

Scaling Mobile Health Worker Video Training Program Across West Africa

Submitted by Okey Okuzu (InStrat Global Health Solutions) on January 17, 2018 - 7:09am

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Proposal Status: [Out of Scope](#)

Our proposal is to scale a video-based maternal and child health (MCH) training program for frontline health workers (HW) to the West African Sub-region and extend to each country, demonstrated benefits of interactive training for frontline HWs. These benefits include addressing the urgent need for improved knowledge, skills, motivation and retention of the health workforce, especially in remote settings. Since 2014, we have conducted a proof of concept; piloted the program and now scaled it as a service for training health workers across approximately 250 Health Facilities in Nigeria with approximately 2,500 health workers enrolled.

We will bring to bear our experience from successes, failures and lessons learnt during the pilot and scale up phases in Nigeria, delivering a sustainable approach to improving the delivery of healthcare in remote settings in each of the target countries. In each country on our list, we will present to the Government a dossier containing Required Skills by Cadre; Curriculum; Lists of Optional and Mandatory Content by HW Cadre and Test Questions and Answers, to adapt to their priorities and contexts. Our consortium will adapt the content as required for each country and deploy in health facilities identified by their Ministry of Health. HWs in each country will have access to improved training and health system solutions contributing to tangible country gains towards healthier living and wellbeing of their populations and stronger national health systems.

Our Theory of Change is supported by a rigorous M&E framework to allow stakeholders in each country to align on Key Performance Indices (KPIs). We will report on KPIs at agreed intervals, to demonstrate that the project is on track towards achieving desired outcomes. Our M&E framework is compliant with SMART (Specific, Measurable, Achievable, Realistic and Timely) principles.

Consortium Team

InStrat Global Health Solutions was founded in 2010 to improve healthcare delivery in low resource settings in Africa through the appropriate use of mobile technology. Since our first implementation in Nigeria in 2013, we have laid an enviable track record of success by deploying mobile health technology solutions in over 800 primary, secondary and tertiary health centers in Seven States in Nigeria and Cameroon. Over 10,000 HWs have been exposed to our solutions. The solutions we have implemented and currently support include of mobile health records systems and health informatics, health information exchange, health worker training, human resource management and disease surveillance. We have maintained a mixed funding model of Government and international donor partner funding that allows us to support our projects in a sustainable way. InStrat is uniquely positioned with the turnkey solutions, experience and expertise to our clients achieve their goal of improving workforce efficiency, skills and knowledge translating to patient care management and ultimately improved health outcomes. InStrat will be the project lead with responsibility for project planning, implementation support and coordination amongst team members.

Medical Aid Films is a UK charity that creates high quality, accessible, resource-appropriate films to strengthen training and education for health workers and communities in maternal and child health. MAF will edit and adapt existing content and develop new health training videos for the project.

Digital Campus is a not-for-profit company that develops innovative mobile technology solutions to support frontline HWs in the field and to improve their lifelong learning and training experience. Digital Campus is the

developer of Oppia Mobile, our proposed open source mobile training platform, which has been deployed in seven countries. Digital Campus will configure and manage the training platform to ensure interruption free use of the platform across the region.

The Confederation of African Junior Enterprises (Africa JE): Africa JE is the Africa arm of an international network of Junior Enterprises (represented in Europe, USA, South America, Africa and Asia). Africa JE's remit includes healthcare, is JE is affiliated with the Association of Cameroonian Diaspora Doctors and helped organize InStrat's Cameroon Mobile Training Pilot. Africa JE maintains an active network of Junior Enterprises across Franco-phone West Africa. This provides us the synergy of accessing multiple countries with the support of one partner. The socio-cultural and economic similarities of Franco-phone West African Countries makes Africa JE, with its boots-on-the ground network, a compelling partner for this project. Africa JE will provide ground implementation support in the Cameroon, Senegal and Cote d'Ivoire.

SBTS Group is a global technology firm that originated from Sierra Leone with operations in Africa, United States and Asia. SBTS is a turnkey implementer of Financial Management, Training and Knowledge Management and Call Center operations. SBTS Group was the primary developer of the 117-call center for Ebola operations which was a critical tool in the arrest and eventual eradication of Ebola in Sierra Leone. With current operations in Sierra Leone, Liberia and Ghana, SBTS will provide ground implementation support in these countries.

Project Description

Context: Widely published international data shows that Sub Saharan Africa (including West Africa) has amongst the highest rates of maternal and infant mortality in the world. The WHO estimates that ¼ preterm deaths could be avoided with existing interventions, but this requires a skilled health worker who can care for mothers and newborns. Country policies exist for reproductive health, improved access to emergency obstetric care as well as regulations that mandate minimum entry and continued training requirements for all cadres of health workers. However, the geographical dispersion of the healthcare facilities, the vast number of HWs in these dispersed locations, and meager training budgets make it a challenge to provide requisite training or Continuing Medical Education. This has a significant bearing, not only on retention of knowledge and skills, but also on levels of motivation of HWs. Provision of continued, quality in-service training is an important factor in attracting and retaining rural health workers, and other factors such as availability of tools and support for staff training also play a significant role in affecting HWs job satisfaction. The Nigerian Urban Reproductive Health Initiative (NURHI) baseline study found that although many service providers had received pre-service training on family planning, very few had received in-service refresher training in the previous 12 months. Between 0% and 35% of service providers in high-volume, public preferred or private preferred facilities had received any refresher training in the year prior to the survey.

Provision of relevant health information and training via mobile devices increases accessibility, affordability and delivery of such information. Our approach ensures that content and related applications are aligned with HWs' needs and capacities related to service delivery. Content on Oppia Mobile can be easily updated based on new training needs or new content availability. In an InStrat project, published in the Human Resources for Health Journal (Otu et al. Human Resources for Health (2016) 14:5), there was an 11% improvement in HW knowledge

of and attitudes towards Ebola virus disease.

Description: The project is an outgrowth of a USAID funded pilot of a tablet- based curriculum (collaboratively conducted with mPowering Frontline Health Workers) to enhance training for 200 HWs in Ondo State, Nigeria in 2015 which showed a 32% improvement in average test scores post training amongst participants. Organic interest in replicating this success by State Governments in Nigeria and Donor partners have led to its scaling across approximately 250 health facility in three Nigerian States, training approximately 2,500 Health Workers.

Dramatic results have been demonstrated so far. HWs have relied on our training videos to resuscitate a new born baby (Odode BHC, Ondo State); stop a bleeding patient's post-partum hemorrhage (Wumi PHC, FT); educate pregnant women and nursing mothers on appropriate and effective breast-feeding technique; Calibrate an infant's injection to her weight; remove a patient's placenta safely amongst numerous other use cases and outcomes testimonials.

The health issues faced by health workers in West Africa is similar to Nigeria hence making this solution an attractive solution to increase the health worker skill and knowledge gap in the region. We plan to extend VTR Mobile (locally branded version of Oppia Mobile) to the West African sub region in two phases. In the first phase, we will deploy VTR to six West African countries: Three French-speaking: Cameroon, Cote d'Ivoire and Senegal and three English speaking: Sierra Leone, Liberia and Ghana in 2018. A second phase is anticipated in 2020 during which we will extend the service to all other West African countries. Our solution will integrate the following elements into one seamless training application to be delivered to HWs mobile phones:

- **Hardware:** Android Mobile phones and tablet computers
- **Curricular:** 1. Pre, peri, postnatal Maternal and Child Health. 2. Critical Skills needed by Health Extension Workers, Nurses/Midwives, Doctors for carrying out their functions effectively in low resource settings. 3. Training to carry out appropriate Task shifting/sharing in low resource settings.
- **Content:** Training videos segregated by HW Cadre (the application will ensure that HWs view only approved material for their cadre). We will initially adapt content available of mPowering's ORB platform.
- **Tests:** Quizzes will be given to HWs to ensure that learning is taking place. Each Government will determine its pass/fail thresholds.
- **Reporting:** User Activity Reports including tasks completed, test scores, popular courses, etc. will be provided monthly.
- **Certification:** Each country will certify participants that have successfully completed the training program.

All the above have been developed and validated for use in Nigeria – providing our consortium with a dossier that each country can adapt to suit its needs and context.

Relevance

We have demonstrated that VTR is a far more effective means of training than current alternative methods. The cost to a typical Nigeria State of delivering approximately 40 hours of training via our innovation is approx. \$24 per HW per year and could reduce to as low as \$5 at high volumes. This compares to the current cost of approx. \$500 per HW per year for delivering 40 hours of face-to-face training in remote settings. Costs will even be leveraged further by the reusability of the content across each country. In addition, VTR can be delivered as an app onto HW's phones or tablets provided by other facilities reducing hardware costs. VTR is highly scalable at a fraction of the cost of face to face training as same content can be deployed simultaneously to

thousands of people. SMS training is limited by the number of characters allowed per message and is therefore not an effective means of training. There is a distinct role for using film in health education in low literacy settings. A short video can portray 1.8 million words of text and is therefore a reliable and effective method of information-sharing and increasing understanding, especially in low literacy settings where populations have limited opportunity to develop text-based processing skills. Increased learning is partly explained by the link between images and memory. Using film for education increases the viewer's ability to recall information as visual images are linked to long-term memory.

Monitoring and Evaluation

Our M&E log frame will follow the SMART framework, and in line with UN SDG 3: Ensure healthy lives and promote well-being for all at all ages, our impact will be **Improved Standards in Health Care Provision in the affected communities within 18 months**. Our, Outcomes, Outputs, Activities and Inputs will be Specific, Measurable, Achievable, Realistic and Timely.