EBODAC Vision & Mission

**Vision:** Maximize vaccination impact in targeted populations

**Mission:** Develop scalable tools and strategies to ensure Ebola vaccines (trials) are successfully deployed and accepted, with second dose compliance.
EBODAC Project Context

The Ebola epidemic
The Ebola epidemic claimed over 11,000 lives in West Africa since 2014, including 3,900 deaths in Sierra Leone (1)
Over 500 healthcare workers have died
Health care systems have crashed

Working towards a solution
Vaccine development at Janssen

Deployment considerations
- 2 vaccines, 2 months apart
- Suspicion and distrust of affected populations
- Weakened healthcare systems

(1) Source: 27th March 2016 - WHO Ebola Situation Report
EBODAC  EBOla vaccine Deployment, Acceptance and Compliance

Our work in supporting a clinical trial in Sierra Leone

- Community engagement
- Identification tools
- Mobile technology

Our mission:
Building a modular platform scalable for successful deployment of Ebola vaccines
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
Approach

• Leverage existing technology and expertise
  ➢ Biometric identification tool
  ➢ Mobile messaging platform (MOTECH)

• Use on the ground expertise and resources

• Building strong local partnership with Sierra Leone College of Medicine and Allied Health Sciences (COMAHS)
Identification Tool

Requirements

- Needed to positively identify individuals, with a high degree of accuracy because of a prime-boost vaccine regime
- Have broad cultural acceptance and minimize stigmatization
- Ability to be used within the Ebola virus disease environment
Biometric Identification Tool

- Electronic fingerprint / Iris detection with vaccination card
- Mobile robust biometric kit, 8 hour battery autonomy, off-line capability, including delivery of tamper proof vaccination card on mobile printer
Mobile Phone Platform

Requirements

- Easily accessible worldwide
- Ability to be deployed in resource limited settings

MOTECH

- Open-source and customizable
- Interoperable with other systems (e.g. DHIS2)
- Implementations of MOTECH deployed in various countries by various partners
Mobile Technology System (MOTECH)

• Sends customized voice (IVR) or text (SMS) messages to participants in their chosen local language
  ➢ Reminder messages to motivate and remind subjects to return for a scheduled clinic visit and booster vaccine
  ➢ Targeted engagement messages to convey vaccine related information, build trust and keep subjects engaged in the trial

• Generates reports to support clinical team
  ➢ On demand reports to support timely participant engagement and follow-up
  ➢ Daily standing reports

• Includes a scheduling application
  ➢ Manage facility capacities for efficient throughput of trial participants or vaccinees
The EBODAC Consortium

Pharmaceutical company
Global Public department focusing on HIV, Tuberculosis, 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
Technology Challenges

- Technology implementation
- Privacy, regulatory and policy constraints
- Local context implementation
Technology implementation

Mobile Network Operators (MNO)
- Local MNOs did not meet voice messaging set-up requirements

Network connectivity
- Satellite connectivity established in clinic allowing for clinical data entry and biometric data synchronization

Climate challenges
- Robust satellite connection to withstand rainy season
Privacy, Regulatory and Policy constraints

Absence of clear country specific policies or regulatory frameworks in relation to clinical trials and data hosting

- Addressed by reverting to continent-wide or EU Policies/Regulations as appropriate and request for specific approvals/derogation

Difficulty in obtaining approval for external hosting of data due to local uncertainty on data access, security and privacy

- Addressed by repeated meetings with MoHS and MoIC officials including technical experts
Local context implementation

- Niche technologies require specific skills
  - Leverage consortium partners expertise in the local context
  - Build local human resource capacity in context of vaccine trial
Overall Impact Stage 1

• 100% compliant with booster dose
• 96% of users reporting high level of usability and acceptability of solution
• Biometric and MOTECH platforms are being managed by the local staff
Technology Achievements Stage 1 (43 participants)

100% participants accepted to receive phone messages
95.5% listened to the received messages
100% participants accepted biometric identification
Biometric kit operators, first line IT support staff for MOTECH and data entry staff and management are local national personnel.
Scale-up of resources

- Initial training of biometric and MOTECH system conducted by partners (Train-the-trainer approach)
- Subsequent training conducted by local staff
- Develop Support agreements
- Develop User Guide books
Scale-up of technology

• Potential scalability of MOTECH technology based on current National IVR Health service project in India

• Feasibility study on the use of iris-scanning in minors of ages 1-4
Opportunities

- Mobile technology has great potential for complementing clinical trial communications and information services
- Scalability of the EBODAC mobile platform is feasible in low resource settings
- Development of strong partnerships enable transfer of solutions to sustainable local ownership
- EBODAC technology using the biometric ID system and MOTECH offers the ability to capture and monitor the vaccination status in communities beyond the clinical study context
EBODAC has received funding from the Innovative Medicines Initiative 2 Joint Undertaking, a joint undertaking between the European Union and EFPIA, under grant number 115847 (EBODAC).