

## CASE STUDY

# cStock: Supply Chains for Community Case Management

*Focusing on Pneumonia and Other Common Disease of Childhood Project, in partnership with JSI Research & Training Institute, Bill & Melinda Gates Foundation, and Malawi Ministry of Health*

## THE PROJECT

In Malawi, community health workers, also known as Health Surveillance Assistants (HSAs), provide Community Case Management (CCM). These HSAs carry and prescribe a defined list of essential medicines such as ORS, anti-malarials, antibiotics, and family planning commodities.

The Improving Supply Chains for Community Case Management of Pneumonia and Other Common Diseases of Childhood project (SC4CCM), implemented by the JSI Research & Training Institute,

## Highlights

Compared to baseline, product availability **more than doubled** after the introduction of a set of interventions which included cStock.

**99%** of CHWs indicated that cStock saved them significant time in collecting products.

**Reporting rates average above 80%** in all districts, compared to 43% at baseline, with some districts reaching 100%.

Inc. (JSI R&T) funded by the Bill & Melinda Gates Foundation, has worked with the Malawi Ministry of Health in developing approaches to address the lack of data visibility in the health supply chain for HSAs, which contributes to poor product availability in hard to reach areas.

With 94% of HSAs surveyed owning a mobile phone, SC4CCM has developed a mobile system not only to improve data visibility, but also to streamline the HSA requisitioning process.

## THE TECHNOLOGY

The system, known as cStock, allows HSAs to use their personal phones to submit SMS with stock information, allowing community level data, previously unavailable, to be visible to decision makers at all levels of the system.

cStock automatically calculates the resupply needs for an individual HSA based on reported stock levels and system-calculated consumption, and transmits this need via SMS to the corresponding health center, enabling staff to pre-pack orders in advance of the HSA arriving.

A second message is sent by the health center staff who then informs the HSA when their products are ready to be picked up. In addition, cStock alerts higher-level staff via SMS if supplies cannot be replenished, or if an HSA remains at low levels of stock despite being resupplied. Data is also available via a web-based dashboard that provides timely visibility into actual stock levels held by HSAs, enabling real time identification of problem areas and overall monitoring of supply chain performance by the district and central level administration.

cStock was not intended to replace reporting procedures for the paper-based logistics management information system (LMIS), but rather was designed to expedite the resupply process and provide a mechanism for health center and district managers to trouble shoot and prioritize product availability by providing them with timely information to make product resupply decisions.

The paper-based resupply and reporting system was characterized



by typical challenges, including delays in reporting due to: lack of printed forms; required time to complete the entire report; the need to travel to the health center to submit the order; and resulting delays as HSAs needed to wait several hours for their order to be filled.

Results from the baseline survey showed that HSAs frequently made wasted trips, often reaching resupply points only to be told products were stocked out. Consequently, one of cStock's key features aimed to reduce travel and waiting time by HSAs.

Now, HSAs send stock data to cStock, which automatically calculates resupply quantities needed and sends the order quantity to the health center. The health center checks their stock levels, and if they have products in stock, prepacks the order and sends an "order ready" message back, so that HSAs know they will not make a wasted trip.

When health centers are low on stock, alerts are sent to district managers, who can then prioritize actions to resupply health centers so they in turn can resupply HSAs. HSAs know not to travel until they have received an order ready message.

## ACHIEVEMENTS

To date, cStock has been deployed nationally to over 3,000 HSAs in Malawi, with average reporting rates above 80% in all districts, with some districts reaching 100%. The system has demonstrated significant reductions in stockout rates and lead times for resupply, as well as improvements in overall stock management in Malawi.

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