



**cStock**

Supply Chains for Community Case Management

CASE STUDY



dimagi



The Global Fund

BILL & MELINDA  
GATES foundation

World Vision

# OVERVIEW

In Malawi, the Ministry of Health and Population (MoHP) is championing the strengthening of community health systems. As part of this effort, the MoHP enlists the support of Health Surveillance Assistants (HSAs), who are the bedrock community health worker (CHW) cadre that provides integrated Community Case Management (iCCM) at the community level, among other services. These CHWs assess and treat minor conditions for children under five, which requires them to be well stocked on essential, life-saving medicines. To help them, the MoHP introduced the Improving Supply Chains for Community Case Management of Pneumonia and Other Common Diseases of Childhood project (SC4CCM). This initiative takes advantage of the fact that 94% of CHWs own a mobile phone to improve data visibility and product availability in the field. While the SC4CCM project phased out in November 2014, the trademark “cStock” tool that allowed greater visibility into community level data continues to be implemented under the Ministry of Health and Population leadership, with funding from Global Fund that is being managed by World Vision Malawi.

The main goal for this strong community focus is to bring healthcare services closer to clients in order to treat children under five in a timely manner, reduce the travel burden on clients who live far from health facilities, promote good hygiene and strengthen disease prevention systems, and ultimately improve community health outcomes. In order to reach this goal, the Health Surveillance Assistants (HSAs) must be well stocked on essential, life-saving medicines, including antimalarials (and malaria Rapid Diagnostic Testkits (mRDTs)), antibiotics, ORS, and family planning commodities, among others.

# SUMMARY



**LOCATION**  
Malawi



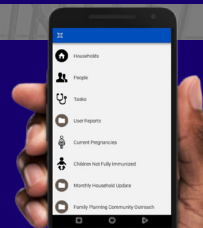
**SECTOR**  
Disease Treatment and Prevention,  
Maternal & Child Health



**PARTNERS**  
JSI Research & Training Institute, Inc., Bill & Melinda Gates Foundation, Malawi  
Ministry of Health, Global Fund, World Vision International (Malawi)



**NUMBER OF USERS**  
3,900+



## PROBLEM

In Malawi, a cadre of community health workers (CHWs) provides integrated Community Case Management (iCCM) at the community level where access to care in health facilities is made difficult due to both distance and terrain. These CHWs assess and treat minor conditions for children under five with essential, life-saving medicines, including antimalarials, antibiotics, ORS, family planning commodities, and more. As such, being well stocked on these medicines and having a robust stock reordering system is critical for their work and community wellbeing, especially for those children under five years old.

One major challenge for these CHWs had been weak visibility into upcoming stocking needs, which led to frequent stock-outs and patients going untreated. In remote areas, a stock out on essential medicines would put children under five at great risk. The old, paper-based reporting structure was long and tedious for the CHWs, denying management the opportunity to anticipate stock needs in a community. All this exacerbated the problem. It also created delays in reporting due to a lack of printed reporting forms, lengthy time to complete the entire report, the need to travel to the health center to submit the order, and the delays that came as a result of CHWs needing to wait several hours for their order to be filled.

## SOLUTION

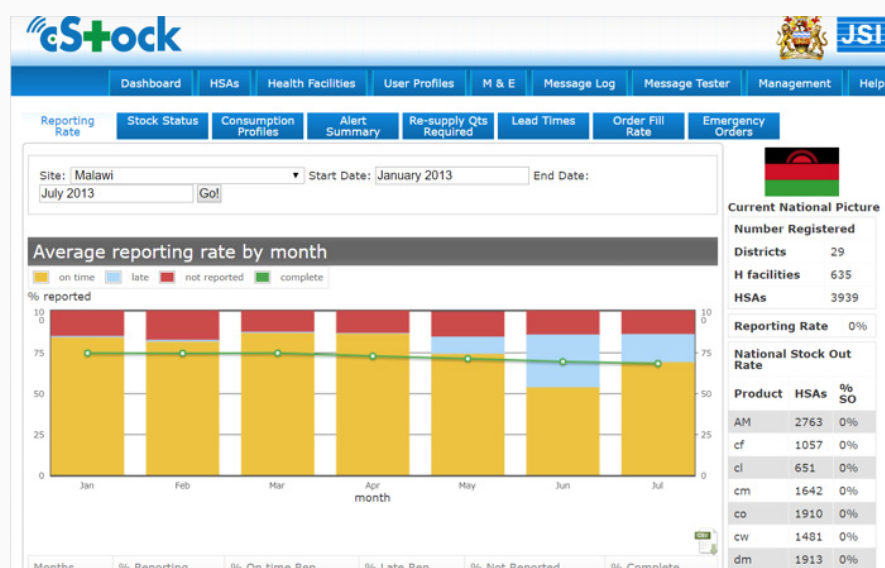
In 2010, the Ministry of Health and Population (MoHP) implemented the Improving Supply Chains for Community Case Management of Pneumonia and Other Common Diseases of Childhood project (SC4CCM) to address the lack of data visibility in the health supply chain for their CHWs. With 94% of CHWs owning a mobile phone at baseline in 2010, the introduction of the mobile system (cStock) significantly improved data visibility and product availability and streamlined the HSA stock requisitioning process dramatically. Since the SC4CCM project concluded in November 2014, the trademark “cStock” tool that allowed greater visibility into community-level data continues to be implemented under the MoHP’s leadership with funding from Global Fund being managed by World Vision Malawi.

In order to improve visibility into upcoming medicinal needs, SC4CCM developed a mobile health system for CHWs to submit stock information, allowing previously unavailable community-level data to be visible to decision makers at all levels of the health system.

# APP OVERVIEW

The CommCare-based mobile application, called cStock, automatically calculates the resupply needs for an individual CHW based on their reported stock levels and system-calculated consumption. It then transmits this need ("order") via SMS to the CHW's "parent" health center/re-supply point, enabling staff to pre-pack orders in advance of the CHW's arrival. This saves time for both the health center staff, who can optimize their order packing, and the CHWs, who receive an "Order Ready" message that helps them avoid wasting time on needless trips to the "parent" facility.

cStock also alerts higher-level staff via SMS if health facility cannot meet a particular need ("order") or if a CHW remains at low levels of stock despite being resupplied. The data are also available via a web-based dashboard that provides timely visibility into actual stock levels held by CHWs, enabling real-time identification of potential problems (e.g. stock outs, over-stocks, etc.) and overall monitoring of supply chain performance by the district and central level MoHP administration.



cStock compiles reported stock levels and notifies health facility staff of re-supply needs.

The screenshot shows the 'Message Log' section of the cStock dashboard. It includes a search bar and a table of messages. The table columns are Contact, Connection, Direction, Date, and Text. The messages are all sent to health facility staff, notifying them of stock on hand reports and the need to report stock on hand.

Contact	Connection	Direction	Date	Text
Tereza Dandaula	+265995695478 via airtel-smpp	O	19:01 01/08/2019	Dear Tereza Dandaula, your stock on hand report is due in 1 days. To report stock on hand, send SOH [space] [product code] [space] [amount]
Byson Pelusi	+265999019326 via airtel-smpp	O	19:01 01/08/2019	Dear Byson Pelusi, your stock on hand report is due in 1 days. To report stock on hand, send SOH [space] [product code] [space] [amount]
Maureen Kausiwa	+265888168997 via tnm-smpp	O	19:01 01/08/2019	Dear Maureen Kausiwa, your stock on hand report is due in 1 days. To report stock on hand, send SOH [space] [product code] [space] [amount]
Michael sukali	+265997958486 via airtel-smpp	O	19:01 01/08/2019	Dear Michael sukali, your stock on hand report is due in 1 days. To report stock on hand, send SOH [space] [product code] [space] [amount]
charles Mathayo	+265888700517 via tnm-smpp	O	19:01 01/08/2019	Dear charles Mathayo, your stock on hand report is due in 1 days. To report stock on hand, send SOH [space] [product code] [space] [amount]
ENOCK MATOLA	+265888392403 via tnm-smpp	O	19:01 01/08/2019	Dear ENOCK MATOLA, your stock on hand report is due in 1 days. To report stock on hand, send SOH [space] [product code] [space] [amount]
stuart ndau	+265995679355 via airtel-smpp	O	19:01 01/08/2019	Dear stuart ndau, your stock on hand report is due in 1 days. To report stock on hand, send SOH [space] [product code] [space] [amount]



# IMPACT

At the time of handover to MoHP in Nov 2014, cStock had reached full national coverage, with nearly 3900 CHWs using it across the country. Average reporting rates were above 80% in all districts, with some districts reaching 100%, compared to only 43% average reporting rate before the program began. The system has greatly helped double product availability, significantly reducing stockout rates and lead times for resupply, while improving overall visibility into community stock data and more informed management of community supply chain. In fact, 99% of community health workers reported that cStock helped save them significant time in collecting products through avoidance of empty trips to facilities.

Currently, cStock is being managed by the Ministry of Health and Population (MoHP), with a grant from the Global Fund that is administered by World Vision Malawi.



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