

UbuntuNet CONNECT 2018

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Type: Presentation

Title: Creating a cold chain Technician Capacity Building Application

Addressing Sub-Theme 3: SMART Teaching and Learning: Services and tools

Papers under this sub-theme will address issues related to stand-alone or shared services and tools that seek to make ICT an integral part of the teaching and learning process. Topics could include strategies on engaging the current 'digital generation', improvement of individualized learning, innovation in teaching and learning, pedagogy, student assessment, learning management, roles of NRENs and regional RENs, outcomes and lessons learned.

This paper will discuss the creation of a learning/capacity building application for Cold Chain Technicians. VillageReach with our new partner Bull City Learning, is strengthening the vaccine cold chain in Malawi by developing and launching an easy-to-use, interactive, digital manual on refrigerator preventive maintenance and repair of cold chain equipment. A cold chain or cool chain is a temperature controlled supply chain. An unbroken cold chain is an uninterrupted series of refrigerated production, storage and distribution activities, along with associated equipment and logistics, which maintain a desired low-temperature range in this case for vaccines.

Using human-centered design principles, VillageReach worked with cold chain technicians in Malawi to develop and launch an interactive digital application to support preventative maintenance and repair of cold chain equipment. This work included workshops with cold chain technicians, a baseline survey of current knowledge and cold chain equipment available, application creation and prototyping with selected technicians and a final roll out. The Cold Chain Technicians are tasked with maintaining specialized cold chain equipment, that hold vaccines that are thermos sensitive substances that need to be kept at a regulated temperature of 2 –8 degrees Celsius.

In Malawi, there are many challenges and complexities that hinder the effective management of the Cold Chain Equipment. These challenges are compounded by the diversity in the type of Cold Chain Equipment available in the country coupled with the remote locations the equipment is located and limited technical knowledge of the cold chain technicians. These technicians receive limited training that does not equip them with the skills needed to address the varying refrigerator repair and maintenance needs. This leads to poor Cold Chain Equipment performance and ad-hoc approaches to resolving Cold Chain problems.

The application, based primarily on video trainings, is loaded onto tablets that technicians carry with them to guide their Cold Chain Technicians activities. It will be a primarily offline resource tool for cold chain technicians to use in Malawi's low resource setting environment where most health centers have no or poor internet connectivity. We hope to increase the capacity of the Cold Chain Technicians to carry out routine maintenance of essential equipment used to keep vaccines at the right temperatures. Other objectives of the project where to, improve and supplement training of Cold Chain Technicians, improve the skills of Cold Chain Technicians, improve the performance of Cold Chain Technicians and to improve cold chain equipment performance and uptime.

Tablets will also be loaded with secondary resources. An application built on the Dimagi CommCare Platform, created by Boston University Students, which is an open-source mobile platform used for data collection on the supervision aspect of the Cold Chain Technicians work. Also placed on the tablets will be some third party refrigerator technician resource applications.

Keywords: Cold Chain, Capacity Building, Interactive, Application, Video Manual, Refrigerator, Vaccines

Summary

This paper discusses the work to create a companion application for Cold Chain Technicians to assist them in maintaining and repairing cold chain equipment to keep vaccine refrigerators functioning at optimum temperatures.

Sub-Theme

SMART Teaching and Learning: Services and tools

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