

Assessing the Multisectoral Outbreak Response



Objective

**Assess the effectiveness of the intervention
package**

Has the response been successful ?

Can we observe



a reduction
of the disease
burden



as a result of
the integrated
program for
cholera
control



The indicators of impact



This is the quantitative reduction on the disease transmission in the areas where the control measures were implemented (intervention area)

It is expressed

as **Absolute reduction** = number of cases and deaths averted and

as **Relative reduction of incidence** = percent reduction of the risk

Is there an easier way?

A good description of the cases and the epidemic curve for one given area can already tell you a lot !



Descriptive
epidemiology
WHO ?
WHEN ?
WHERE ?

- Simple description,
- Follow-up of patients, Outbreak investigation
- Impact on morbidity/mortality
- Cross-sectional study/case report/ case study/ ecological study
- Do not require sophisticated knowledge
- ***Can respond to many questions !***
 - can indicate which strategies to implement and which strategy works



In the course of an epidemic, when to ring the bell and re-assess the situation

Source : UNICEF 'cholera kit'

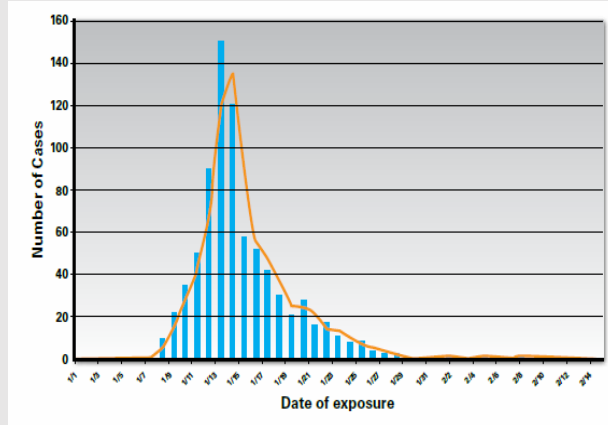
- Districts where the number of cases continue to raise (+ XX cases / last week)
- Districts with a daily Case Fatality Ratio superior to X%
- Districts with high number of deaths outside health facilities
- Districts with cases re-occurring after more then X days
- ...



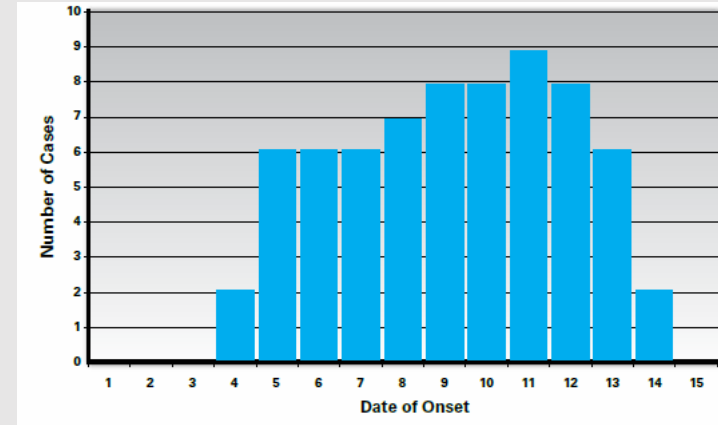
Continuous description of reported cases at Health area level

Hypothesis
on the Transmission source

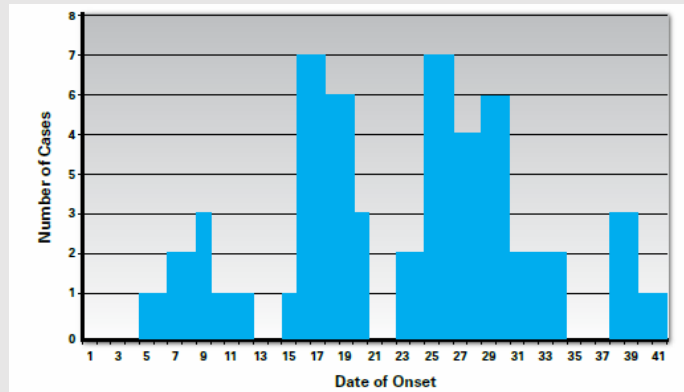
What the epidemic curve can tell us ?



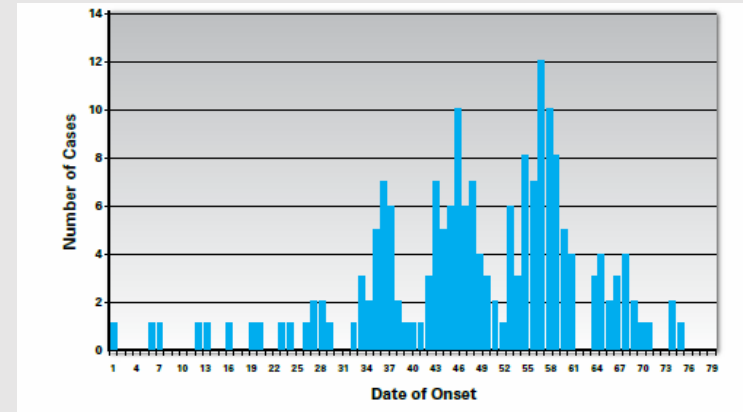
A point source outbreak
One exposure



Single source of infection
Multiple exposures



Single source of exposure
Exposure is intermittent

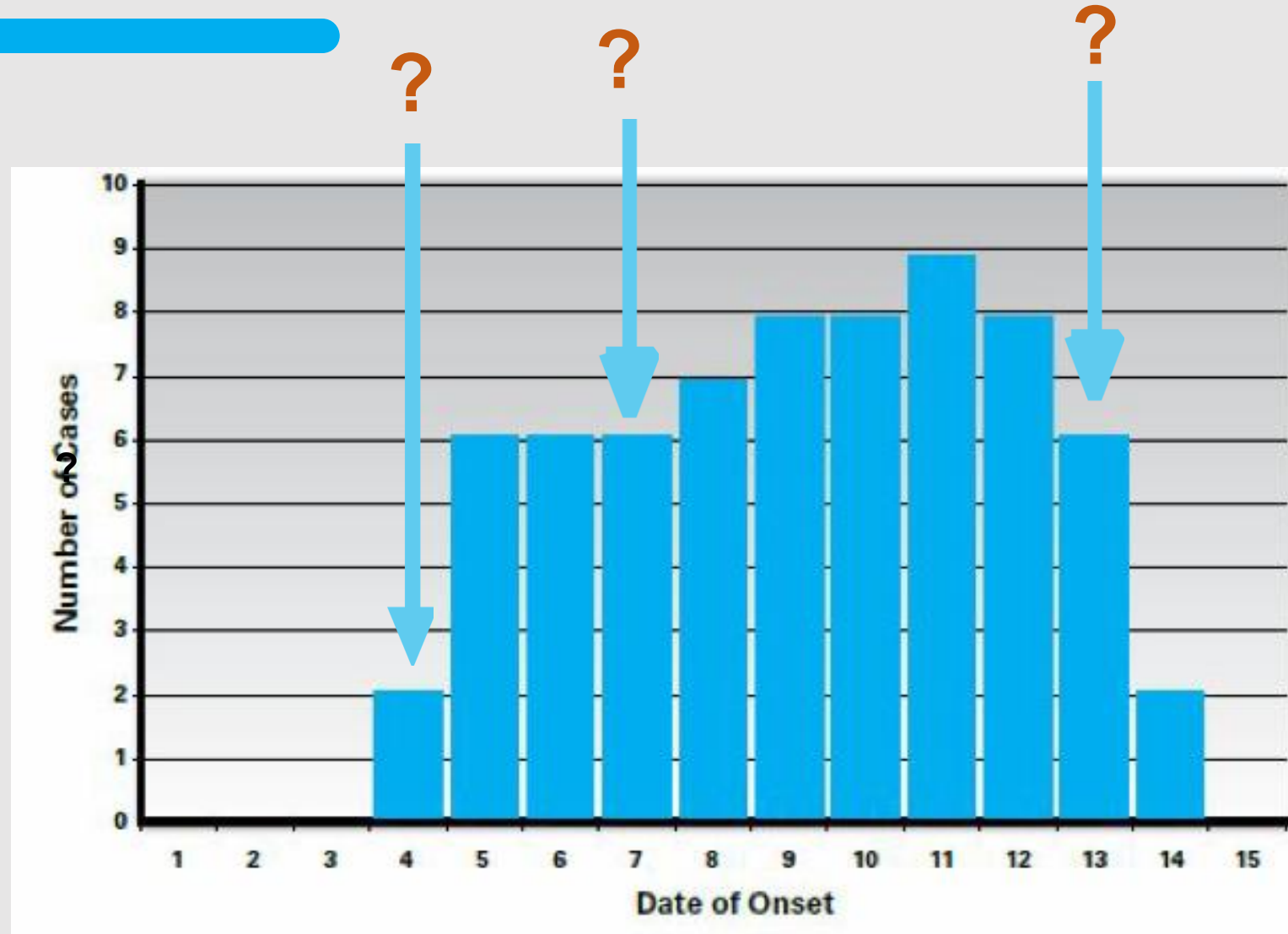


Person to person

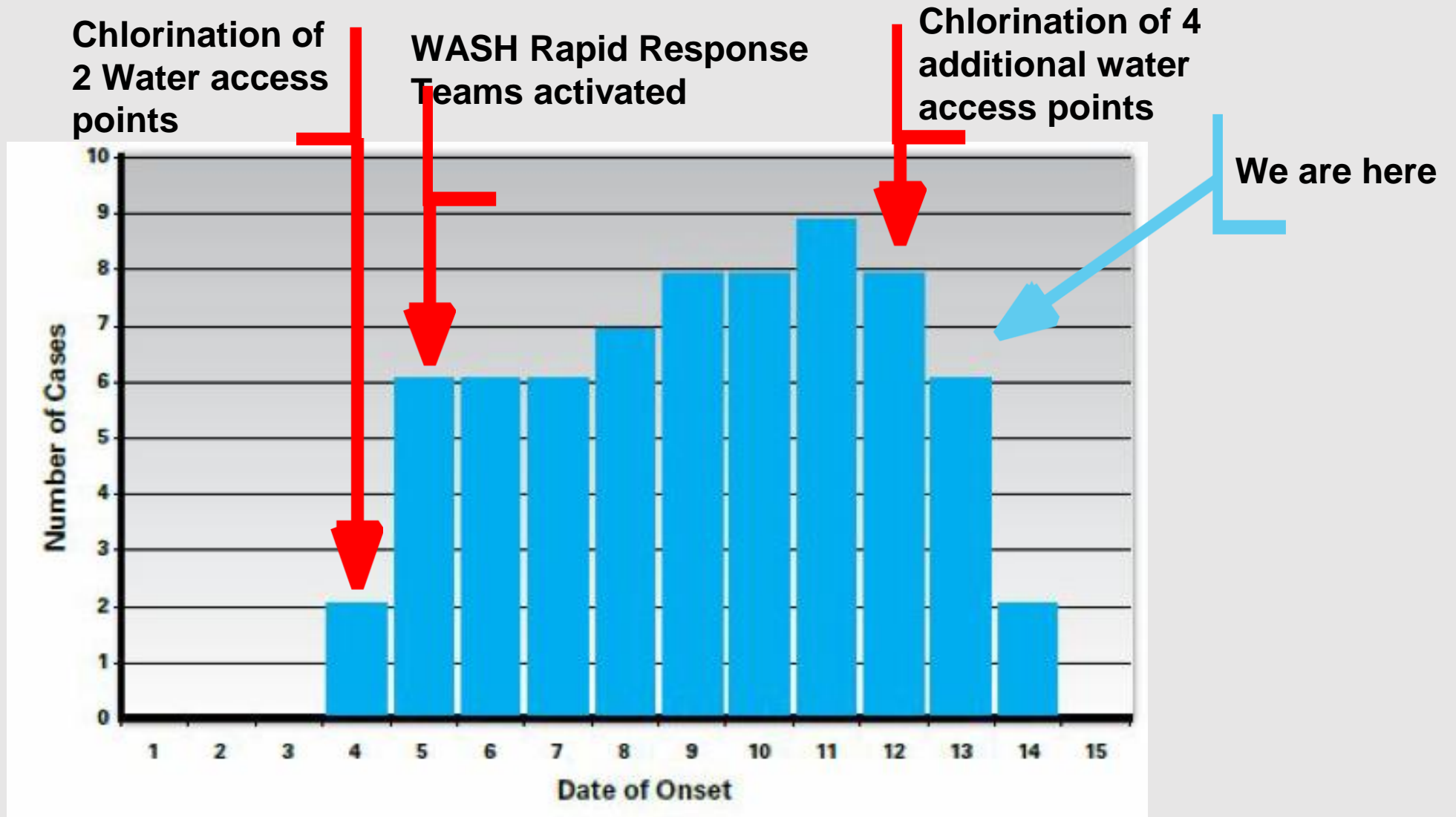
First, where are we, in the course of the outbreak and what kind of interventions have been done to date ?



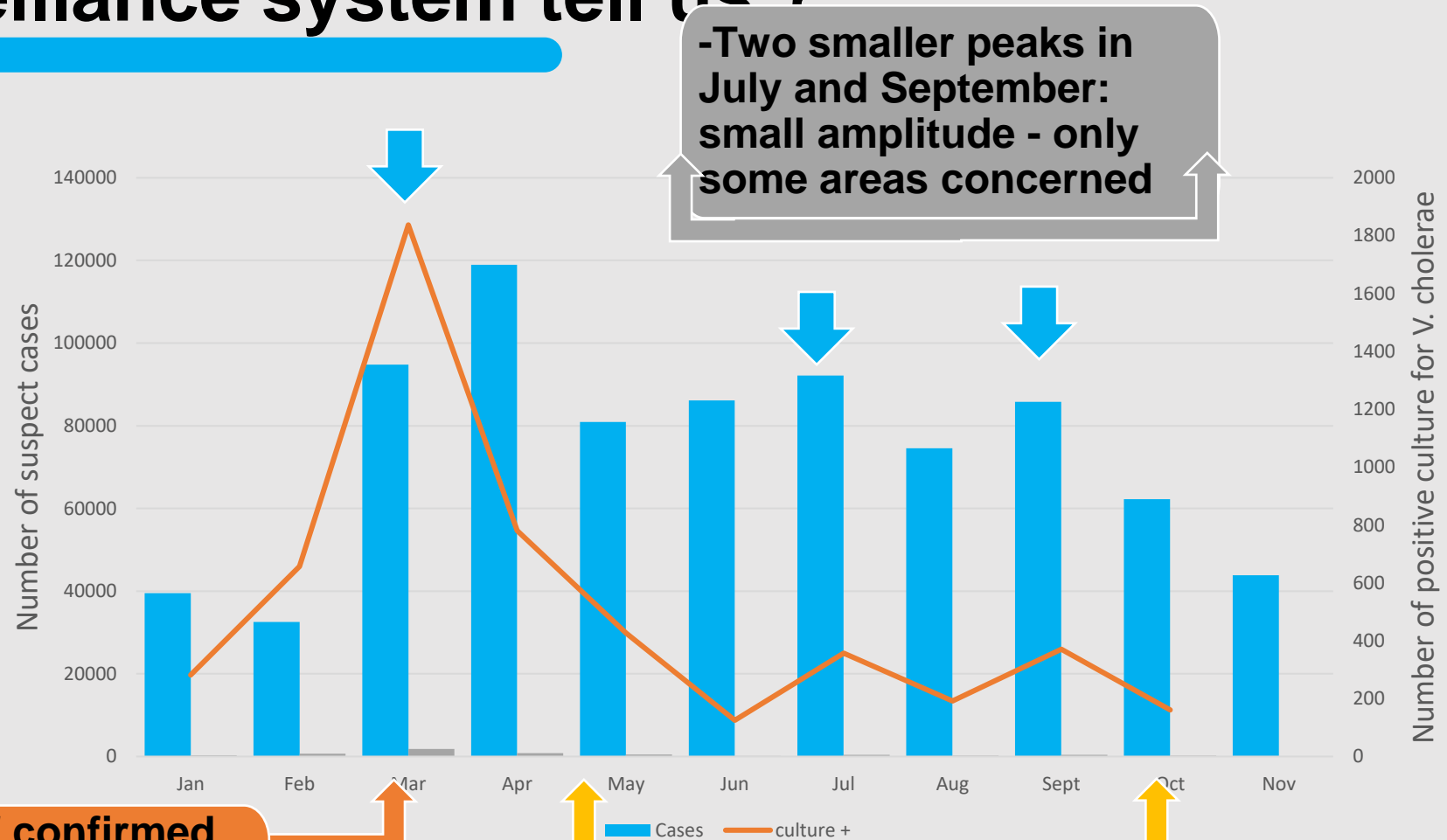
Today, where are we ?



What has been done in this area ?



Example Yemen 2019- What does the lab surveillance system tell us ?



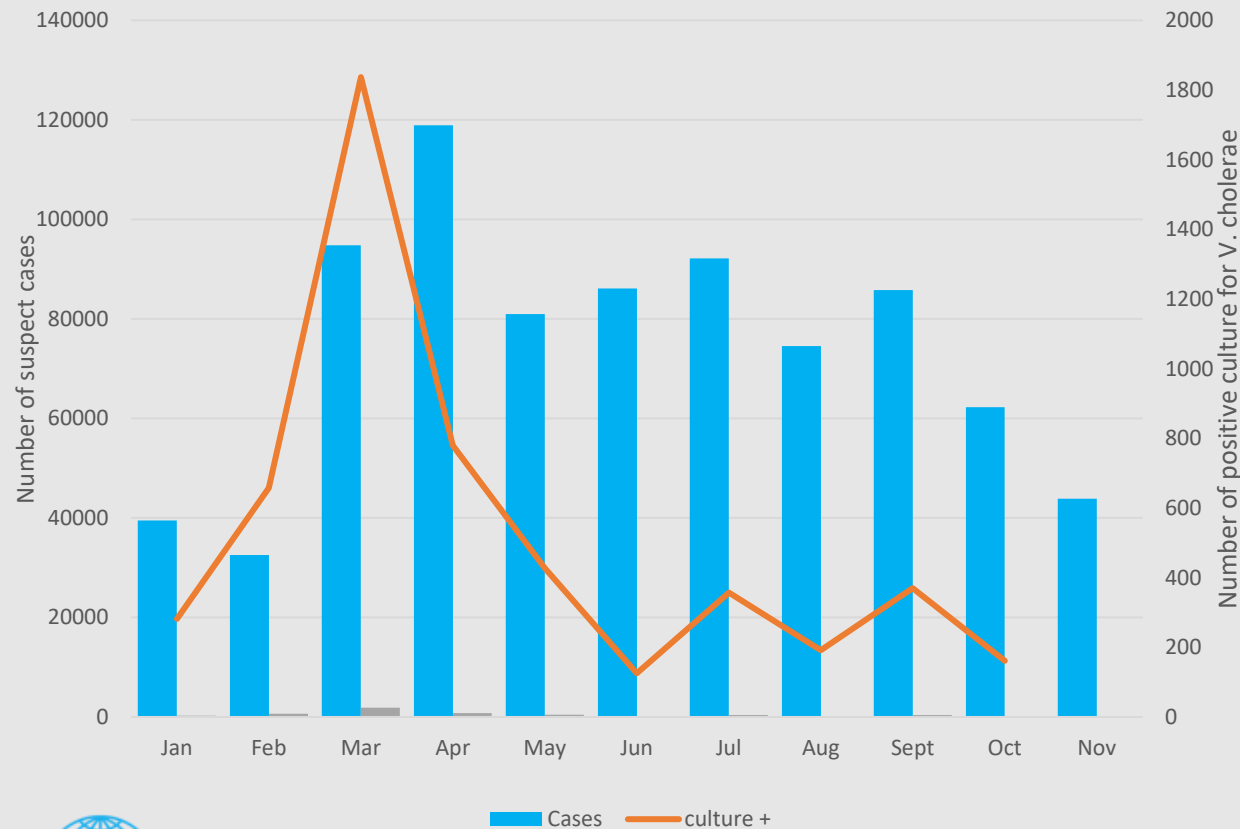
-Two smaller peaks in July and September: small amplitude - only some areas concerned

-A first peak of confirmed cases in March : high amplitude - many areas concerned

-From May to October : the trend of suspect cases does not follow the trend of confirmed cases



Example Yemen 2019- the trend of suspect cases do not give us the right picture of the situation



From June to October 2019

- the trend of suspect cases **does not follow the trend of confirmed cases**
- the number of suspect cholera cases never went back to the level of January (<> confirmed cases)



Probable notification of AWD caused by other pathogens in addition of the true cholera cases

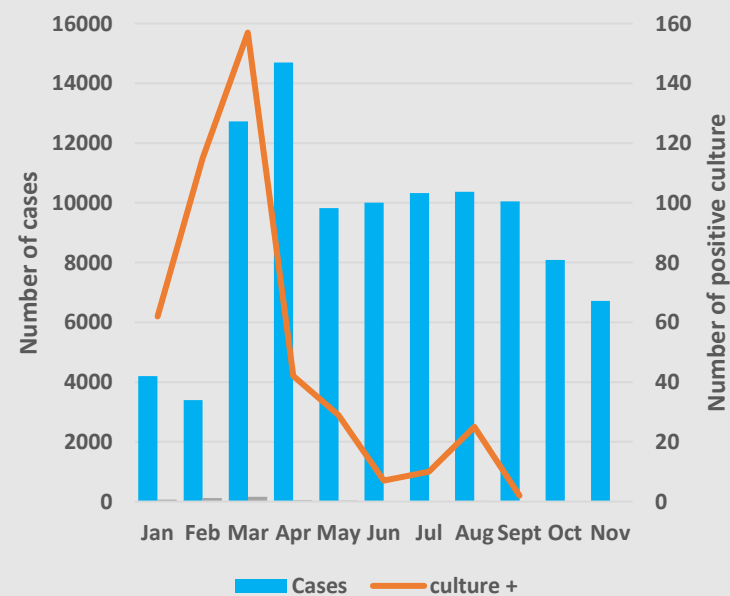
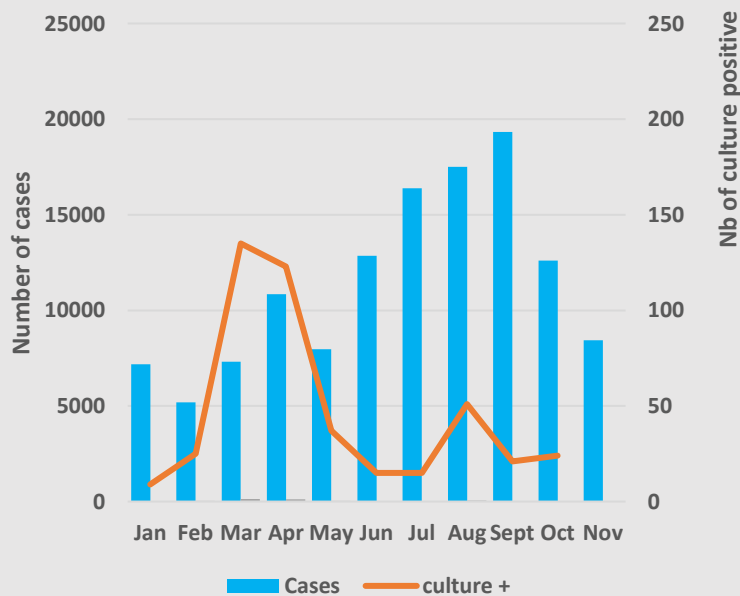
Example Yemen 2019- What was the situation in October 2019 ?

62 269 suspect cholera cases notified (EOC dashboard)

| | Hodeidah Gov. | Sanaa Gov. | Alamanat Alsinah Gov. | Hajjah Gov. |
|-----------------------------------|---------------|------------|-----------------------|-------------|
| Contrib to the global nb of cases | 20% | 13% | 8.7% | 8.3% |

50% of cases in 4 gov.

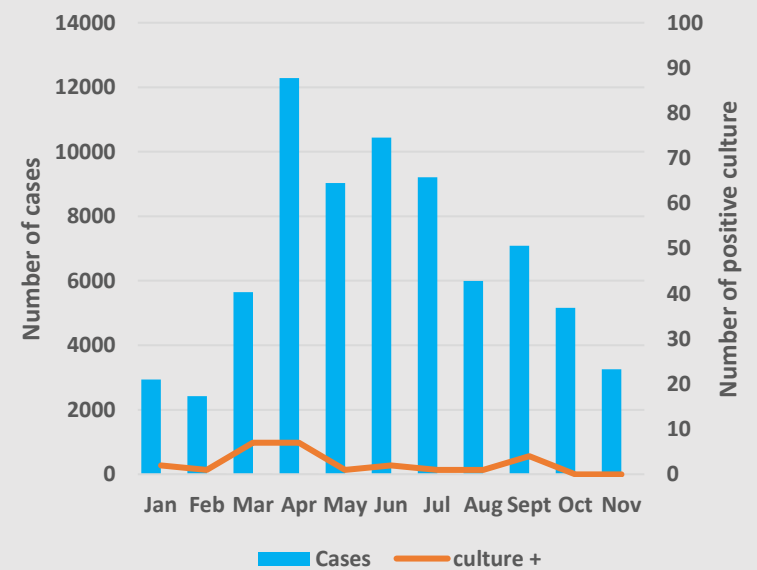
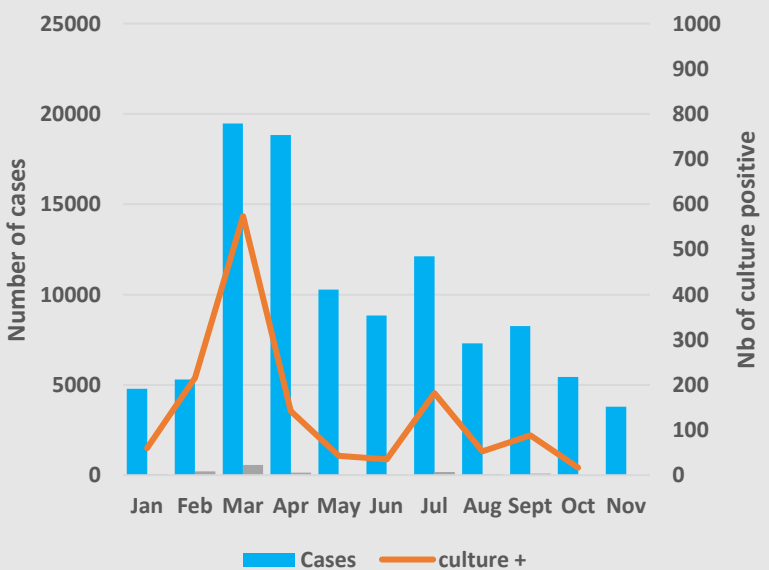
Trends of suspect and confirmed cases are different



Example Yemen 2019- What was the situation in October 2019

62 269 suspect cholera cases notified (EOC dashboard)

Potential high over-reporting since May



80% of cases reported in ORC

High number of children

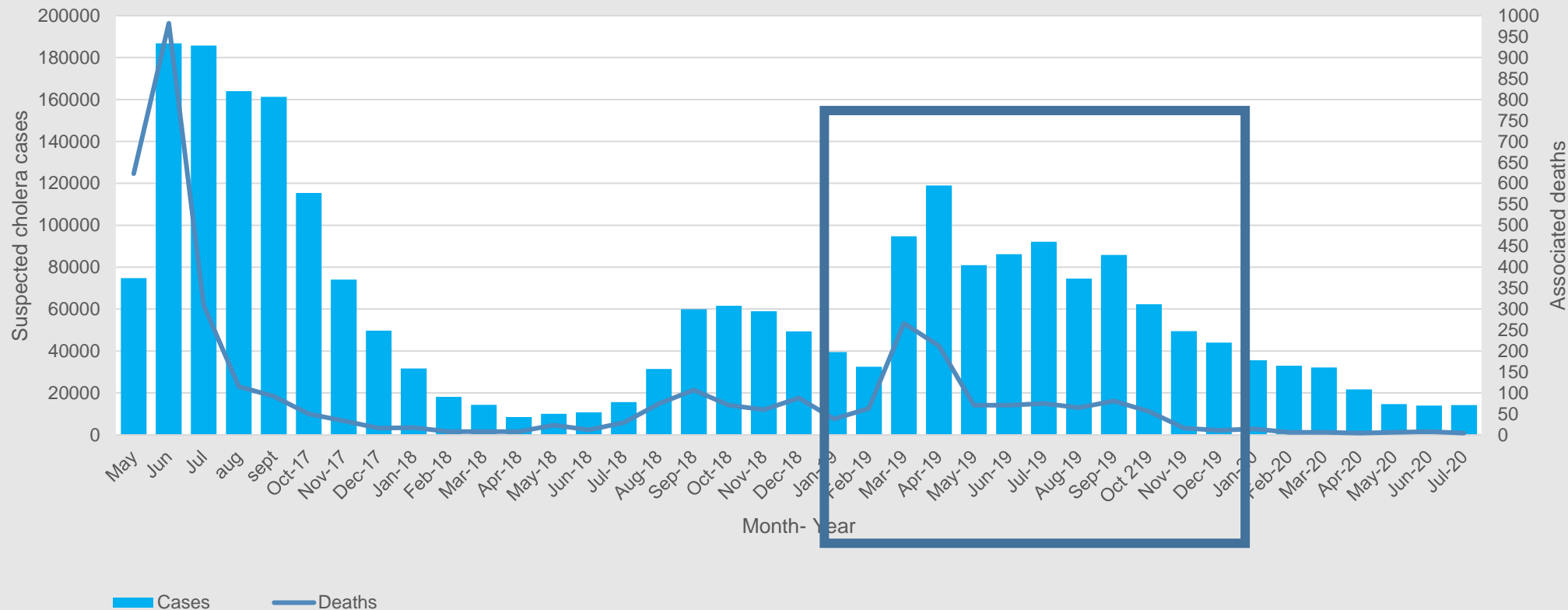
Low proportion of severe cases

Characteristic of cases do not fit anymore with the epidemiology of cholera



| UNICEF ORC | Hodeidah Gov. | Sanaa Gov. | Alamanat Alsinah Gov. | Hajjah Gov. |
|------------|---------------|------------|-----------------------|-------------|
| Under 5 | 35% | 21% | 34% | 54% |
| No dehyd. | 28% | 16% | 18% | 47% |

Example Yemen - What does the trend of deaths tell us ?



Group Exercise: Welcome back to Zbeeb District

Assign participants into groups and send them the link in the chat:

Scenario Five: Are we inflecting the curve?

https://docs.google.com/forms/d/e/1FAIpQLSdQDvSmIj6sZO2aMbM21RDrec3uN67B3b62jcFLGuN5zj9AQ/viewform?usp=pp_ur
!

Wrapping up: Group Exercise

Scenario 6: The Calm?

https://docs.google.com/forms/d/e/1FAIpQLSetbP65-jcrVOpZonnePCi2pbN8O192YiSJKjkxGM1LTmRNvw/viewform?usp=pp_url

Post training test and Training evaluation

Post training test (20 easy questions – 5 min)

https://docs.google.com/forms/d/e/1FAIpQLSePmG9SNK2cyochGLxqxDYnc3Q3QNGiLnZvQfe6BxqVQ2hriw/viewform?usp=pp_url

Evaluation questionnaire (5 min!)

https://docs.google.com/forms/d/e/1FAIpQLSfe-bATNVA4rAlhDnXbKTnsjKOo51nx1Tk5FYhvpTucysIYVQ/viewform?usp=pp_url