



A Digital Approach to Strengthening Community Supply Chains

Community health workers (CHWs) are on the front-line of saving lives by providing preventive, promotive, and curative services and health commodities.

They reach individuals close to where they live and bridge the gap between the community and the formal health system. But because most CHWs lack easy-to-use tools to calculate needs and request resupply, they often run out of the materials they need to care for people. Given the critical role that CHWs play in improving health outcomes for communities, they can benefit from digital health tools to automate calculations and processes—ensuring that supplies are available where they need them, when they need them.

What is cStock?

cStock is a digital supply chain strengthening approach, implemented via multiple digital platforms. CHWs use cStock to report their health supplies stock levels, and the cStock system calculates which supplies, and the quantity, 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 don't waste time and resources traveling when no products are available.

For a digital health tool to be effective, staff must use and value data and take appropriate actions. Information Mobilized for Performance Analysis and Continuous Transformation (IMPACT) Teams provide a structured, complementary approach for using the data generated by cStock, and create a culture of joint problem solving. IMPACT Teams review data, identify problems and their root causes, innovate solutions, and take action to address the problems. The cStock approach was first designed and implemented in Malawi and has been adapted and transitioned to Kenya.

cStock in Malawi



The cStock approach was created by JSI, the Ministry of Health, and key stakeholders in Malawi, and designed to run on simple feature phones via SMS. With Dimagi as the technology partner, cStock was rolled out to approximately 1,300 CHWs (referred to in Malawi as Health Surveillance Assistants) in six districts during the initial 3-year period. Evaluations in Malawi showed that CHWs who use cStock and participated in IMPACT teams have 14% fewer stockouts and low stocks of life-saving products for children under 5, directly resulting in lives. Additionally, 56% of CHWs who used cStock (compared to 5% of those who use paper reports) needed less than 20 minutes to report stockouts. IMPACT teams improve communication between levels because they provide a forum for feedback and problem-solving. Evaluations indicated that both using cStock and having IMPACT teams improves reporting rates (90% for cStock and IMPACT teams; 80% for cStock alone; and 43% baseline reporting). Time between requesting and receiving products is halved using cStock and IMPACT teams (7 days) than using cStock only (13 days). Based on these results, the Ministry of Health decided to scale cStock nationally, and it has been the reporting system of record for all 12,000+ CHWs since 2014.

cStock in Kenya



In Kenya, JSI and its local affiliate inSupply Health have redesigned and adapted cStock based on human centered design (HCD) research. In 2017, JSI partnered with the University of Oslo to integrate cStock workflows within DHIS2 in Siaya County.

The integration, which included redesigning paper-based recording forms, collection, and resupply processes, and defining roles and responsibilities of IMPACT teams, improved workflows for routine reporting, resupply, and emergency reporting. By the end of the implementation period in October 2018, more than 580 CHWs (referred to in Kenya as Community Health Volunteers) and 25 community health assistants (CHAs) in Siaya County had been trained and were using cStock for tracking, reporting, and resupplying critical health products monthly. They were also recording logistics data on stock cards, and routinely meeting as an IMPACT team to review data and find solutions to problems. Ninety-four percent of the CHWs found it easy to use the cStock platform and have incorporated cStock components in their routine practices. Five percent of the CHWs rely on the supply values on the cStock dashboard to resupply the CHWs. Perceived benefits include reduced workload, improved data visibility and accountability of commodities issued, and reduced commodity wastage.

In 2019, in anticipation of rollout of cStock to four northern arid and semi-arid counties for use by nomadic communities and CHWs, inSupply implemented a further adapted HCD approach to ensure cStock uptake and use. Key insights from the process resulted in a more user-friendly pictorial interface with audio, flexible resupply locations, and a data entry portal for CHW supervisors. cStock is now being considered by MOH as its primary reporting and resupply tool for CHWs.

FOR MORE INFORMATION

on cStock and how to adopt cStock in your country,
visit insupplyhealth.com, or go to sc4ccm.jsi.com/emerging-lessons/cstock/

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