GLOBAL TASK FORCE ON CHOLERA CONTROL

GTFCC METHODS AND PROCESS FOR THE IDENTIFICATION OF PAMIS

E. Lee 22 May 2024

Key principles

GLOBAL ROADMAP TO END CHOLERA

The Global Roadmap to End Cholera by 2030 calls for control & elimination strategies
spatially targeted to priority geographic areas

These Priority Areas for Multisectoral Interventions are PAMIs ENDING CHOLERA A GLOBAL ROADMAP TO 2030

A renewed strategy to end cholera

Once identified, cholera PAMIs must become the primary targets of multisectoral interventions

WHERE DOES PAMI IDENTIFICATION FIT IN WITH NCP DEVELOPMENT?

NCP Inception

1. Declaration of country commitment

1. Identification of priority areas for interventions

2. Situational analysis (including capacity assessment)

4. Defining leadership and coordination mechanisms (not all priority areas will necessarily receive
 5. Formulation of NCP goal

Development of operational cholera control plans covering all pillars targeted to priority areas

NCP Development

WHY USE GTFCC PAMI METHODS?

Promotes data-driven and transparent prioritization of with standard epidemiologic indicators

Emphasizes implementation feasibility, public health impact, and consensus-building among in-country stakeholders and partners

Applying GTFCC PAMI methods facilitates smoother access to OCV for preventive use and NCP endorsement

WHICH COUNTRIES SHOULD IDENTIFY PAMIS & WHEN?

Countries affected by or at-risk for cholera outbreaks should perform PAMI identification



The identification of PAMIs

- should be updated periodically, in line with NCP renewal cycles (≈ every 5 years)
- usually takes about 6 months

Overview of approach

TWO DISTINCT GTFCC METHODS



- For countries with moderate to high cholera transmission
- ≥ 5% of areas reported cholera in the past 5 years
- PAMIs identification primarily based on the cholera burden
- \circ NCP is for cholera control



For countries limited or no cholera transmission

- o < 5% of the areas reported cholera in the past 5 years
- PAMIs identification primarily based on the vulnerabilities for cholera (re)emergence
- $\circ~$ NCP is for cholera elimination

TRANSITIONING FROM CONTROL TO ELIMINATION

All countries are encouraged to set elimination as their ultimate goal but to effectively reach this goal, **intermediate objectives** (i.e., cholera control) are necessary

- Endemic countries shall first aim at controlling cholera (reducing incidence) through an NCP (and PAMIs) for cholera control
- As fewer areas remain affected by cholera, the country will progress towards cholera elimination through an NCP (and PAMIs) for elimination

THE 2 PAMI METHODS FOLLOW A SIMILAR APPROACH



- All geographic units of a country are scored according to a numeric index
- Aims to inform evidencebased / objective decision making

- Stakeholders from multiple sectors decide based on consensus on an index threshold value
- All geographic units with an index value > threshold are PAMIs

PRINCIPLES FOR SELECTING THE PAMI INDEX THRESHOLD

All areas above an index threshold are considered PAMIs



Identification of PAMIs for cholera control

NUMERIC INDEX: PRIORITY INDEX

Calculated using cholera surveillance data over the past 5 to 15 years

•For all 'NCP operational geographic unit' (Admin-2 or Admin-3, for countries to decide)

Represents dimensions of cholera " burden "

OCholera incidence

Ocholera mortality

• Cholera **persistence** (% of weeks with reported cholera)

• Cholera test positivity indicator [depending on representativeness of cholera testing]

PRIORITY INDEX

- Each indicator is scored
- The priority index is the sum of the scores of all indicators

Priority index

incidence score + mortality score + persistence score +

test positivity score (if applicable depending on representativeness)

SCORING OF EPIDEMIOLOGIC INDICATORS

Based on country specific distribution parameters

Incidence, mortality, persistence

- 0 point: 0
- 1 point: >0 and <median
- 2 points: ≥median and <80th percentile
- 3 points: \geq 80th percentile

CONSIDERATIONS FOR DEFINING A TEST POSITIVITY INDICATOR

- Systematic testing for cholera is not yet common surveillance practice
- Missingness in testing could introduce biases in any indicator related to test positivity
- Assess representativeness of cholera testing to determine how test positivity should be scored

ASSESS REPRESENTATIVENESS OF TESTING INDICATOR



ASSESS REPRESENTATIVENESS OF TESTING INDICATOR



SELECTION OF TEST POSITIVITY INDICATORS

• Acceptable representativeness of testing Positivity rate

- Suboptimal representativeness of testing Number of years with case(s) tested positive
- Insufficient representativeness of testing No testing indicator included in the PAMI analysis

SCORING OF TEST POSITIVITY INDICATOR

Representativeness	Cholera test ess positivity indicator	Score			
		0 point	1 poin t	2 points	3 points
Acceptable	Positivity rate	0%	≤ 10%	$>10\%$ and $\leq 30\%$	> 30%
Suboptimal	Number of years with case(s) tested positive	0	1	> 1	NA
Insufficient	Not applicable	NA	NA	NA	NA

PRIORITY INDEX THRESHOLD Hypothetical example

	Feasibility		Impact		
	\		//		
Priority index	Cumulative % of units	Cumulative % of population	Cumulative % of cholera cases	Cumulative % of cholera deaths	
12	2	2	16	10	
11	7	8	40	26	
10	20	25	88	65	
9	35	47	93	81	
8	37	49	94	84	

ADDITIONAL PAMIs Optional

- The priority index may sometimes underestimate the true burden of cholera when there are:
 - Major surveillance gaps or underreporting
 - Recent OCV campaign(s) (temporarily lowers the priority index)
- Flexibility for countries to consider additional PAMIS (optional)
 - BUT number of additional PAMIs should remain limited compared to number of PAMIs based on priority index
 - Feasibility should be re-assessed after adding additional PAMIs

PAMIs FOR CONTROL





PAMI for cholera control



Technical guidance document



- Excel tool
- Template to format the data
- Training datasets



• Step by step user guide

✓ English
 ✓ Arabic
 ✓ French
 ✓ Portuguese

Identification of PAMIs for cholera elimination

NUMERIC INDEX: VULNERABILITY INDEX

Represents vulnerabilities to the introduction, onset or spread of a cholera outbreak

Takes into account vulnerability factors

Olndicative GTFCC list generic of vulnerability factors

OCustomisable to factors relevant to the country-specific context

VULNERABILITY INDEX

- Each vulnerability indicator is scored (presence (0) / absence (1))
- The vulnerability index is the sum of the score of all vulnerability indicators
- A vulnerability index threshold is determined by country stakeholders
- Geographic units with a vulnerability index > threshold are PAMIs
- In addition, geographic units where confirmed cholera outbreaks where reported in the last 5 years are also PAMIs regardless of their vulnerability index

PAMIS FOR ELIMINATION



PAMI for cholera elimination



RESOURCES

• Technical guidance document



- Excel tool
- Template to format the data
- Training datasets



• Step by step user guide

✓ English
 ✓ Arabic
 ✓ French
 ✓ Portuguese

Next steps following PAMI identification

DOCUMENTATION

 PAMI identification should be documented in a report following standard templates

The filled Excel tool does not account for a documentation of PAMI identification Template report on the identification of PAMIs for cholera control

GLOBAL TASK FORCE ON

CHOLERA CONTROL

l.Background

- Information on any previous identification of PAMIs (method, analysis period)
- Information on NCP status and targets (past, current, and future) in the country
- Concise description of the cholera epidemiological situation in the country in recent years (up to last 10 years)
- Concise description of cholera surveillance system
- Concise description of cholera testing strategy
- Justification for using the method "PAMIs for cholera control" (i.e., provide percentage of NCP operational geographic units with cholera outbreaks cumulatively over the past five years)

II. Methods

Datasets

General

- Administrative level of NCP operational geographic units
- Duration of analysis period

Priority index

- · Sources of data for epidemiological and testing indicators
- Assessment of quality of the data
- Management of missing data
- Vulnerability factors [optional]
- List of vulnerability factors selected emphasizing their relevance in the country context
- Data sources for vulnerability factors
- Criteria to identify NCP operational geographic units to undergo a vulnerability assessment
- Method for assessing vulnerability factors

Template report on the identification of PAMIs for cholera elimination

I.Background

RESOURCES

- Information on any previous identification of PAMIs (method, analysis period)
- · Information on NCP status and targets (past, current, and future) in the country
- Concise description of the cholera epidemiological situation in the country and cholera control efforts in recent years (up to last 10 years)
- · Concise description of cholera surveillance system
- Concise description of cholera testing strategy
- Justification for using the method "PAMIs for cholera elimination" (i.e., provide percentage of NCP operational geographic units with confirmed cholera outbreaks cumulatively over the past five years)

II. Methods

Supporting information

- Administrative level of NCP operational geographic units
- Duration of analysis period
- · Description of vulnerability factors considered in the analysis
- · Rationale for not selecting of any generic vulnerability factors (if applicable)
- Rationale for selecting of any additional country-specific vulnerability factors (if applicable)

Vulnerability index

- Data documentation table reporting the definition of each measurable indicator with concise description of the corresponding data sources
- Assessment of quality of the data
- Management of missing data



GTFCC PAMI REVIEW

<u>/!\</u> New!

- Independent technical review of PAMI identification by the GTFCC
- •Formally required for countries planning to request OCV for preventive use and/or to submit their NCP for GTFCC endorsement
- •To be requested rapidly after PAMI identification: before initiating intervention planning in PAMIs
- •Takes 30 days for completion



How long does it take?

Countries can expect the GTFCC PAMI review to be completed in about 30 days

CHOLERA CONTROL

GTFCCsecretariat@who.int

Together we can

#endcholera

Technical support for PAMI identification



PAMI 'starter pack'

ditional assistar

Together we ca

#endcholera



Identification of PAMIs

Frequently asked questions

	10	
•	Wrvat are PAMILS?	
•	What is the purpose of PAMI identification?	
•	When should a country identify PAMIs?	2
•	How long does it take to identify PAMIs?	
WI	hat are the GTFCC methods for PAMI identification?	
•	Why should countries use a GTFCC PAMI method?	
•	Why are there two GTFCC PAMI methods?	
•	How to determine which GTFCC PAMI method to use?	
•	Why should countries with no to low cholers transmission still identify their PAMis?	
H	ow to identify PAMIs for cholera control?	
•	How are PAMIs for cholera control selected?	
•	What are the GTFOC supporting materials?	
•	How to request additional technical support?	
Ho	ow to identify PAMIs for choiera elimination?	
•	How are PAMs for cholera elimination selected?	
•	What are the GTFCC supporting materials?	
•	How to request additional technical support?	
W	hat to do next once PAMis have been identified?	
	Hards downed Bill Hard and	11 M

How to document PAMI identit · What is the immediate next step after documentation of PAMI identification? ..

> For any additional question, please contact the GTFCC Secretariat: GTFCCsecretariat@who.int

OTFCC PAMI methods	GTFCC methods Combine: • A data-driven phase to score geographic units according to their choires situation and vulnerabilities • A consensus-building phase among country stakeholders
Informed lecision-making dence-based methods to form decision-making	When initiating PAMI identification
ŵ	Inform the CTFCC Secretariat to be guided through the process Detarmine which CTFCC method to use
Flexibility Balance between the ability of implementation ublic health impact of an ACP targeted to PMMIs	There are two distinct GTPCC methods to identify: • PANIs to develop an NCP to cantoul chains (PANIs for control) • PANIs to develop an NCP to eliminate chains (PANIs for elimination)
948	Country with moderate to high choiers transmission in transmission in mocent years
Consensus eholders scross multiple ictors contribute to the dentification of PAMIs	PAble for PAble for effective
\bigcirc	After PAMI identification
Engagement keholder engagement in	Reach out to the GTFCC Secretarist to:
buy-infor the NCP	 Share the results
and the second second	 Benefit from an independent GTFCC PAMI review
Q	Be guided in the next steps of NCP development
Recognition	GTFCC online resources and support
ndonsement of an NDP	PAMIs for control been been Additional assis

CTFCCsecretariat@who.int

A https://www.gtfcc.org/

CHOLERA CONTROL

Identification of PAMIs

How to target cholera control and elimination strategies and improve the effectiveness of National Cholera Plans (NCPs)?

Identification of PAMIs for cholera control

Principles

 Applicable in countries with moderate to high choices transmission
 Countries with choices outbreaks in > 1% of the geographic units own the part 5 years
 Countries with inholds on choices numericable inholds breaked choice Advis (dentification for cholera alimitation (https://tinyurl.com/PAHMalimination)

👿' Performed when a National Cholara Plan (NCP) is developed or updated havery 5 years
 or scorer if there are changes in choices epidemiology/submability factors or surveillance

Sased on cholers burden

Cholera incidence, mortality persistence, and diagnostic test positivity over the last 5 to 5 years are computed to score each geographic unit according to a numeric priority index · Ceographic units with a priority index above a threshold determined by country stake

g Optionally complemented with an assessment of vulnerability factors In geographic units where cholens burden may be underestimated, vulnerability factors may be considered to identify a limited number of additional PANIs:

Calculate

Validate by

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et meps

can

#endcholera

Steps

Compile annual surveillance data (incidence, persistence, mortaity, diagnastic testal for each econschic	 Score epidemiological indicators, assess the representativement of choices testing, and score diagnostic test controls. 		Engage stakeholders from sectors in a validation work determine the final list of P/ participatory manner
Collect vulnerability Accordate for geographic units where the cholars burdler may be underestimated [optionic]	 Sum the accre of epidemiclogical and of the text po indicator to obta indicator to obta unit 	ndicators activity in a priority rographic	Reach consensus on a prior through only balancing A and impact of the future NC prographic units with a prior through the set of the future for through the set of the set through the set of the set of an optional assessment of vulnerability factors is under reach consensus on any ad PAMIB
Final list of P	AMIs	Get	started, be supported
All geographic units with a pri the threahold determine stakeholders and -optional a limited number of geograp priority index below the thre vulnerable to the	ority index above d by country phic units with a sheld but highly data	 Infum the considered Reptored Reach to During Pri- 	 CITEC: Secretariat when your cour angaging in PARE devotion for the CITEC: anime personnel your of Party or constitution decomments in the CITEC: Secretariat: Mill devoting for technical assists

Identification of PAMIs 3 for cholera elimination

Principles

Applicable in countries with no to limited cholera transmission Countries with choices outbreaks reported in = 3% of the geographic units over the past 5 years
 Countries with high to moderate choices transmission should instead consider PAMIs identification for chalers.control (https://tinyurl.com/PAMicontrol)

Y Performed when a National Cholers Plan (NCP) is developed or updated

mevery 5 years
 or scorer if there are changes in choiers epidemisling/journerability factors or surveillance

🗹 Based on the occurrence of cholera outbreaks and on an assessment of vulnerabilities to cholers reemergence

· Cooprephic units where confirmed choices outbreaks occurred in the last 5 years are PAMs + In addition, cholers vulnerability factors considered relevant in the country-specific context are computed to

score each geographic unit according to a numeric subarability index. • Ceographic units with a subarability index above a threshold determined by country stateholders are also It-Abels

Steps				
Prepare datasets vi	Calculate Inerability Index	Validate by stakeholders		
Compile data on the occurrence of confinned theters outlinearly. Salect vulnerability factors related in the country update (in the country update (in the country update). If the cou	ach vulnerability of for each phic unit e score of all bility indicators to a vulnerability or each geographic	Engage stakeholders from Engage stakeholders from workphoe to determine the final tat of PAMIs in a participatory manuar Pack conservat a vulnorability index threaded value balanching feasibility and impact of the future HOP. All events billity index threaded value balanching feasibility and impact of the future HOP. All events billity index threaded value balanching feasibility and impact of the future HOP. All events billity index threaded value balanching feasibility and impact of the future HOP. All events billity index threaded area billity		
Final list of PAMIs	Ge	t started, be supported		
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	etariut@wna.inn w.gtftcr.org/	Together we can #endcholera		

ONLINE TRAINING MODULES

- Introduction to PAMIs
- How to identify PAMIs for control
- How to use the Excel tool PAMIs for control (tutorial)
- How to identify PAMIs for elimination
- •How to use the Excel tool PAMIs for elimination (tutorial)



THE GTFCC NETWORK IS HERE TO GUIDE & SUPPORT YOU

- GTFCC Secretariat / WHO HQ
- GTFCC Country Support Platform
- WHO Regional Offices
- **UNICEF HQ**
- UNICEF Regional Offices
- Africa CDC



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