GLOBAL TASK FORCE ON
CHOLERA CONTROL

OUTBREAK SUB-GROUP
SURVEILLANCE WG WEBINAR UPDATE

Raoul Kamadjeu
30 March 2021

SUBGROUP MEMBERS

Raoul Kamadjeu

Namseon Beck

Sophie Bonnet

Amanda Debes

Marc Gastellu

Rachel Goodermote

Francisco Luquero

Anthony Okon

Marie Laure Quilici

Anastasia Smirnova

Vincent Sodjinou

Maryann Turnsek

Muhammad Tayyab

Christophe Valingot

WORKPLAN

WORKPLAN, SURVEILLANCE AND MONITORING SUBGROUP

❖ Three themes
- Outbreak detection
- Outbreak investigation
- Case-area targeted interventions (CATI)

❖ Outbreak definitions
- Assess the need and, if relevant, revise GTFCC definitions of suspected cholera outbreaks (= "cholera alerts") in different epidemiological settings
- Assess the need and, if relevant, revise GTFCC definitions of cholera outbreaks in different epidemiological settings
- Define criteria to declare the end of an outbreak in different epidemiological settings

REVIEW OF CHOLERA OUTBREAK DEFINITIONS

- Cholera surveillance goals
- Process
- Where we are
- Next stepts

PURPOSE OF OUTBREAK DEFINITIONS

❖ Suspected outbreak
- Trigger for investigation (and early response)

❖ Confirmed outbreak
- Trigger for comprehensive response, *V. cholerae* specific response (e.g. reactive OCV)

❖ End of outbreak
- Return to normal routine surveillance activities; depending on country, may have other policy implications

APPROACH

METHOD OF WORK

1. **Started with broader discussion on current definitions and options for modification/ expansion**

❖ Does humanitarian setting require its own set of definitions?
- agreement that this would be very setting dependant and complex to make a blanket recommendation on humanitarian settings; instead include a note that these settings require special considerations regarding thresholds

❖ Persistent and non-persistent setting
- Rationale: Investigation and action thresholds differ, currently no clear seperate definitions
- Persitent → year-round sustained transmission with seasonal peaks
- Non-persistent → full interruption of cholera for certain periods of time (timeframe not yet defined)

❖ End of outbreak
- Currently mentioned within testing strategy section of GTFCC interim surveillance guidance (Page 16) → moved to outbreak definitions and reviewed

❖ Defining certain terminology
- Geographical area for outbreak detection → agreement that this depends on the situation, cannot be defined easily for all countries
- Local transmission → at this stage not further defined; needed?

METHOD OF WORK

2. **Reviewed definitions in detail for persistent and non-persistent settings (next slides)**

❖ Circulation of proposed definitions for inputs

❖ Integration of written feedback by secretariat

❖ Presentations of reviewed proposal at meeting for discussion

❖ Integration of verbal feedback

❖ Survey to help reach consensus

OUTBREAK DEFINITIONS
NON-PERSISTENT TRANSMISSION SETTING

- Small adjustments to previous GTFCC versions
- Addition of end of outbreak definition

SUSPECTED OUTBREAK DEFINITION

CURRENT (GTFCC interim guidance. Pg. 6)

A cholera alert is defined by the detection of:

Two or more people aged 2 years and older (linked by time and place) with acute watery diarrhoea and severe dehydration or dying from acute watery diarrhea from the same areas within one week of one another

OR

One death from severe acute watery diarrhoea in a person at least 5 years old

OR

One case of acute watery diarrhoea testing positive for cholera by rapid diagnostic test (RDT) in an area (including those at risk for extension from a current outbreak) that has not yet detected a confirmed case of cholera.

Discussion points:

❖ Adjust terminology from "**alert**" to "**suspected outbreak**" to align with other WHO early warning terminology where alert is used differently

❖ Wording repeats suspected case definition; refer directly to suspected case?

❖ Death in 5+ year old, even though case definitions have been changed to 2+ year old at last review; severe redundant

❖ Addition of definition of confirmed case with no evidence of local transmission, to align with confirmed outbreak definition

❖ No option adapted to persistent transmission settings (see later in presentation)

SUSPECTED OUTBREAK DEFINITION

CURRENT (GTFCC interim guidance)

A cholera alert is defined by the detection of:

Two or more people aged 2 years and older (linked by time and place) with acute watery diarrhoea and severe dehydration or dying from acute watery diarrhea from the same areas within one week of one another

OR

One death from severe acute watery diarrhoea in a person at least 5 years old

OR

One case of acute watery diarrhoea testing positive for cholera by rapid diagnostic test (RDT) in an area (including those at risk for extension from a current outbreak) that has not yet detected a confirmed case of cholera.

PROPOSED

❖ Two or more suspected cholera cases (person) from the same geographical area (place) reported within one week of each other (time)

   OR

❖ One person aged 2 years or older dying from acute watery diarrhoea

   OR

❖ One probable case (or: One suspected cholera case testing positive by rapid diagnostic test)

   OR

❖ One single confirmed cholera case with no evidence of local transmission identified (yet)

CONFIRMED OUTBREAK DEFINITION

CURRENT (GTFCC interim guidance. Pg. 6)

A cholera outbreak is defined by the occurrence of at least one confirmed case of cholera and evidence of local transmission.

Outbreaks can also occur in areas with sustained (year-round) transmission and are defined as an unexpected increase (in magnitude or timing) of suspected cases over two consecutive weeks of which some are laboratory confirmed. Such increases should be investigated and responded to appropriately through additional outbreak response and control measures.

Discussion points:

- ❖ The current definition does not specifically use the term "Confirmed" as in Confirmed Cholera outbreak

- ❖ First part applies to "non-persistent" cholera settings

- ❖ Second part applies to "persistent" cholera settings, not so clear in terms of "unexpected increase"

- ❖ Separate the two settings?

- ❖ Discussion on defining "evidence of local transmission" → concluded that this would be very context dependant and that examples can be included in guidance, but no strict definition to be developed

CONFIRMED OUTBREAK DEFINITION
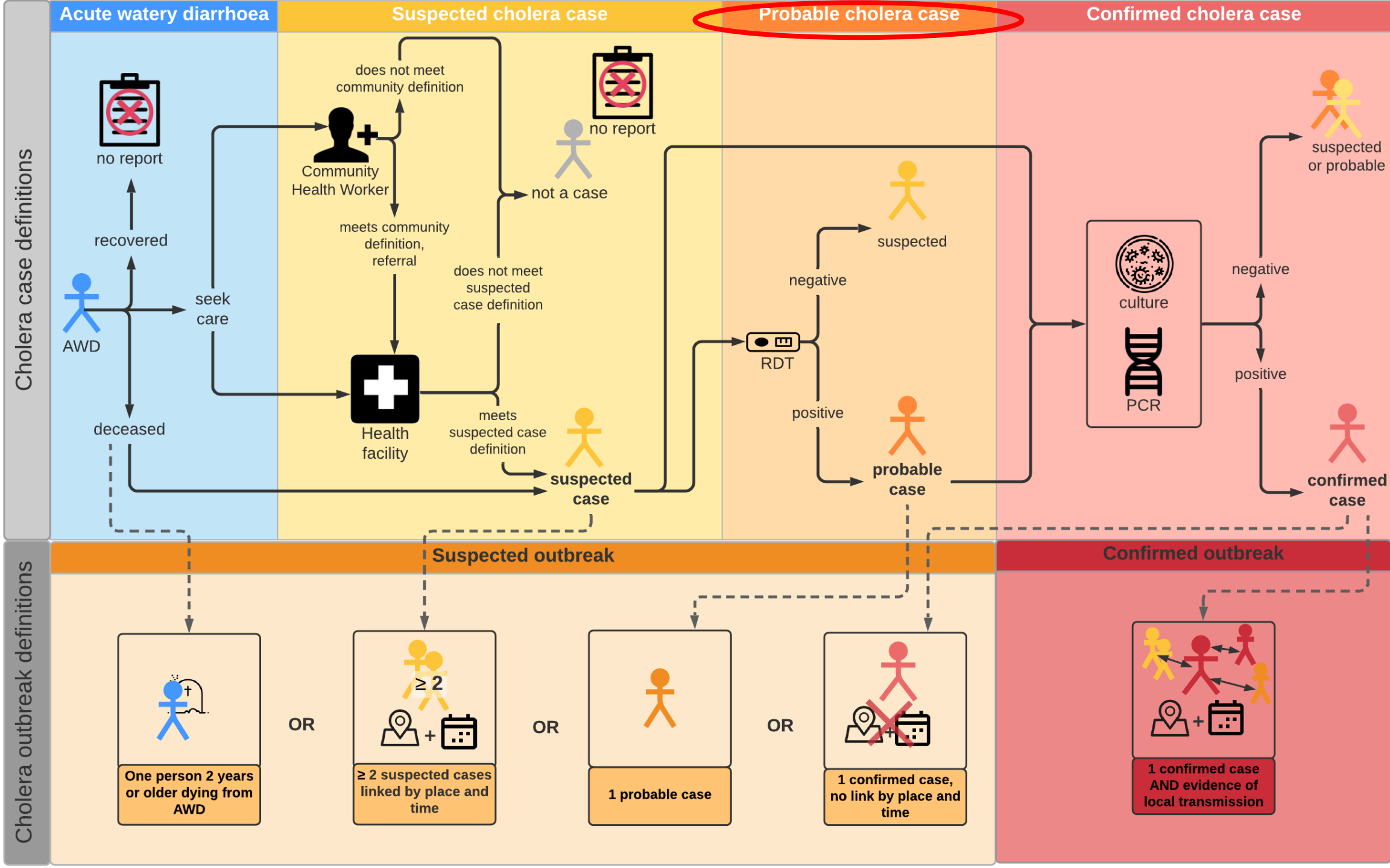
CURRENT (GTFCC interim guidance)

A cholera outbreak is defined by the occurrence of at least one confirmed case of cholera and evidence of local transmission.

Outbreaks can also occur in areas with sustained (year-round) transmission, and are defined as an unexpected increase (in magnitude or timing) of suspected cases over two consecutive weeks of which some are laboratory confirmed. Such increases should be investigated and responded to appropriately through additional outbreak response and control measures.

PROPOSED

❖ The occurrence of at least one laboratory (culture or PCR) confirmed cholera case **AND** evidence of local transmission in a specified geographical area (cases reporting common risk exposure(s) or being linked by place and time).

*Outbreak start date: The start date of the outbreak is the date of onset of the first reported case (suspected, probable or confirmed)

Cholera case definitions

Acute watery diarrhoea | **Suspected cholera case** | **Probable cholera case** | **Confirmed cholera case**

no report

AWD
recovered
seek care
deceased

does not meet community definition
Community Health Worker
meets community definition, referral
does not meet suspected case definition
not a case
no report

Health facility
meets suspected case definition
suspected case

RDT
negative — suspected
positive — **probable case**

culture
PCR
negative
positive

suspected or probable
confirmed case

Cholera outbreak definitions

Suspected outbreak | **Confirmed outbreak**

One person 2 years or older dying from AWD

OR

≥ 2 suspected cases linked by place and time

OR

1 probable case

OR

1 confirmed case, no link by place and time

1 confirmed case AND evidence of local transmission

END OF OUTBREAK DEFINITION

CURRENT (GTFCC interim guidance. Pg. 16)

When the number of suspected cases in the epidemic area significantly declines and all samples from all AWD cases test negative by RDT, culture or PCR for a minimum period of two weeks, the outbreak can be considered ended.

Discussion points

❖ Discussion if option should be given for areas with limited testing capacities
- Consensus that aim should be to improve capacity to test suspected cases during/ at the end of outbreaks in all cholera affected areas
- Option proposed for situations where not all suspected cases are possible to be sampled and tested
- **Survey** (11 respondents): 10 agreed or could live with this definition, 1 respondent disagreed with a definition for poor lab capacity

END OF OUTBREAK DEFINITION

CURRENT (GTFCC interim guidance)

When the number of suspected cases in the epidemic area significantly declines and all samples from all AWD cases test negative by RDT, culture or PCR for a minimum period of two weeks, the outbreak can be considered ended.

PROPOSED

❖ Complete interruption of cholera transmission evidenced by negative laboratory test results (culture or PCR) of all reported suspected cholera cases (supported by active case finding) in a specified geographical area, for a minimum of 2 consecutive weeks.

❖ Consideration for areas with limited laboratory capacity:
Evidence of negative laboratory test results for all sampled suspected cases for a minimum of 2 consecutive weeks, with a minimum of x suspected cases sampled per week (*remains to be defined*).

*Outbreak end date: The end of the outbreak is 14 days after the date of recovery of the last confirmed case OR 14 days after the date of death of the last suspected, probable or confirmed case, whichever comes last.

OUTBREAK DEFINITIONS
PERSISTENT TRANSMISISON SETTING

SUSPECTED OUTBREAK DEFINITION

CURRENT (GTFCC interim guidance)

❖ No suspected outbreak definition defined for persistent setting

DISCUSSION

❖ Mirror where possible and logical the non-persistent setting

❖ Increase in deaths above baseline not considered appropriate, as weekly baseline unlikely to be meaningful (too variable) → unexpected incrase in deaths would be covered through EBS

❖ For laboratory tests: increase in positive tests on its own not meaningful, as an increase could be due purely to increased testing; more appropriate to look at increase in the proportion of positive tests

❖ No consensus yet on baseline and degree of increase (threshold) → one country example assessed; further country examples needed

SUSPECTED OUTBREAK DEFINITION

CURRENT (GTFCC interim guidance)

❖ No suspected outbreak definition defined for persistent setting

PROPOSED

❖ An increase in reported suspected cholera cases for ≥1 week above the established baseline in a specified geographical area

OR

❖ An increase in the positivity rate of RDT tested suspected cholera cases (probable cases) for ≥1 week above the established baseline in a specified geographical area

OR

❖ An increase in the positivity rate of suspected cholera cases tested by PCR or culture (confirmed cases) for ≥1 week above the established baseline in a specified geographical area

CONFIRMED OUTBREAK DEFINITION

CURRENT (GTFCC interim guidance. Pg.6.)

Outbreaks can also occur in areas with sustained (year-round) transmission and are defined as an unexpected increase (in magnitude or timing) of suspected cases over two consecutive weeks of which some are laboratory confirmed. Such increases should be investigated and responded to appropriately through additional outbreak response and control measures.

DISCUSSION

❖ Unexpected (in magnitude or timing) too vague?

❖ Attempt to propose clearer definition that follows on from the suspected definition

CONFIRMED OUTBREAK DEFINITION

CURRENT (GTFCC interim guidance)

Outbreaks can also occur in areas with sustained (year-round) transmission and are defined as an unexpected increase (in magnitude or timing) of suspected cases over two consecutive weeks of which some are laboratory confirmed. Such increases should be investigated and responded to appropriately through additional outbreak response and control measures.

PROPOSED

❖ An increase in the positivity rate of suspected cholera cases tested by PCR or culture (i.e., increase proportion confirmed cases of all cases tested) over ≥ **2 consecutive weeks** above the established baseline in a specified geographical area
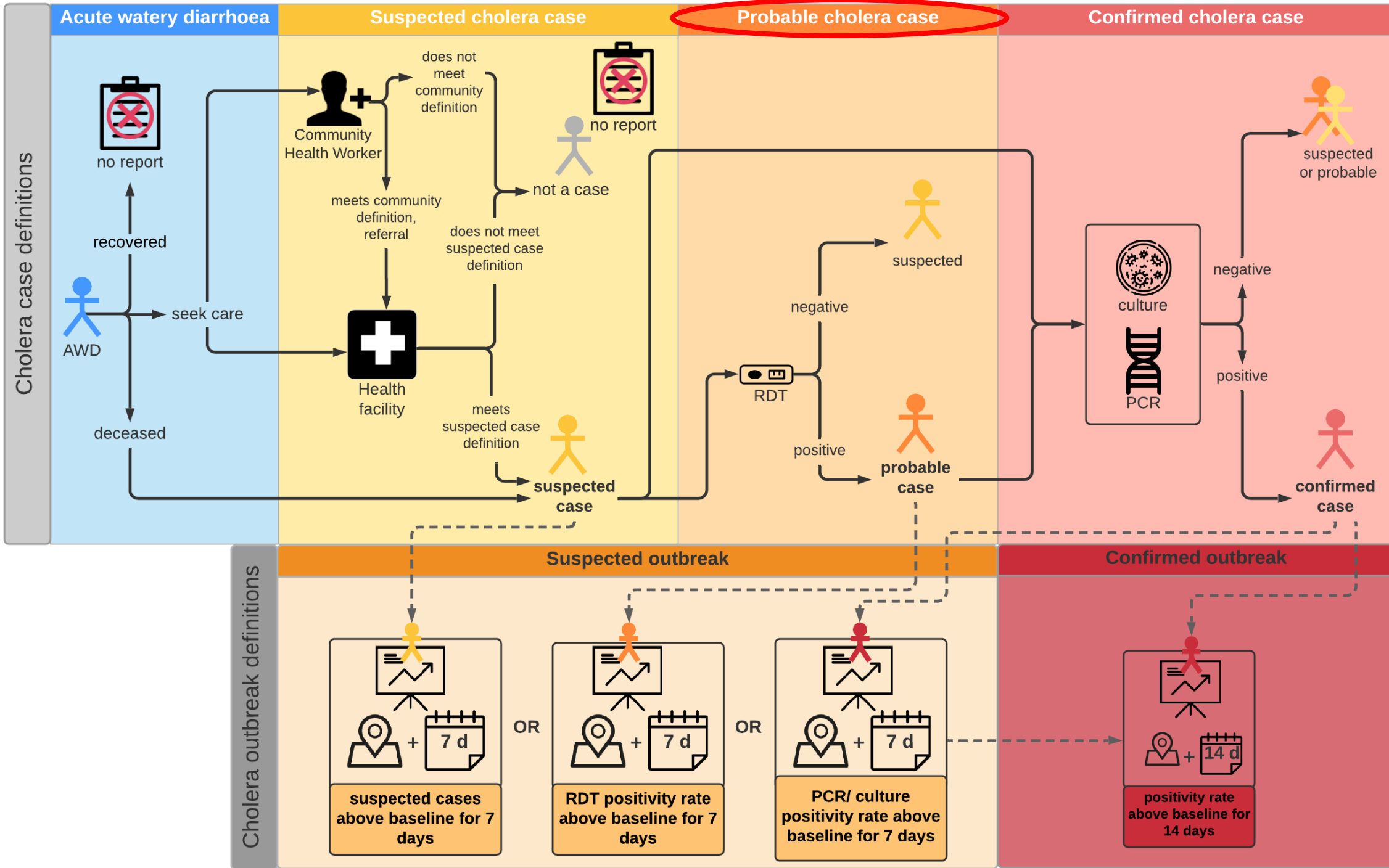
Considerations for areas with limited laboratory capacity (2 suggestions)

❖ In the absence of adequate laboratory capacities, the confirmed outbreak definition for non-persistent transmission settings may be used.

OR

❖ In areas where systematic laboratory testing of suspected cholera cases has not yet been implemented, a confirmed outbreak may be defined as an increase of suspected cases above the established baseline for two consecutive weeks, of which some (at least x?) are laboratory confirmed.

*Outbreak start date: The start date of the outbreak is the date on which the increase above baseline was first detected.

Cholera case definitions

Acute watery diarrhoea | **Suspected cholera case** | **Probable cholera case** | **Confirmed cholera case**

no report

AWD — recovered / seek care / deceased

Community Health Worker — does not meet community definition → not a case

meets community definition, referral

does not meet suspected case definition → not a case

no report

Health facility — meets suspected case definition → **suspected case**

RDT — negative → **suspected** / positive → **probable case**

culture / PCR — negative → **suspected or probable** / positive → **confirmed case**

Cholera outbreak definitions

Suspected outbreak | **Confirmed outbreak**

suspected cases above baseline for 7 days OR **RDT positivity rate above baseline for 7 days** OR **PCR/ culture positivity rate above baseline for 7 days** → **positivity rate above baseline for 14 days**

END OF OUTBREAK DEFINITION

CURRENT (GTFCC interim guidance)

When the number of suspected cases in the epidemic area significantly declines and all samples from all AWD cases test negative by RDT, culture or PCR for a minimum period of two weeks, the outbreak can be considered ended.

Discussion points

❖ Return of all available cholera indicators (incidence, positivity rate of tests) to their respective baseline values for **2 consecutive weeks.**

*Outbreak end date: The end date of the outbreak is the date on which cholera indicators (incidence, positivity rate of tests) have returned to baseline for **2 consecutive weeks.**

SUMMARY

SUMMARY AND PENDING ITEMS

Summary of main proposed adaptations

❖ Clear seperation of outbreak definitions for persistent vs non-persistent settings, due to different action threshold

❖ Clear end out outbreak definitions for both persistent and non-persistent settings

Pending items

❖ Decison on baseline for persistent setting: blanket recommendation, or suggestions for countries to adapt?

❖ Action thresholds and guidance on which actions to take (suspected vs confirmed outbreak, non-persistent vs persistent setting) → theme 2 (outbreak investigation)

❖ Development of testing strategy and use of RDT for outbreak detection/ monitoring (jointly with lab WG, surveillance & monitoring subgroup))

❖ Case report and case investigation form (jointly with surveillance & monitoring subgroup)

NEXT STEPS

OUTBREAK DETECTION

❖ Develop recommendations on minimum standards for event-based surveillance for outbreak detection and on community-based surveillance for outbreak detection and monitoring (further to indicator-based surveillance)

❖ Develop practical recommendations in support of the implementation of the recommended minimum surveillance standards for outbreak detection

❖ Develop criteria for evaluating sensitivity of cholera surveillance for timely detection and notification of cholera outbreaks

❖ Foster innovation in cholera outbreak detection and forecasting End out outbreak definitions developed

OUTBREAK INVESTIGATION

❖ Review existing resources and assess the need to develop further GTFCC guidance1 on the investigation of cholera outbreaks and develop SOPs and case investigation forms if appropriate

❖ Integrate and track indicator of timeliness of investigation of cholera outbreaks GTFCC SOPs

CASE-AREA TARGETED INTERVENTIONS (CATI)

❖ Recommend a framework for the implementation of case-area targeted interventions

GLOBAL TASK FORCE ON
CHOLERA CONTROL

THANK YOU