Transport
 - Storage Conditions
 - Inventory Management
 - LMIS: SCM Data and Reporting
4. Summary
5. Resources
6. SCM Subgroup
7. Questions and Discussion

Getting products to the community

Unique challenges :

- Rural areas, difficult geography
- Limited or challenging transportation networks
- Often relying on volunteer community health workers (CHWs) who work out of their homes or villages
 - no dedicated physical space
- At the end of the supply chain



Photo: Millenium Promise

Good planning of supply chain management is essential to overcome these challenges

Community Case Management Context

CHWs are at the “last mile” in health system distribution and rely on the continuous availability of medicines to the community level



SCM for CCM needs to be considered within the full supply chain context, not simply as an add-on

Community health workers are reaching children in the most hard to reach areas in a wide variety of geographic settings and with a wide variety of products:

- **Ethiopia** – 30,000+ Health Extension Workers managing up to 25+ products
- **Malawi** – 3,000 + Health Surveillance Assistants (HSAs) managing up to 19 products
- **Rwanda** – 35,000+ CHWs managing 5-8 products (~ 2/3 providing CCM)

Product Selection

Community-based treatment adds additional layers to the supply chain – often requiring products with characteristics different than those used at hospitals and health facilities

Products need to be selected considering the full supply chain, the CHW and the end user

Select products in **pediatric** dosages and formulations

Select packaging appropriate for the community level, specifically:

- Transport and storage conditions
- Volume of clients
- Unique needs of infants and children
- Simplify dispensing and manipulation by CHWs

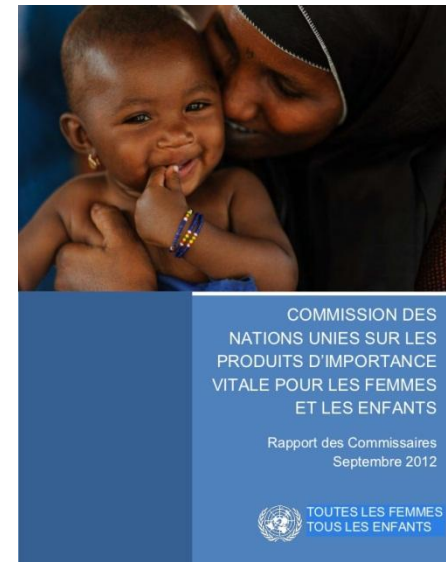


Product Selection

Children and caregivers have a preference for liquids, but syrups and suspensions are bulky to transport, store, and manage.

Ideally, countries should:

- Select high quality dispersible tablets
- Select individual courses of treatment (blister packs) or individually packed rapid diagnostic tests (RDTs)
- Ensure selected formulation is on the National Essential Medicines List and in standard treatment guidelines



UN Commission on Life Saving Commodities for Women and Children

Recommended Products:

Amoxicillin – 250mg dispersible tablets in blister packaging of 10

Oral Rehydration salts (ORS) – low-osmolarity sachets (0.2, 0.5, 1.0L sachets)

Zinc – 10mg or 20mg dispersible tablets in blister packaging of 10

Example: Rwanda

After implementing CCM, Rwanda re-evaluated the products in use and switched to products better suited to the CHW context:

- Amoxicillin 125mg dispersible tablets in blister packs
- Zinc 10mg dispersible tablets in blister packs
- PSI overpacks the Coartem with pictorial information for use only at the community level (Primo)



Selection of unique products also ensures that products reach CHWs

PRIMO

Coartem® 20/120
artemether 20 mg
lumefantrine 120 mg

AMABWIRIZA: PRIMO Umuhondo ivura malariya yoroshye iterwa n'imibu ya nijoro ikwirakwiza uduterandwara.

Malariya iravurwa igakira kandi iyowe hakiri kare ntaba igikatu ngo itere ibibazo.

RANGIZA UMUTI UKURIKIJE AMABWIRIZA AKURIKIRA

1. Umwana wewe afitwe umubiri muho PRIMO byibwirira.

2. Kura neza ibimbi (2 mu gupaki).

3. Sya ibimbi niba atabimira.

4. Vanga umuti n'amazi maza cyangwa amata, ubuki, umuneka.

5. Hita uha umwana umuho rwanga.

6. Ongera umuho umuti nyuma y'amashyamba 8 kugera kuri 12.

7. Ku muni wa kabiri mu gihe umuho umuti.

8. Ku muni wa kabiri nimugoroba, ongera umuho umuti.

9. Ku muni wa gataru mu gitondo, ongera umuho umuti.

10. Ku muni wa gataru nimugoroba, ongera umuho umuti.

11. Umwana uranyweye imbi neza, akanayitangiza akiza vuba.

12. Bari muranga ugomba kugira izitirambuzi ibyeye umuti.

13. Kurama mu nzitirambuzi ibyeye umuti buri ghe birinda Malariya.

14. Hehe n'umubu, hehe na Malariya.

KOYESHA UMUTI UKIMARA KUMVA UMURIRO

| TANGIRA | UMUNSI WA 2 | UMUNSI WA 3 |
|-----------------------------|-------------|-------------|
| MU GITONDO 1. | 3. | 5. |
| MURUGOROKA 2. | 4. | 6. |

ABANA B'IBIRO kg 15 - kg 25
Abana bari hagati y'imyaka 3 na 5

Abana bari muni y'amezi 6 (kg 5) bagomba kujanywa ku ivuriro bakimara gufatwa. Wunywe ukurikije amabwiriza. Ntuzagire uwo agabanyiriza kuri uyu muti. Tanga umuti hamwe n'ibinyo. Komeza gutanga ibinyo cyangwa kosa niba bishoboka.

Plan for supply chain in CCM

Common Pitfalls

- Procurement and delivery of products can take 6 months to a year depending on policies and sources
- Design of tools and materials takes time, if there is no mechanism in place to resupply CHWs
- Additional time for distribution to CHWs also needs to be considered

Mitigation Strategy

- Establish a plan for the pilot or introductory phase and scale up so that medicines and supplies can be estimated and procured
- Ensure that the supplies are ready to give an initial stock to the CHWs as they complete their training and that they are trained in the resupply mechanism

Quantification



Quantification involves:

1. Forecasting future consumption at the CHW level (estimating needs)
2. Ensuring there is adequate inventory at all levels of the system so products will reach the CHWs (supply planning)

Historical data are ideal for forecasting needs (such as consumption or case data) but if CCM is new, there is no such data. Demographic data e.g., number of episodes/child/ year for each condition can be used.

Supply Planning

The output of a quantification exercise should be a supply plan that indicates when products are required in country to meet the forecast need

The supply plan take into account:

- (1) Timing and availability of funding,
- (2) Stock on hand (SOH) of products currently in the system and any orders already placed, and
- (3) Estimated supplier lead-time for each product

The supply plan should guide procurement, not the forecast



Be realistic about scale-up rates and patterns of use of services: assuming immediate at scale service availability and service use will over-estimate need and risk misuse, diversion and/or expiry.

Procurement

- Include technical specifications from the first procurement to avoid complications
- Perform quarterly review of consumption against forecast and adjust supply plan accordingly
- Communication and coordination maximize resources and ensure that needs at all levels of the system are considered.
- Need strong advocacy for the CHW level to ensure sufficient funding.

Consider staggered delivery dates for annual procurements: this allows for changes in dates of future shipments or quantities, as trends in demand become more evident, especially for new programs



Standard SCM Procedures

SCM procedures for CHWs should be

- Designed to align with already existing procedures and systems at CHW and higher levels,
- Appropriate for the CHW
- Included in initial training of CHWs.

Areas to consider in design of resupply system:

- Distribution and transport
- Storage conditions
- Inventory management
- Logistics Management Information Systems (LMIS): SCM Data and Reporting

Simple systems should be developed so CHWs can track, record and request products without the need for complicated calculations.



Create simple job aids on sturdy materials in the local language to help CHWs complete their supply chain tasks.

Distribution / Transport

Transporting products is one of the biggest challenges

- CHWs frequently rely on non-motorized means such as bikes, foot, donkeys, to collect products from resupply point



- Clearly define the resupply point: choose the nearest health facility if possible
- Harmonize resupply with existing monthly meetings or salary collection to minimize unnecessary travel
- If CHWs are using public transport consider an incentive to ensure supplies are collected
- Consider distribution of medicines by supervisors if supervision is regular to all CHWs

Storage

Storage is particularly challenging for CHWs as they often work from their homes and in remote places. Health products must always be protected from water, sunlight, heat, humidity, rodents and insects, and kept out of the reach of children

- CHWs should be provided with practical storage solutions such as lockable, dry, dark containers.
 - e.g. wooden boxes heat up less than metal ones.
- Products should be arranged to facilitate counting and general management .
- Expiry dates should be monitored - if this is too difficult for CHWs this can be part of supervision



Storage conditions should ensure the physical integrity as well as quality and safety of products and their packaging.

Inventory Management (1)

Inventory control systems guide facility staff and CHWs in **when to order and how much to order** to ensure a continuous supply and to minimize or prevent stockouts and overstocks.

Simple systems are needed to help CHWs manage their stock and record and report consumption without the need for complicated calculations or to shift responsibility for calculations to higher levels



Inventory Management (2)

Resupply quantities should be based on consumption and how much the CHW needs to last them until their next order

- In determining order frequency, balance storage space with the burden of frequent travel to the resupply point.
- For regular orders, e.g. monthly, the stock used is replaced plus a buffer to allow for fluctuations

Order Qty = Consumption x 2 - Stock on hand

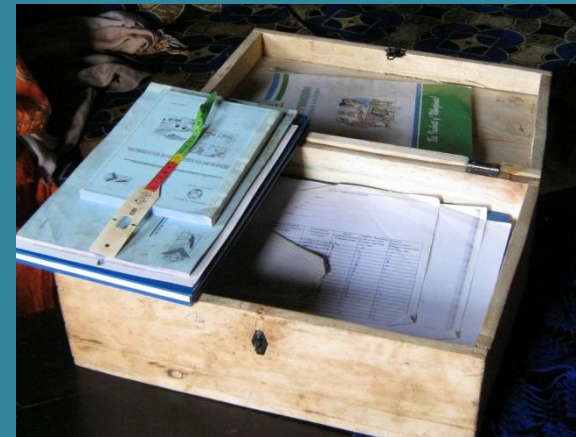
- CHWs have to order **before** they stock out to ensure continuous service.

LMIS: Supply Chain Data

Logistics Management Information Systems (LMIS) collect important data to inform routine resupply, respond to emergency situations (e.g., stockouts), monitor performance, and forecast quantities required for CHW programs nationally.

Typical data collected through LMIS:

- (1) Stock on hand
- (2) Consumption (or issues) data
- (3) Losses and adjustments
- (4) Days stocked out



Limit data collected from the community level to include only essential data e.g. stock on hand and consumption, so as to not overburden the CHWs with reporting.

Design simple tools for CHWs e.g. stock cards and report form.

LMIS: Reporting and Resupply

- Link reporting with resupply
- Data must be available on a timely basis for decision making
- Ensure that community-level logistics data is visible at district and central levels to ensure that this information is available for quantification and supply planning for CHW programs (don't aggregate with health center data)



Ideas for simplifying the LMIS:

- CHWs only report stock data and the resupply point calculates the re-order quantities based on consumption
- Use of mobile phones can enhance transmission of data and automate calculation of resupply quantities

Example: Resupply Procedures in Rwanda

- CHWs bring stock cards to monthly meetings
- Cell Coordinators of a sub set of CHWs compile data to calculate resupply
 - This reduces the workload on health center staff in the resupply process
- Cell Coordinators use a “magic” calculator to determine resupply quantities based on consumption



Example: Resupply Procedures in Rwanda

Cell Re-Supply Worksheet

| Name of CHW | Primo Rouge Blister (Calc. #1) | | | | Primo Jaune Blister (Calc. #1) | | | | Amoxycillin 125mg tablets (Calc. #2) | | | | Zinc 10mg tablets (Calc. #2) | | | | ORS Sachets (Calc. #3) | | | | Gloves (Individual) (Calc. #3) | | | |
|-------------|--------------------------------|---|---|---|--------------------------------|---|---|---|--------------------------------------|---|---|---|------------------------------|---|---|---|------------------------|---|---|---|--------------------------------|---|---|---|
| | D | B | R | S | D | B | R | S | D | B | R | S | D | B | R | S | D | B | R | S | D | B | R | S |
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Cell coordinators record consumption and stock on hand from each CHW on a resupply worksheet

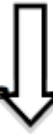
The “magic calculator” is used to easily determine how much each CHW needs to top up to a two month maximum

1. Find the consumption for the CHW.



| | | | | | | | | |
|-----------|----|----|----|----|----|----|----|----|
| Balance → | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| ↓ Cons. | | | | | | | | |
| 0 | 4 | 3 | 2 | 1 | 0 | | | |
| 1 | 4 | 3 | 2 | 1 | 0 | | | |
| 2 | 4 | 3 | 2 | 1 | 0 | | | |
| 3 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | |
| 4 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| 5 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 |
| 6 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 |
| 7 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 |
| 8 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 |
| 9 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 |
| 10 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 |

2. Match the consumption with the stock on hand for the CHW.



Calculator #1: Primo Rouge and

| | | | | | | | | |
|-----------|----|----|----|----|----|----|----|----|
| Balance → | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| ↓ Cons. | | | | | | | | |
| 0 | 4 | 3 | 2 | 1 | 0 | | | |
| 1 | 4 | 3 | 2 | 1 | 0 | | | |
| 2 | 4 | 3 | 2 | 1 | 0 | | | |
| 3 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | |
| 4 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| 5 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 |
| 6 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 |
| 7 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 |
| 8 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 |
| 9 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 |
| 10 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 |

3. The re-supply quantity is the quantity where the consumption meets the stock on hand.

Calculator #1: Primo Rouge and

| | | | | | | | | |
|-----------|----|----|----|----|----|----|----|----|
| Balance → | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| ↓ Cons. | | | | | | | | |
| 0 | 4 | 3 | 2 | 1 | 0 | | | |
| 1 | 4 | 3 | 2 | 1 | 0 | | | |
| 2 | 4 | 3 | 2 | 1 | 0 | | | |
| 3 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | |
| 4 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| 5 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 |
| 6 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 |
| 7 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 |
| 8 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 |
| 9 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 |
| 10 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 |

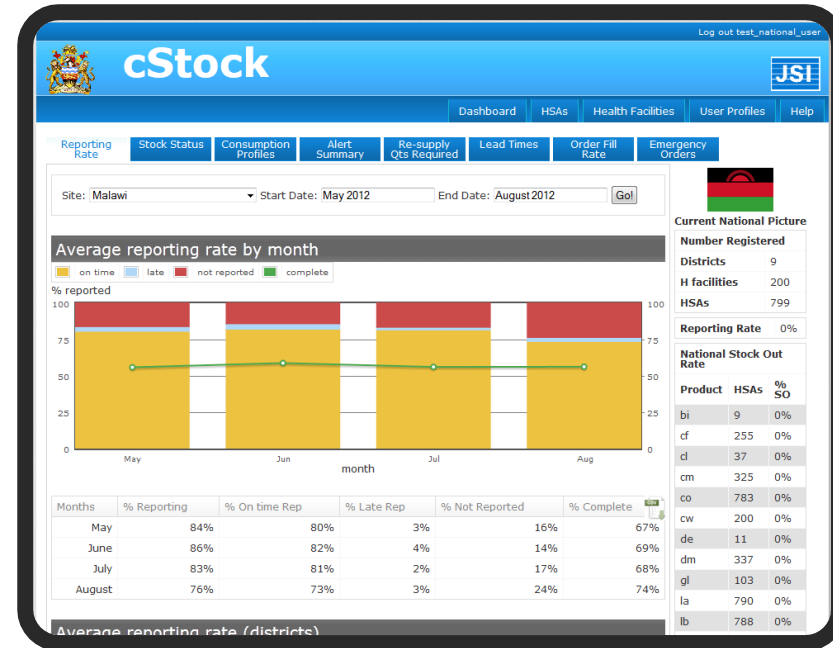
Be sure to use the correct calculator for each product:

- Calculator #1: Primo Rouge and Primo Jaune
- Calculator #2: Amoxycillin 125mg and Zinc 10mg

Write the re-supply quantity in the Quantity Required(R) column on the Fiche de Réquisition Communautaire.

Example: cStock in Malawi

- Uses GSM phones already-owned by Health Surveillance Assistants to allow rapid uptake of the system
- HSAs report minimal logistics data – SOH and receipts
- Nags to remind HSAs to report and alerts to notify higher levels of unresolved stock issues
- Presents the data in simple, easy to read reports



Supply chain managers can monitor stock levels, stockouts and respond immediately

Summary of key points

- Plan for supply chain management in CCM
- Define technical specifications and ensure that these are included in National Essential Medicines List and Standard Treatment Guidelines
- Quantify well on solid assumptions and review supply plan regularly
- Procure well in advance (using the technical specifications) and communicate and coordinate
- Design a SC system before rolling out CCM and train CHWs in resupply during initial training
- Design simple inventory management and reporting systems to limit the burden on CHWs
- Utilize data for monitoring and supervision

Resources

- CCM Essentials – Treating Common Childhood Illnesses in the Community
- CCM Detailed Implementation Plan Outline (Save, 2008)

CCMCentral - Windows Internet Explorer
http://www.ccmcentral.com/

CCMCentral

Integrated Community Case Management of Childhood Illness

Home About Tools iCCM Benchmarks and Indicators Operations Research Supply Chain Links and Documents

This website is a product of the **iCCM Task Force**. The website aims to centralize resources, provide examples of best practices and give access to tools. It also provides a forum for answers to questions and discussions of challenges. The website has been developed and is currently managed by the USAID-funded Maternal Child Health Integrated Program (USAID/MCHIP).

LATEST: Kenya Policy Change on Zinc Improves Access to Zinc to Tackle Diarrheal Disease

Update on the Development of the iCCM Costing and Financing Tool
Management Sciences for Health (MSH) has been...
[Read the Full Story](#)

EVENT HIGHLIGHTS

- ▶ **Pneumonia Roundtable attracts 100 leading global stakeholders in child survival, April 30, 2013, New York City**
With less than 1000 days to prevent the deaths of 4.4 million...
- ▶ **Webinar on Supply Chain in CCM: Overview of the common pitfalls and potential solutions - May 15, 2013, 9:00-10:30 AM**
- ▶ **Results from Save the Children's iCCM Program - May 13, 2013, Washington, DC**
Results from Save the Children's iCCM program Save...

- Managing Programmes to Improve Child Health (WHO)
- Quantification of Health Commodities: Community Case Management Products Companion Guide. SC4CCM.
- Tips: Supply management issues related to CCM to consider from the start-up phase
- Revised section on SCM tools (coming)

SCM sub group

In progress:

- Host resources on www.CCMcentral.com
- Finalize tips to guide program implementers in SCM for CCM
- Provide examples of inventory management tools
- Develop and host additional webinars. Topics may include: waste management, mHealth solutions, private sector, etc.
- Serve as a the SCM link to the CCM Task Force

More information on the sub group

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