

Piloting cStock in Siaya County, Kenya

Submission date 02/01/2018	Recruitment status No longer recruiting	<input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
Registration date 15/02/2018	Overall study status Completed	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
Last Edited 13/02/2018	Condition category Other	<input type="checkbox"/> Individual participant data <input type="checkbox"/> Record updated in last year

Plain English summary of protocol

Background and study aims

Every day 21,000 children still die from preventable causes, and an additional 1,000 girls and women die in pregnancy and childbirth. Community health volunteers (CHV) can reach these children and mothers by providing essential health services in local communities if they are well trained and equipped with basic lifesaving medicines to provide the services. Frequent stock outs of medicines among CHVs is one of the most frequently reported bottlenecks to successful community-based treatment programs, preventing CHVs from consistently providing services and leading to unnecessary deaths of women and children. This study tests the effectiveness of mobile phone tools and team building in improving access to medicines in community-based health programs. The mobile tool will be used for reporting and resupply of medicines. The teams will be established between CHVs and their supervisors to use the information generated by the system to promote local problem solving and actions to address challenges that they face together.

Who can participate?

Community health volunteers in Bondo and Ugunja Sub-Counties, Siaya County, Kenya

What does the study involve?

Participants attend a two-day training where they learn how to use the mobile reporting and resupply application. The participants then return to their homes and continue to provide health services in their community. They are expected to report on their medicines every month using the cStock application. They report on the quantity of medicines they have remaining and how much they have dispensed over the month. On receiving medicines they report in the cStock application how much they receive. In addition if during the month they have a stock out or low stocks they report an emergency request for more medicines. Their supervisor is also part of the study and is required to respond to requests and communicate with community health volunteers when there are problems with resupplying them. The supervisor is supported in basic supply chain skills and knowledge to be able to respond and support community health volunteers.

What are the possible benefits and risks of participating?

The benefits of participating in this study are that community health volunteers will be able to communicate requests to their supervisors in a timely and more efficient manner. They will be able to easily request and report stock outs to the system. Managers at the sub-national and

national level will also be able to monitor stock levels at the community level and work with supervisors to address shortages. Risks for participants are minimal. Risks may include if community health volunteers cannot access the network to send their reports and supervisors do not follow up to determine why they are not reporting that they may not get resupplied for that month. Other risks are if the community health volunteers find the system too difficult to use and are not able to fully participate in the study.

Where is the study run from?
inSupply Project Siaya County (Kenya)

When is the study starting and how long is it expected to run for?
March 2017 to December 2018

Who is funding the study?
Saving Lives at Birth partners: the United States Agency for International Development (USAID), the Norwegian Agency for Development Cooperation (Norad), the Bill & Melinda Gates Foundation, Grand Challenges Canada, the UK Department for International Development (DFID), and the Korea International Cooperation Agency (KOICA)

Who is the main contact?
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Public

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Additional identifiers

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number

Secondary identifying numbers
0046717

Study information

Scientific Title

Piloting cStock in Siaya County, Kenya

Study objectives

Implementing a mobile health supply chain tool with user friendly dashboards, and IMPACT teams will lead to better availability of critical iCCM commodities in community-based health programs in Bondo and Ugunja Sub-Counties, Siaya County, Kenya and more children will be treated for diarrhoea and malaria in the community.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Maseno University Ethics Review Committee, 21/09/2017, ref: MSU/DRPI/MUERC/00467/17

Study design

Non-randomised study

Primary study design

Interventional

Secondary study design

Non randomised study

Study setting(s)

Community

Study type(s)

Other

Participant information sheet

Not available in web format, please use the contact details to request a patient information sheet

Health condition(s) or problem(s) studied

Diarrhoea, malaria

Interventions

The cStock approach uses mobile technology, user friendly dashboards, and quality improvement teams to reduce stockouts of critical commodities in community-based health programs. The cStock approach includes three critical components that improve data visibility, create a culture of data use, and drive accountability for performance. The three components are:

1. A simple mHealth tool that uses a streamlined, demand-based reporting and resupply process. Stock data reported by the CHW triggers the re-order process, whereby cStock automatically calculates resupply quantities and transmits a request via app messaging or SMS to supervisors at health facilities. The health facilities then send feedback to the CHW when the order is ready or if they are out of stock. This process facilitates accuracy in order quantities, reduces transport

time and costs, and improves communication.

2. A user-centred dashboard that converts the data into relevant, aggregated, and timely community logistics indicators. The web-based dashboard displays the data in easy-to-read graphs and charts to facilitate rapid decision making by subnational and national level program managers and partners.

3. IMPACT team which include CHWs, supervisors, managers, and pharmacy staff are action-oriented teams with a shared goal of improving product availability, and a collective responsibility to identify and implement solutions to supply chain problems. They use a quality improvement approach to interpret data, prioritize problems and find solutions, and take action to improve performance. (IMPACT stands for information mobilized, performance analysis, and continuous transformation).

This study proposes to introduce and test the cStock approach in two sub-counties of Siaya county to prove that by improving reporting and resupply through the use of mobile technology, and enhancing the use of data for resupply stockouts of critical commodities in iCCM programs can be reduced. The evidence from this study will be used to present a case for scale up in Siaya and to other iCCM counties in Kenya and for to advocate for the sustainability of this tool.

Community Health Volunteers and supervisors will be trained in the use of the mobile tools and given guidance on how to prevent stock outs. All volunteers will be included, there will not be a control group. This will only measure longitudinal changes. Monitoring the uptake of the intervention will be conducted by randomly selecting volunteers every quarter.

There will be a mixed-methods approach to evaluation, including baseline and endline quantitative surveys, longitudinal trend analysis from system outputs, and focus group discussions. Quantitative longitudinal evaluation of progress between baseline and endline will measure the impact of interventions on key supply chain indicators.

Intervention Type

Other

Primary outcome measure

1. Number of participants (community health volunteers) submitting a report on their medicines every month, measured by analyzing data submitted to the cStock system each month
2. Number of participants (community health volunteers) with medicines in stock, measured by counting number of medicines in stock in their home at baseline and endline
3. Number of participants (community health volunteers) with medicines in stock every month according to submitted reports every month, measured by analyzing data submitted to the cStock system
4. Number of supervisors supplying adequate quantity of medicines to the community health volunteers, measured by analyzing receipts sent to the cStock system

Secondary outcome measures

Number of children treated for malaria and diarrhoea, measured by counting number of cases recorded on patient registers as treated at baseline and endline

Overall study start date

30/03/2017

Completion date

31/12/2018

Eligibility

Key inclusion criteria

Community Health Volunteer in study location

Participant type(s)

Health professional

Age group

Adult

Sex

Both

Target number of participants

586

Key exclusion criteria

Any community health volunteer not trained to manage medicines

Date of first enrolment

01/02/2018

Date of final enrolment

30/09/2018

Locations

Countries of recruitment

Kenya

Study participating centre

inSupply Project Siaya County Kenya

Siaya County

Siaya

Kenya

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Sponsor information

Organisation

Grand Challenges Canada

Sponsor details

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Sponsor type

Government

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Funder(s)

Funder type

Other

Funder Name

Saving Lives at Birth partners: the United States Agency for International Development (USAID), the Norwegian Agency for Development Cooperation (Norad), the Bill & Melinda Gates Foundation, Grand Challenges Canada, the U.K. Department for International Development (DFID), and the Korea International Cooperation Agency (KOICA)

Results and Publications

Publication and dissemination plan

Planned publication in a high-impact peer reviewed journal by December 2019.

Intention to publish date

01/12/2019

Individual participant data (IPD) sharing plan

The data sharing plans for the current study are unknown and will be made available at a later date.

IPD sharing plan summary

Data sharing statement to be made available at a later date