GLOBAL TASK FORCE ON
CHOLERA CONTROL

CHOLERA SURVEILLANCE AT COUNTRY LEVEL
GTFCC RECOMMENDATIONS
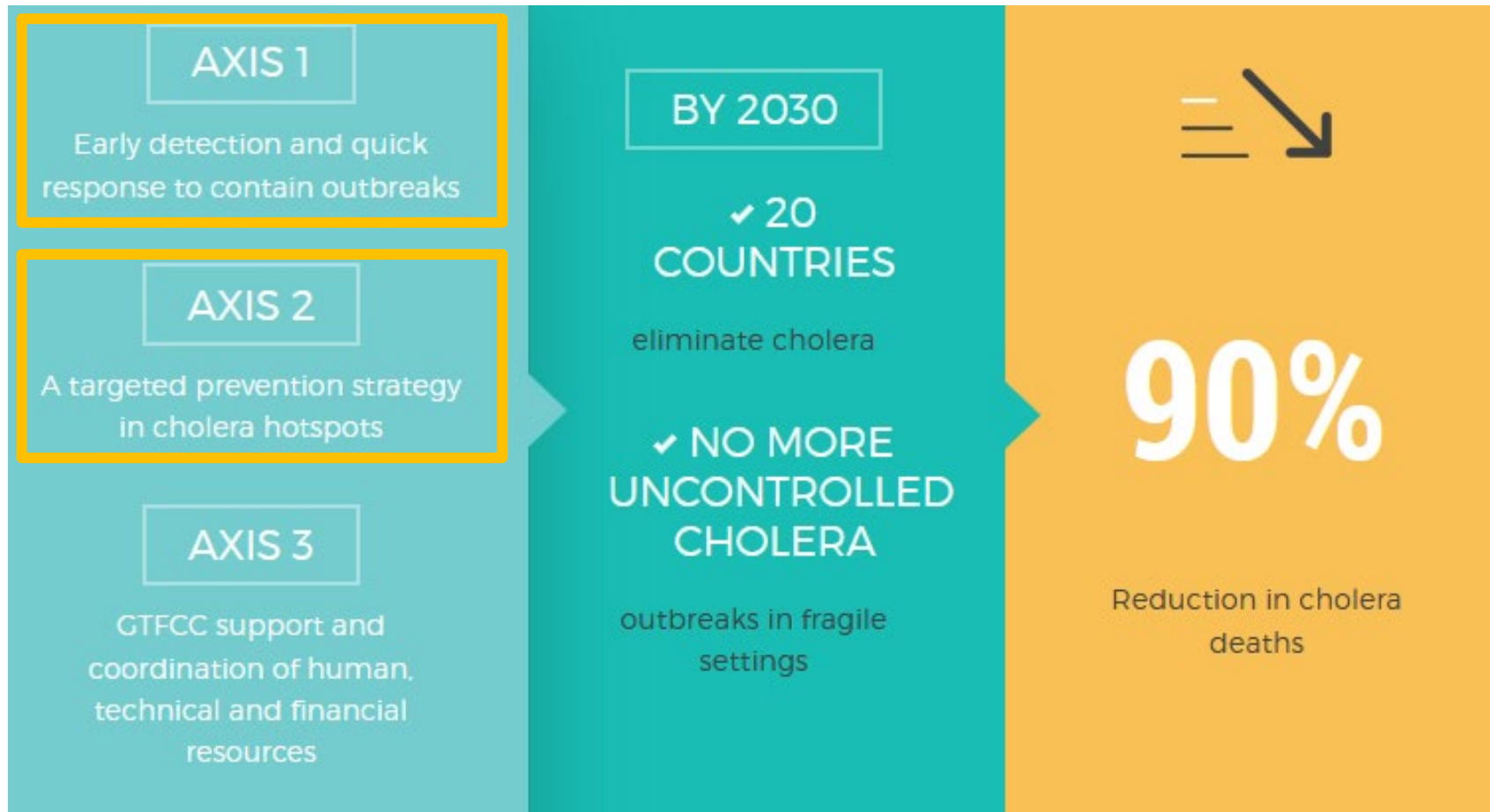
K. Heitzinger (CDC)
GTFCC subgroup lead
03 May 2023

BACKGROUND

- Importance of cholera surveillance
- Rationale for updating GTFCC recommendations
- Revision process and timelines

CHOLERA SURVEILLANCE - CORNERSTONE TO END CHOLERA

ENDING CHOLERA: A global roadmap to 2030

AXIS 1

Early detection and quick response to contain outbreaks

AXIS 2

A targeted prevention strategy in cholera hotspots

AXIS 3

GTFCC support and coordination of human, technical and financial resources

BY 2030

✔ 20 COUNTRIES

eliminate cholera

✔ NO MORE UNCONTROLLED CHOLERA

outbreaks in fragile settings

90%

Reduction in cholera deaths

SURVEILLANCE & CHOLERA PREVENTION AND CONTROL

Surveillance is **critical for all other pillars:**

- Early detection and **quick response** to contain outbreaks

- Targeted prevention strategies - identification of PAMIs for the development of **NCPs**

- **Monitoring and evaluation** (progress and impact)

Leadership & coordination

WASH

Surveillance

Case management

OCV

Community engagement
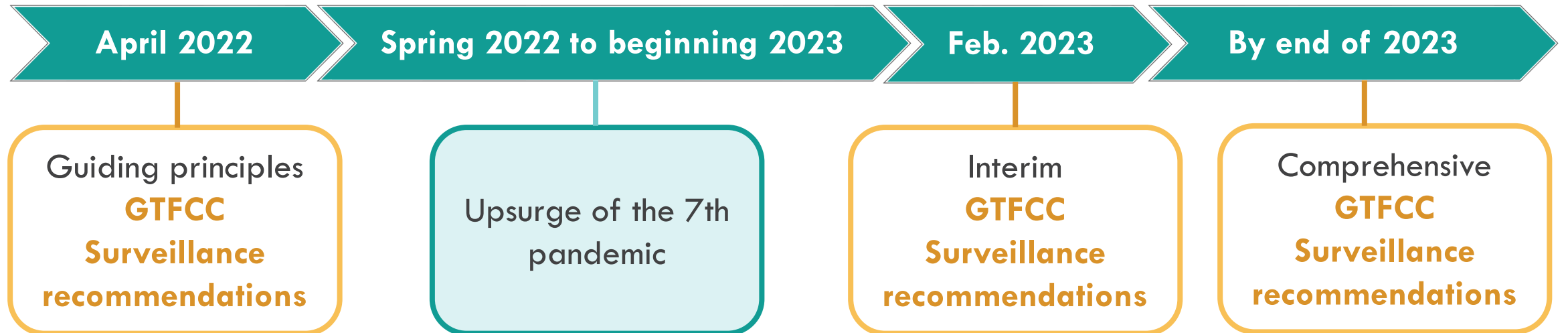
UPDATE OF GTFCC RECOMMENDATIONS FOR CHOLERA SURVEILLANCE

2017 GTFCC surveillance recommendations:

- Did not provide an adequately **fine-scale** or **accurate** picture of the cholera situation

- Did not address the **diversity** of cholera epidemiological situations and corresponding surveillance and control objectives

To update GTFCC surveillance recommendations to better help countries achieve their cholera-related prevention and control targets in line with the Global Roadmap

REVISION GTFCC RECOMMENDATIONS FOR CHOLERA SURVEILLANCE
Timeline

| April 2022 | Spring 2022 to beginning 2023 | Feb. 2023 | By end of 2023 |

Guiding principles **GTFCC Surveillance recommendations**

Upsurge of the 7th pandemic

Interim **GTFCC Surveillance recommendations**

Comprehensive **GTFCC Surveillance recommendations**

OBJECTIVES OF THIS SESSION

To present

- GTFCC Interim recommendations (Feb. 2023) – Key changes
(excluding details on testing strategy => Thursday)

- Future directions for the next update - comprehensive GTFCC recommendations

To hear from you

- Comments will be taken into account by the Surveillance Working Group in the next update

- Discuss perspectives for implementation

INTERIM GTFCC RECOMMENDATIONS FOR CHOLERA SURVEILLANCE
February 2023

- Key objectives and principles
- Definitions
- Operationalization

EN
https://tinyurl.com/SurvFeb2023

FR
https://tinyurl.com/SurvFev2023

Key objectives and principles

KEY OBJECTIVES & PRINCIPLES
Apr. 2022, Surveillance WG meeting

✓ Maximize the **operational use** of cholera surveillance data

⊙ *Adaptive surveillance at the local level*

✓ Increase the **accuracy** of cholera surveillance

⊙ *Systematic strategies for testing*

✓ Increase the **resolution** of cholera surveillance

⊙ *Case-based surveillance*

ADAPTIVE SURVEILLANCE AT THE LOCAL LEVEL

To maximize the operational use of surveillance data

Surveillance objectives and modalities are **adapted to the cholera situation at the local level**

Local level: - **surveillance unit**
   - administrative unit no bigger than an NCP operational unit / country specific

Cholera situations

Surveillance objectives

Absence of a confirmed cholera outbreak → To **rapidly detect**, **investigate**, **and respond** to suspected/probable cholera outbreak **to interrupt** the onset of local transmission

Confirmed cholera outbreak → To **monitor the morbidity**, **mortality and affected populations** to inform targeted interventions **to mitigate the impact and spread** and eventually end the outbreak

SYSTEMATIC STRATEGIES FOR TESTING

To increase the accuracy of surveillance

Systematic strategies for testing adapted to the cholera situation at local level, including:

- Expanded **RDT** use for early outbreak detection and outbreak monitoring

- Alternative recommendations if RDTs are not available

- More specific recommendations for **culture** and **PCR** use

CASE-BASED REPORTING AND DATA ANALYSIS

To increase the resolution of surveillance

Minimum requirements for **case-based data collection**, **reporting** and **analysis** at the surveillance unit level

2017 Recommendations

- ✕ Aggregated number of cholera cases and deaths by age group (<5 and ≥5 years)

- ✕ Data is consolidated and analyzed at district or national level to describe the cholera situation

Feb. 2023 Interim recommendations

- ✓ Minimum standard **case-based data** to be collected and reported for all suspected cholera cases

- ✓ Data **analysis at the level of surveillance units** to ensure contextually appropriate interpretations and interventions

Definitions

Cholera situation in a surveillance unit

SUSPECTED CHOLERA OUTBREAK

- **Two or more** suspected cholera cases reported in the same surveillance unit within one week of each other

or

- One person **≥ 2yrs old dying** from acute watery diarrhoea with no other specific cause attributed to this death

or

- One confirmed cholera case pending case classification by origin of infection (i.e., locally acquired or imported cholera case)

PROBABLE CHOLERA OUTBREAK

▪ A probable outbreak is detected when a certain number of suspected cholera cases with a **positive rapid diagnostic test** within a two-week period in a surveillance unit exceeds pre-defined **thresholds**

Thresholds are statistically determined to provide high confidence that at least one suspected case with RDT+ is indeed a true cholera case

Maximizes use of RDT for rapid response
whilst taking into account RDT performance (specificity)

CONFIRMED CHOLERA OUTBREAK

- At least one **confirmed** cholera case **locally acquired**

Imported cholera case
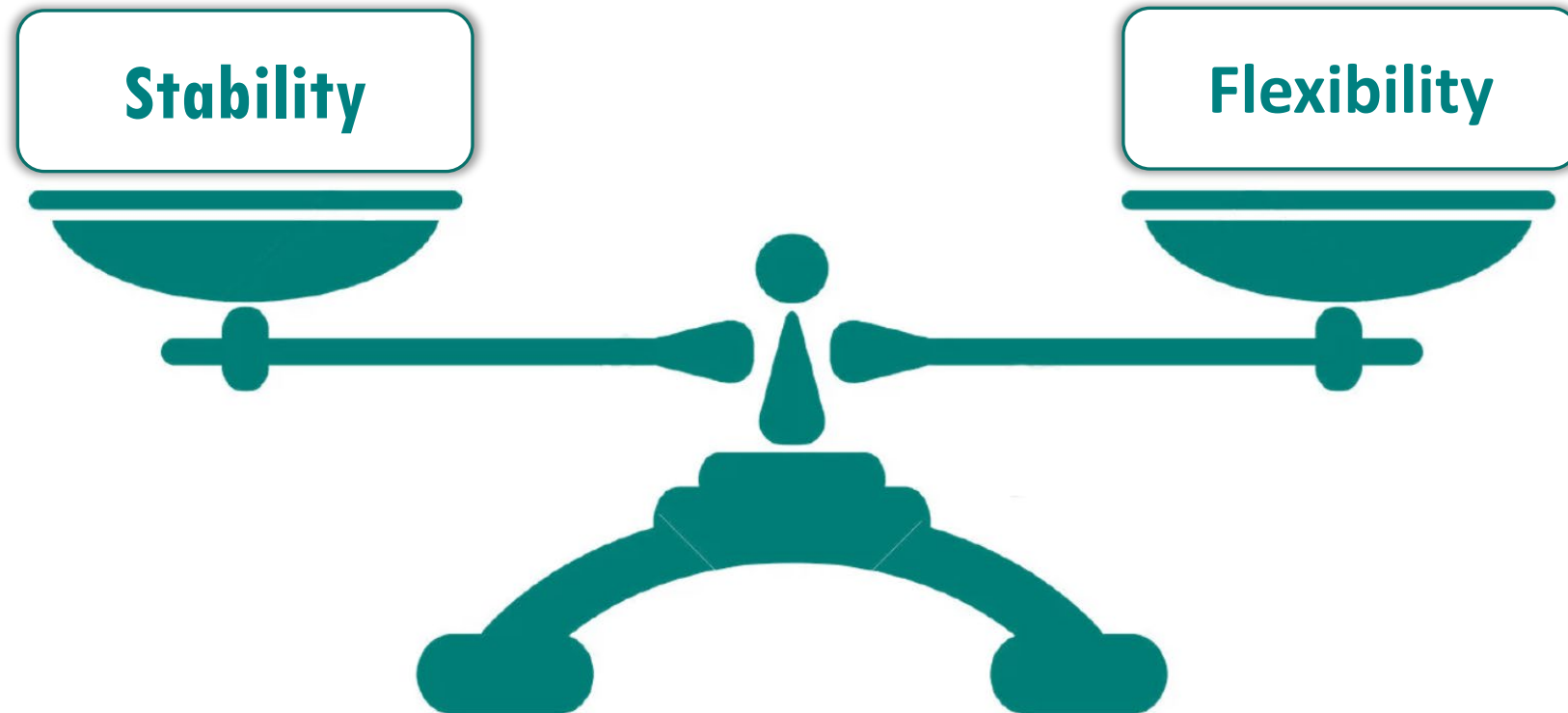≠
Confirmed cholera outbreak

END OF A CHOLERA OUTBREAK

- A suspected, probable, or confirmed cholera outbreak can be considered over when for a minimum period of **four consecutive weeks** all suspected cases (if any) had a **negative laboratory test result by culture or PCR**

Operationalization

ADAPTIVE CHOLERA SURVEILLANCE

Adaptive ≠ unstable

Stability

Flexibility

ADAPTIVE CHOLERA SURVEILLANCE

STABLE

Regardless of the cholera situation in the surveillance unit, surveillance should include:

- Operational surveillance streams (health facility-based, community-based, event-based)

- Systematic data collection and reporting

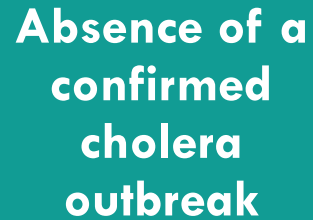- Routine data analysis of key surveillance indicators

FLEXIBLE

Surveillance modalities to be adapted to the prevailing cholera situation in the surveillance unit:

- Case definitions

- Testing strategy

- Frequency of reporting and analysis

ADAPTIVE SURVEILLANCE MODALITIES: CASE DEFINITIONS

ADAPTIVE SUSPECTED CASE DEFINITIONS

Absence of a confirmed cholera outbreak

Any person **≥ 2 yrs old** with **acute watery diarrhoea** and:
- **severe dehydration**

or
- **dying** from acute watery diarrhoea

Confirmed cholera outbreak

Any person with or dying from **acute watery diarrhoea**

ADAPTIVE SURVEILLANCE MODALITIES: TESTING STRATEGIES
Preview – will be presented on Thursday

ADAPTIVE TESTING STRATEGIES

Absence of a confirmed cholera outbreak → Testing of **all cholera suspected cases**

Confirmed cholera outbreak → Testing of **a subset of cholera suspected cases** according to a systematic protocol

ADAPTIVE SURVEILLANCE MODALITIES: FREQUENCY OF REPORTING AND ANALYSIS

ADAPTIVE FREQUENCY OF REPORTING AND ANALYSIS

Absence of a confirmed cholera outbreak → **Daily** reporting and analysis allow early outbreak detection

Confirmed cholera outbreak → **At least weekly** reporting and analysis to monitor the outbreak

SUMMARY: CORE AND ADAPTIVE SURVEILLANCE MODALITIES

Cholera situation in the surveillance unit	Absence of confirmed cholera outbreak	Confirmed cholera outbreak
CORE MODALITIES	DETECTION	
	Systematic case detection through all surveillance streams (health-facility, CBS, EBS)	
	DATA COLLECTION	
	Routine recording and reporting of minimum case-based data	
	ANALYSIS	
	Systematic data analysis at the surveillance unit level	
ADAPTIVE MODALITIES	CASE DEFINITION	
	Suspected and confirmed case definitions in surveillance units where there is no confirmed outbreak	Suspected and confirmed case definitions in surveillance units where a confirmed outbreak
	TESTING STRATEGY	
	Testing of all suspected cases	Testing of a subset of suspected cases according to a systematic protocol
	FREQUENCY OF REPORTING AND ANALYSIS	
	Daily	At least weekly

COMPREHENSIVE GTFCC RECOMMENDATIONS

In progress....

GOAL: Enrich and complement Feb. 2023 Interim recommendations

Consistency with all principles of Feb. 2023 interim recommendations will be ensured

Feb. 2023 interim recommendations will be enriched by:

- Further differentiation of cholera **outbreak situations** in a surveillance unit, including their articulation with the requirements for cholera-free status

- Identification of **deteriorated transmission** for investigation and step up in response efforts for control

- **Additional guidance and practical tools** for data collection, reporting, and analysis

- Recommendations for monitoring and evaluation of **surveillance performance**

- Incorporation of **feedback from countries**

DIFFERENTIATION OF CHOLERA OUTBREAK SITUATIONS

Confirmed cholera outbreak

Clustered cholera transmission

Confirmed cholera outbreak with confirmed cholera case(s) that are all **epidemiologically linked** based on an epidemiological investigation

Community cholera transmission

Confirmed cholera outbreak with confirmed cholera case(s) that **cannot all be epidemiologically linked** based on an epidemiological investigation

ARTICULATION OF CHOLERA SITUATIONS WITH THE REQUIREMENTS FOR CHOLERA-FREE STATUS

Cholera situation in the surveillance unit

Cholera Free Status Framework

Absence of a confirmed cholera outbreak

Clustered cholera transmission

Absence of community transmission.

Cholera is eliminated as a threat to public health.

Does not prevent the recognition or maintenance of Cholera Free Status

Community cholera transmission

Leads to the suspension or revocation of Cholera Free Status

(except if limited in space of time)

COMPREHENSIVE ADAPTIVE SURVEILLANCE FRAMEWORK

Cholera situation

Operational objectives

Adaptive surveillance modalities

Cholera situation	Operational objectives
Absence of a confirmed cholera outbreak	**To rapidly detect, investigate, and respond** to any suspected/probable **cholera outbreak to interrupt** the onset of local cholera transmission.
Clustered cholera transmission	**To rapidly detect, confirm, investigate, and respond** to any **cholera cases to contain transmission**, prevent community transmission, and eventually end the outbreak.
Community cholera transmission	**To monitor morbidity, mortality and affected populations** to inform targeted interventions **to mitigate the impact and spread** and eventually end the outbreak.

- **Case definitions**
- **Testing strategy**
- **Frequency** of reporting and analysis

DETERIORATED COMMUNITY TRANSMISSION OF CHOLERA

▪ **A deteriorated community transmission** indicates a breakdown or failure in control measures or interventions and warrants a **field investigation** to **step up control** efforts

▪ **Indicators of deteriorated community transmission**:

- **Incidence** above the expected historical baseline level
- **Spatial spread** of cholera beyond the initial focus of the outbreak
- High or increasing **case fatality ratio**
- Significant **shift in the socio-demographic characteristics** of cases and deaths

ADDITIONAL GUIDANCE AND TOOLS FOR DATA COLLECTION, REPORTING, AND ANALYSIS

Development of supporting tools:

- Line list template

- Case investigation form

- Template for routine epidemiological reports

Consistency with requirements for reporting and data flow from local to regional and global levels will be ensured

RECOMMENDATIONS FOR ROUTINE MONITORING AND EVALUATION OF SURVEILLANCE PERFORMANCE

- Recommendations on key epidemiological and laboratory indicators and targets for the **continuous monitoring** of surveillance performance (e.g., completeness, timeliness, etc.)

  - Essential to troubleshoot issues and improve surveillance in real-time

  - Minimum performance targets as part of requirements for cholera-free status

- Recommendations for the **periodic evaluation** of the overall effectiveness and impact of the surveillance system

SUMMARY
FEB 2023 INTERIM RECOMMENDATIONS TO BE ENRICHED BY

Differentiation of outbreak situations

> **Absence of confirmed cholera outbreak**

> **Clustered cholera transmission**

> **Community cholera transmission**

Deteriorated community transmission

- A **deteriorated community transmission** in a surveillance unit warrants a **field investigation** to **step up response and control** efforts

Supporting tool for data collection, reporting, analysis

- **Templates** of line list, case investigation form, routine epidemiological reports, harmonization for reporting at regional/global levels

Surveillance performance monitoring and evaluation

- Minimum GTFCC **standards and targets** for epidemiological and laboratory surveillance

INTERIM GTFCC RECOMMENDATIONS – FEB 2023
Download links

English   **https://tinyurl.com/SurvFeb2023**

French   **https://tinyurl.com/SurvFev2023**

Thanks!

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