IVI Global Initiative for Cholera Control

Se Eun Park

Global Task Force on Cholera Control (GTFCC)
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International Vaccine Institute

OCV (Inactivated Whole Cell Oral Cholera vaccine) | IVI Technology Transfers

Company		Partnership	Stage of development
Vabiotech (Vietnam)	mORCVAX	IVI re-formulated, redeveloped process to meet WHO standards	Licensed in Vietnam (mORCVAX™)
Shantha (India)	Shanchol	Technology transfer May 2008	Licensed in India (Feb 2009) WHO prequalified (Sep 2011)
Eubiologics (Korea)	Euvichol	Technology transfer 2010-11	Korean export license (2014) WHO prequalified (Dec 2015) Euvichol-Plus PQd (2017)
Incepta (Bangladesh)	Cholvax	Technology transfer May 2014	Clinical trial conducted in Bangladesh; Technical and regulatory consultations ongoing
BIBCOL (India)		Technology Transfer	Initiated APR 2019

Program Strategy and Projects

Goals	Program Objectives	Current Projects
Ensure OCV Supply	• Continue support to existing manufacturers • Additional TT to ensure adequate global and national vaccine security	• Euvichol-P CTC Label • Supply Critical Reference Standards to Manufacturers • Cholvax II
OCV Use & Introduction	Generate evidence to support OCV use in endemic countries	• Modeling Impact and Cost-Effectiveness of GTFCC Cholera Elimination Plan • CSIMA -Malawi • MOCA -Mozambique • GICC-ECHO- Nepal and Mozambique-launch 2020

Vaccination campaigns (2015-2018)

Demonstrate feasibility, effectiveness etc in different settings

Year	Location/Type	Target #	Coverage		Outcomes
2018	Cuamba, Mozambique Preventive	180,000	1st 2nd	76% 69%	M&E coverage survey Effectiveness (ongoing) Surveillance (ongoing) Cost of Delivery and Cost of Illness (COI)
2016/17	Nepal Pre-emptive	25,000		90%	M&E Cost of Delivery and assessment of Choltool
2015	Nsanje, Malawi Reactive	160,000	1st 2nd	98% 68%	Acceptability, feasibility, Effectiveness (ongoing) Delivery and Cost of Illness (COI) Cost-Effectiveness Analysis
2015	Shashemene Ethiopia Preventive	~62,000	1st 2nd	76% 65%	Acceptability Feasibility
2015	Newakot and Dhading, Nepal Pre-emptive	10,000	1st 2nd	105% 96%	Feasibility of delivering OCV in earthquake affected districts (during monsoon season) using government infrastructure

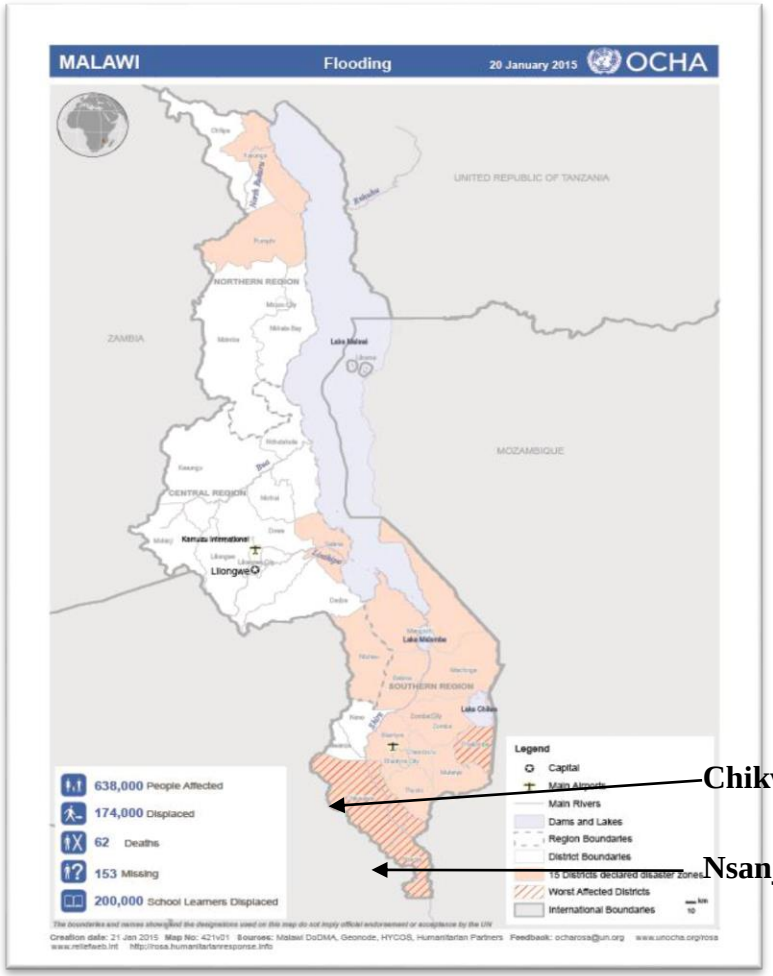
Current activities | IVI in Malawi

Cholera Surveillance in Malawi (CSIMA)

Malawi-Nsanje & Chikwawa

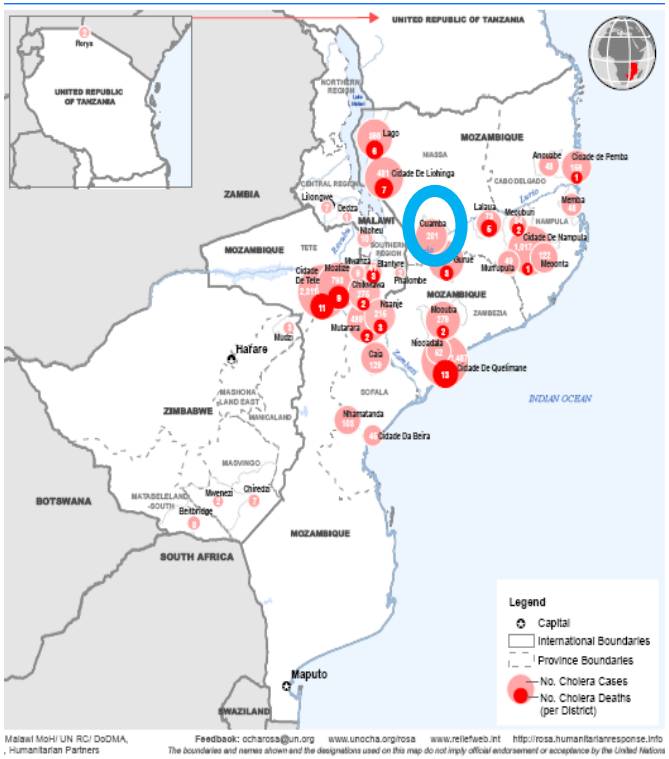
- 2 dose OCV targeted to160,482 in March-April 2015
- Prospective passive diarrhea surveillance from April 2016

  (22 HF in Nsanje 18 in Chikwawa)
- **Nsanje**: 35 confirmed cases/767 samples (Aug 30)
- **Chikwawa**: 48 confirmed cases/1161 samples (Aug 30)
- Cost-of-illness associated with culture-confirmed *V. cholerae*
- Cost-effectiveness of the 2015 Nsanje OCV campaigns
- Phylogeny of *V. cholerae*



Current activities | IVI in Mozambique

Mozambique Cholera Prevention and Surveillance (MOCA)



UN OCHA, May 2015

Study area	Cuamba District
Partners	Instituto Nacional de Saude (Ministry of Health, Mozambique)
Donor	KOICA (Government of Republic of Korea)
Add-on activities	Collaborations with WHO/GAVI to be part of the national cholera control plan

Goal: To prevent cholera epidemics and empower local public health service for sustainable cholera surveillance and control

Key Outcomes and Activities:

1. OCV administration to approx. 180,000 individuals in Cuamba

- Euvichol-plus®
- Monitoring and evaluation of campaigns (AES, coverage)

2. Cholera and diarrheal disease surveillance in Cuamba

Core investigations:

- Surveillance of cholera and diarrheal diseases
- Incidences and antimicrobial resistance profiles
- Vaccine effectiveness estimation

Additional investigations under consideration:

- Water sample testing
- Phylogenetic analysis of detected strains
- Investigations on human gut/fecal microbiota

3. Health economic analysis associated with cholera

- Cost-of-illness associated with treatment of cholera patients in cholera endemic setting
- Delivery cost of OCV vaccination campaigns

4. WASH

- Formative research (Baseline survey)
- Hygiene Behavior Change interventions

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Current activities | IVI in Mozambique

Mozambique Cholera Prevention and Surveillance (MOCA)

Coverage estimation

Administrative coverage		Post-vaccination household coverage survey	
Total population assumed	196,652		
First round	98.9% (194,581)	First round	75.9% (±2.2%)
Second round	98.8% (194,325)	Second round	68.5% (±3.3%)
Full doses	91.6% (180,074)	Full doses	60.4% (±3.4%)

	1-4yo	5-14yo	>15yo	Total
First round	81.1% (±4.5%)	86.4% (±3.1%)	67.6% (±3.3%)	75.9% (±2.2%)
Second round	72.2% (±6.9%)	71.3% (±5.8%)	65.2% (±4.8%)	68.5% (±3.3%)
Full doses	64.4% (±7.3%)	65.2% (±6.1%)	55.7% (±5.0%)	60.4% (±3.4%)

Current activities | IVI in Mozambique

Mozambique Cholera Prevention and Surveillance (MOCA)

Prospective healthcare facility-based cholera and diarrheal disease surveillance with community-level healthcare utilisation survey

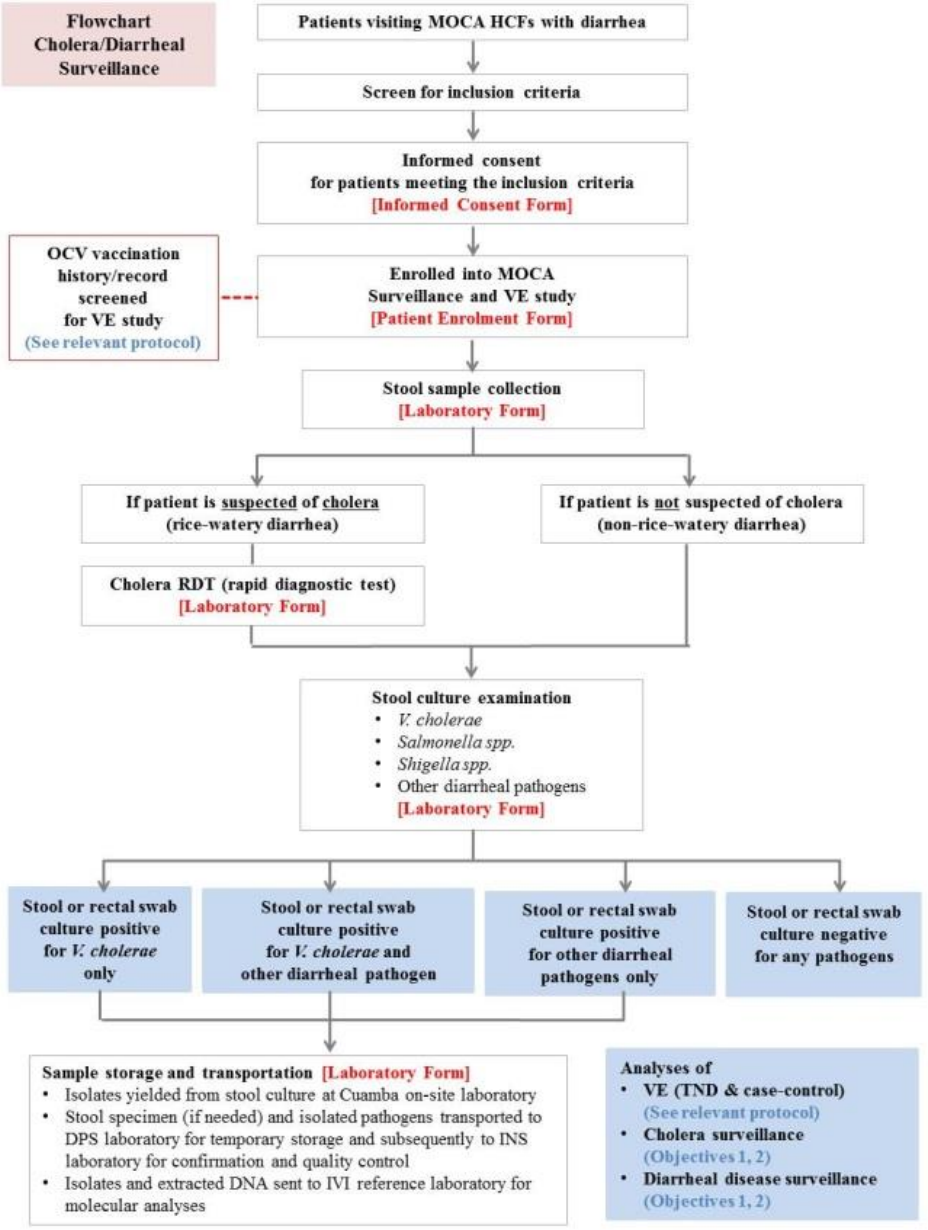
- Cholera and diarrheal disease surveillance
- Vaccine Effectiveness (test negative design)
- Cost-of-Illness
- Healthcare Utilisation Survey

Sentinel Healthcare Facilities (HCFs) selection criteria:

- Records of cholera/diarrheal cases reported in Cuamba in the past two years
- Areas/HCFs whereby most cholera/diarrheal cases have been reported

6 Healthcare Facilities (HCFs):

- Cuamba District Hospital | Secondary/Referral
- Cuamba District Health Center | Primary
- Namutimbua Health Center | Primary
- TipoII – Tetereane Health Center | Primary
- Adine III Health Center | Primary
- Mujaua Health Center | Primary



Going forward | IVI Global Initiative to Control Cholera

GICC – ECHO in Mozambique and Nepal

Global Initiative to Control Cholera - Enhancing Cholera Control

Mozambique

- Lichinga/Lago District and Nampula city/Meconta District (Nampula and Niassa Provinces)
- Preventive OCV vaccination campaigns in cholera endemic areas/hotspots (approx. 300,000 persons)
- Strengthen cholera and diarrheal disease surveillance and laboratory diagnostic capacities
- Enhance access to equitable and sustainable WASH services in vulnerable communities
- Establish platform for policy discussions to initiate roadmap to control cholera in Mozambique

Nepal

- Kathmandu Valley and Kailali District (Provinces 3 and 7)
- Preventive OCV vaccination campaigns in cholera hotspots (approx. 310,000 persons)
- Enhanced surveillance capacity for early detection of cholera
- Strengthened rapid response capacity in Nepal (includes WASH interventions)
- Evidence-based policy for cholera prevention and control (includes cross-sectional seroprevalence and risk study 1-65yo (cholera/IgG/IgM, HAV IgG/IgM))

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IVI

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Nepal Partners

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Malawi Partners

MOH, UMP

External partners

WTSI
JHU


IVI
International
Vaccine
Institute
국제백신연구소

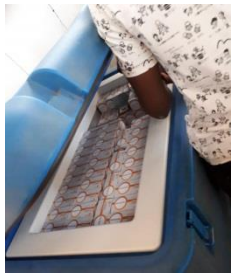
Current activities

Mozambique Cholera Prevention and Surveillance (MOCA)

Departure from Korea | “Euvichol-Plus®”



Arrival in Cuamba


OCV mass vaccination campaigns (Aug 7-11 and 27-31, 2018)









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Current activities

Mozambique Cholera Prevention and Surveillance (MOCA)