

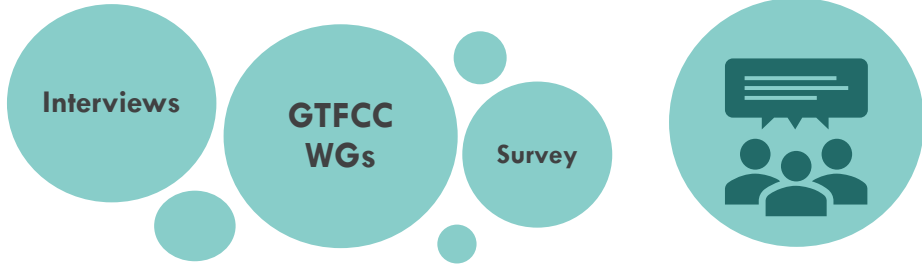


GLOBAL TASK FORCE ON  
**CHOLERA CONTROL**

**THE GTFCC RESEARCH AGENDA**  
**OCV RESEARCH PRIORITIES**

OCV WG Meeting  
11-12 October 2022

# CHOLERA ROADMAP RESEARCH AGENDA DEVELOPMENT PROCESS



**Identify research questions**

- Decide criteria
- Decide context

**Score and prioritize research questions**  
(177 cholera experts)



**Advocacy  
Action  
Monitor/Evaluate**

## **Project team**

### **MM Global Health**

Melissa Ko  
Thomas Cherian  
Shamim Ahmad Qazi

### **Wellcome**

Helen Groves  
Elizabeth Klemm

## **Research Agenda Steering Committee**

Abul Kalam Azad  
Daniele Lantagne  
Dominique Legros – Chair  
Jan Holmgren

Jose Paulo Langa  
Margot Nauleau  
Philippe Barboza  
Val Curtis

## **Global Health Visions**

Kristen Cox Melling  
James Fishon  
Amy MacIver

PILLARS						
	ORAL CHOLERA VACCINE	WATER, SANITATION & HYGIENE	SURVEILLANCE	COMMUNITY ENGAGEMENT	CASE MANAGEMENT	ALL PILLARS

RANK OVERALL	PILLAR	RESEARCH QUESTION
1		What are the optimal oral cholera vaccine schedules (number of doses and dosing intervals) to enhance immune response and clinical effectiveness in children 1 to 5 years of age?
2		What are potential delivery strategies to optimise oral cholera vaccine coverage in hard-to-reach populations (including during humanitarian emergencies and areas of insecurity)?
3	 	Is there additional benefit to adding WASH packages, for example household WASH kits, to an oral cholera vaccine campaign?
4		What is the optimal number of doses of oral cholera vaccine to be used for follow up campaigns in communities previously vaccinated with a 2-dose schedule?
5		Can the impact of oral cholera vaccine on disease transmission, morbidity and mortality be maximized by targeting specific populations and/or targeted delivery strategies?
6		What are the barriers and enablers for integrating cholera treatment into community case management by community health workers?
7		What levels of coverage for relevant water, sanitation and hygiene interventions is required in cholera hotspots to control and ultimately eliminate the risk of cholera?
8		What impact does the timing of oral cholera vaccine use have on outbreak prevention and control?
9		What is the impact of early diagnosis of cholera using a rapid diagnostic test at the point of care in a community setting compared to testing only in health facilities?
10		How can the use of oral cholera vaccine in the controlled temperature chain (i.e., outside the cold chain) be leveraged to maximize the coverage or impact of vaccination in a field setting?
11		What is the incremental benefit of implementing a comprehensive interventions package (including water, sanitation and hygiene, antibiotics, oral cholera vaccine, oral rehydration therapy) to reduce cholera mortality during an epidemic?
12		What is the effectiveness and impact of different vaccination strategies for rapid response to cholera outbreaks (e.g., ring vaccination, case-area targeted interventions, etc.)?
13	 	What is the most cost-effective package of water, sanitation and hygiene, and oral cholera vaccine in different situations, based on transmission dynamics in cholera hotspots?
14		What are the most essential (or what is the minimum set of) infection, prevention and control (IPC) interventions in cholera treatment facilities and oral rehydration points to reduce risk of transmission within these facilities?
15		Are there immunisation strategies other than repeated mass campaigns that will be effective in preventing endemic or epidemic cholera?
16		What is the role and added value of CORTs (community outbreak response teams) in enhancing case investigation and outbreak detection?
17		Can oral cholera vaccine be co-administered safely and without interference with other vaccines during mass campaigns or during routine immunization visits (measles containing vaccines, yellow fever, typhoid, meningitis, pneumococcal conjugate vaccine)?
18	 	What are effective strategies to scale up the use of household water treatment in controlling cholera outbreaks?
19		How can we improve and fine-tune hotspot definition and identification at a district and sub-district level, such as micro-hotspots?
20		Is improved access to safe water (e.g., water points and distribution networks) effective in controlling and preventing cholera outbreaks?

■ Cross-cutting Research Priorities which involve more than one pillar

# 20 RESEARCH PRIORITIES WERE IDENTIFIED ACROSS THE PILLARS

- 9 OCV Only
- 2 cross cutting including OCV

# THE TOP FIVE OCV RESEARCH PRIORITIES PERTAIN TO USE

Rank	Research Question
1	What are the <b>optimal OCV schedules</b> (number of doses and dosing intervals) to enhance immune response and clinical effectiveness in <b>children 1 to 5 years</b> of age?
2	What are potential delivery <b>strategies to optimize OCV coverage</b> in hard-to-reach populations (including during humanitarian emergencies and areas of insecurity) ?
3	Is there <b>additional benefit of adding WASH</b> packages, for example household WASH kits, to an OCV campaign?
4	What is the optimal <b>number of doses</b> of OCV to be used <b>for follow-up campaigns</b> in communities previously vaccinated with a two-dose schedule?
5	Can the <b>impact</b> of OCV on disease transmission, morbidity and mortality be <b>maximized by targeting specific populations</b> and/or targeted delivery strategies?

**DISCOVERY  
RESEARCH  
PRIORITY**

**Discovery and  
development of  
new and  
improved  
vaccines**

# 6 RESEARCH PROJECTS ARE IDENTIFIED AS ACTIVE IN THE CHOLERA RESEARCH TRACKER

- 25 cholera vaccine related projects are listed in the [Cholera Research Tracker](#) database – many initiated prior to development of the research agenda
- 6 projects are listed as ongoing
  - Does not represent all ongoing research
  - Please don't forget to update project status and add new projects

25  
6 ACTIVE



Vaccines

**CHOLERA RESEARCH TRACKER**

An online platform and living database

# MAPPING THE 6 ACTIVE RESEARCH PROJECTS TO OCV RESEARCH PRIORITIES

Rank	Research Question
1	What are the <b>optimal OCV schedules</b> (number of doses and dosing intervals) to enhance immune response and clinical effectiveness in <b>children 1 to 5 years</b> of age?
2	What are potential delivery <b>strategies to optimize OCV coverage</b> in hard-to-reach populations (including during humanitarian emergencies and areas of insecurity)?
3	Is there <b>additional benefit of adding WASH</b> packages, for example household WASH kits, to an OCV campaign?
4	What is the optimal <b>number of doses</b> of OCV to be used <b>for follow-up campaigns</b> in communities previously vaccinated with a two-dose schedule?
5	Can the <b>impact</b> of OCV on disease transmission, morbidity and mortality be <b>maximized by targeting specific populations</b> and/or targeted delivery strategies?

- The impact of mass cholera vaccination in Uvira, Democratic Republic of the Congo – Johns Hopkins University, DRC
- Impact evaluation of OCV preventive campaigns – Epicentre, DRC
- Ethiopia Cholera Control and Prevention (ECCP) – IVI, Ethiopia

- Oral Cholera Vaccine reformulation - IVI, South Korea
- O-specific polysaccharide responses and cholera – Harvard Univ & Massachusetts General Hospital, USA
- Development of a rapidly active live-attenuated cholera vaccine - Brigham & Women's Hospital, USA

\*\* Discovery

# GAPS/AVENUES OF FUTURE RESEARCH IDENTIFIED IN THE 2021 WG MEETING

Rank	Research Question
1	What are the <b>optimal OCV schedules</b> (number of doses and dosing intervals) to enhance immune response and clinical effectiveness in <b>children 1 to 5 years</b> of age?
2	What are potential delivery <b>strategies to optimize OCV coverage</b> in hard-to-reach populations (including during humanitarian emergencies and areas of insecurity)?
3	Is there <b>additional benefit of adding WASH</b> packages, for example household WASH kits, to an OCV campaign?
4	What is the optimal <b>number of doses</b> of OCV to be used <b>for follow-up campaigns</b> in communities previously vaccinated with a two-dose schedule?
5	Can the <b>impact</b> of OCV on disease transmission, morbidity and mortality be <b>maximized by targeting specific populations</b> and/or targeted delivery strategies?

## Dose intervals

\* No active projects listed in research tracker

## CATIs and antibiotics (in response to outbreaks)

\* No active projects listed in research tracker

## New vaccines

\* 3 active projects listed in research tracker

\*\* Discovery

# 2022 OCV PROJECT UPDATE ROUND ROBIN

Rank	Research Question
1	What are the <b>optimal OCV schedules</b> (number of doses and dosing intervals) to enhance immune response and clinical effectiveness in <b>children 1 to 5 years</b> of age?
2	What are potential delivery <b>strategies to optimize OCV coverage</b> in hard-to-reach populations (including during humanitarian emergencies and areas of insecurity)?
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4	What is the optimal <b>number of doses</b> of OCV to be used <b>for follow-up campaigns</b> in communities previously vaccinated with a two-dose schedule?
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\*\* Discovery

IVI  
JHU  
Univ Gothenburg  
icddr,b  
Epicentre  
US CDC  
Others?



# Thank you



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