Making Enabling Technologies Work in Prime-Boost Vaccination Programs

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EBODAC

EBOla vaccine Deployment, Acceptance and Compliance

WHAT IS PRIME-BOOST VACCINATION?

The first vaccination – the 'prime' – initiates the desired immune response

The second vaccination - the 'boost' enhances the immune response with another type of vaccine at a later time

One of the Ebola vaccines in development, by Janssen, is a heterologous prime-boost monovalent Ebola Zaire vaccine regimen.

EBODAC, EBOla vaccine Deployment, Acceptance and Compliance , was conceived to support both clinical development of this Janssen vaccine regimen and potential future vaccination programs.

In both cases, clinical development or real life deployment, compliance to the full regimen, first and second doses are key.

EBODAC Vision & Mission

Vision: Maximize vaccination impact in targeted populations

Mission: Develop scalable tools and strategies to ensure Ebola vaccines and trials are successfully deployed and accepted, with second dose compliance.

EBODAC EBOla vaccine Deployment, Acceptance and Compliance

OUR WORK IN SUPPORTING A CLINICAL TRIAL IN SIERRA LEONE

Community engagement

Identification tools

Mobile technology

Focus of Presentation

OUR MISSION:
Building a modular platform scalable for successful deployment of Ebola vaccines

The EBODAC Consortium

Pharmaceutical company
Global Public department focusing on HIV, Tubercolosis, Mother and Child Health & Neglected Tropical Diseases

Expertise in researching the social and political factors which affect vaccination programs

Humanitarian organization dedicated to working with children, families, and their communities - Extensive local know-how

Non-Government Organization, Mobile Technology designed and developed to support organizations in delivering and scaling mobile health programs

REQUIREMENTS

Biometric Identification tool	Mobile messaging platform
Needed to positively identify individuals, with a high degree of accuracy because of a prime-boost vaccine regime	Easily accessible worldwide since its Open-source and customizable
Have broad cultural acceptance and minimize stigmatization	Ability to be deployed in resource limited settings
Ability to be used within the Ebola virus disease environment	Interoperable with other systems (e.g. DHIS2)

Synchronization between the two systems

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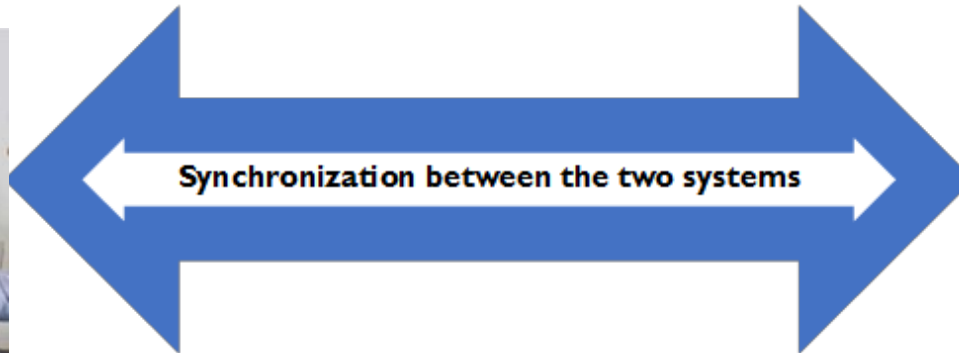
APPROACH

Leverage existing technology and use on the ground expertise and resources

1. Biometric Identification tool

1. Utilisation of the electronic system for biometrics:
   a. Fingerprint,
   b. Iris scan
2. Quick identification and verification of participants at every visit
3. Mobile robust biometric kit that:
   a. Has 8 hour battery autonomy,
   b. Off-line capability
4. Delivery of tamper proof vaccination card
5. The initial source of participant identification data for the MOTECH system

2. Mobile Messaging technology

Utilizes MOTECH: Mobile Technology for Community Health platform

1. Sends customized messages to participants:

    1. In their chosen local language
    2. As Interactive Voice Response(IVR),
    3. or Short Message Service (SMS) when IVR fails after 3 attempts

2. Generates reports on demand to support clinical team

3. The Booking Application

    a. Scheduling of participants
    b. Clinic capacity management

KEY INDICATORS

No	MOTECH Key indicators	Stage I	Stage II
1	% Consenting to MOTECH	100%	93%
2	Average % of IVR message listened to	97%	96%
3	% of IVRs that are picked-up	59%	46%
4	% of participants who listen to 50% or more of the MOTECH messages.	70%	58%

THE BOOKING APPLICATION

This technology was included to facilitate the following:

1. Clinic participant capacity management

2. Booking participants for:

   a. Screening

   b. Vaccination

   c. Follow up Visits

And therefore contributing to the managing the client flow in the clinics

CHALLENGES AND MITIGATIONS

The Following were encountered from the onset of the project

1. **Environmental and humidity challenges with the printing of sticker cards**

   - A local level trial and error temperature and drying of sticker paper was done and feedback was accelerated to the second level

   - A thorough laboratory based humidity assessment was done to ascertain the kind of sticker that cards are appropriate for the implementation environment

   - Appropriate specifications developed and the appropriate sticker cards availed for the clinics.

CHALLENGES AND MITIGATIONS

2. **Technical glitches when operating the systems**

- The systems have been set in such a way that restarting brings the systems back to where the operators were and therefore no need to repeat what was already done

- Very Robust capacity building of the local staff to be able to resolve any issue at operations level

- Developed standardized operating procedures that include a timely escalation process and quick support from a higher level of support.

CHALLENGES AND MITIGATIONS

3. **Poor connectivity and network in the geographical location**

- A thorough connectivity assessment was done and recommendations ascertained.

- Robust satellite connection with a VSAT up grade to facilitate clinical data entry and biometric data synchronization and MOTECH operations

LESSONS LEARNT

1. With adequate local level capacity building, biometric and mobile health systems can be rolled out effectively.

2. Conducting a thorough connectivity assessment before roll out is key since the systems depend on the network to operate

3. Understanding privacy, regulatory & policy elements related to introduction of enabling technology in a given country needed to be considered since the systems deal with local level data.

Thank You