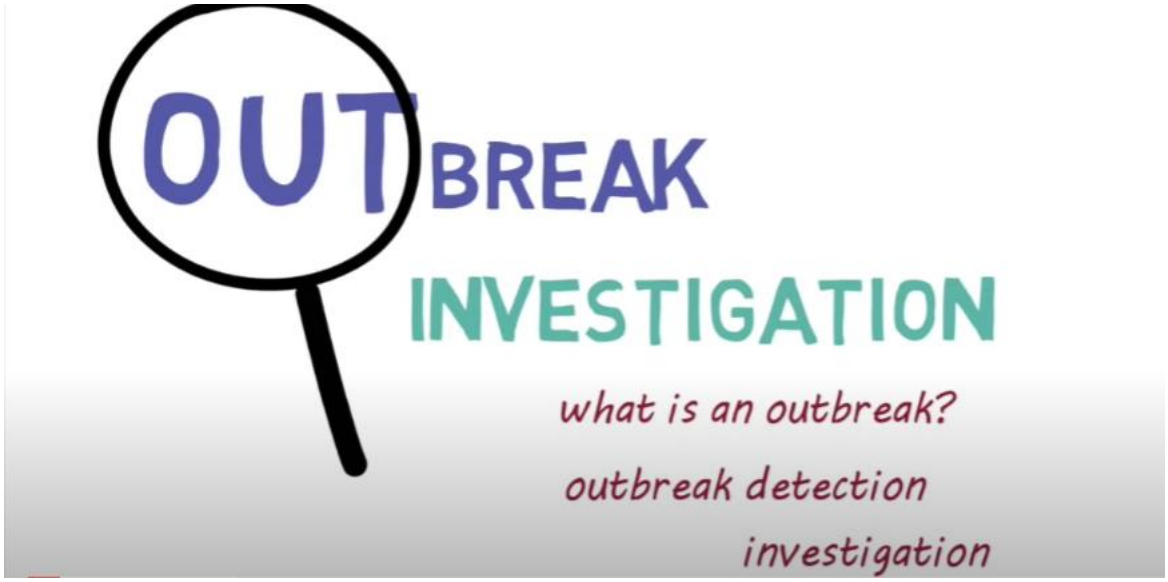
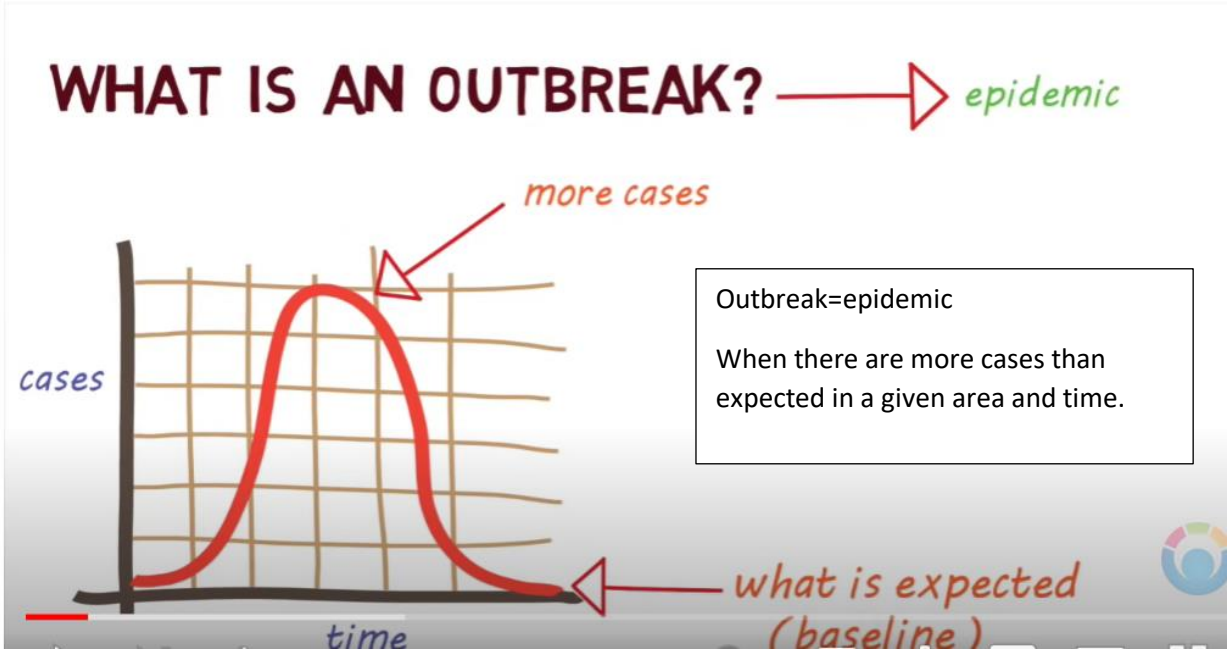
Activity 3

This activity is instead of a lecture, so here is the information mentioned in the video

Note: the whole video is required, WATCH IT!





How to detect an outbreak?

The existence of the outbreak may be known through a variety of surveillant methods

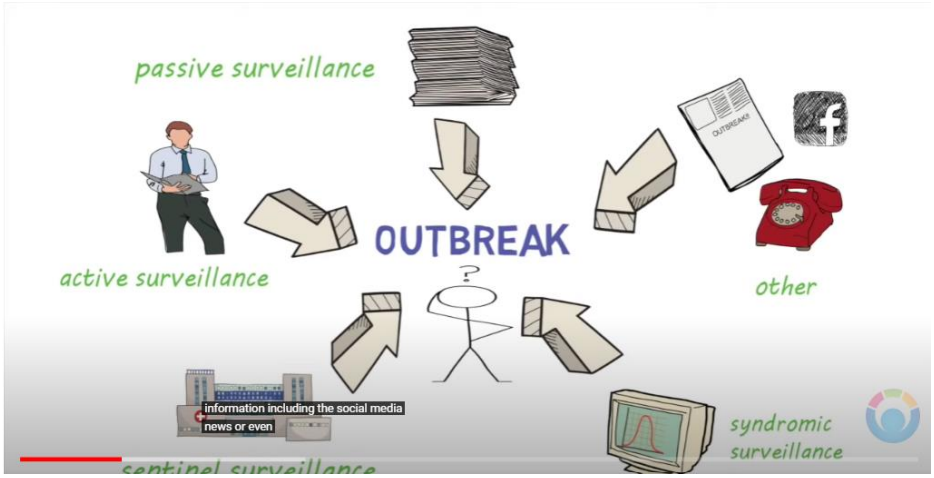
1)passive surveillance: monitoring routinely collected health data

2)active surveillance: health info is actively sought out

3)sentinel: selected groups and institutions provide health data

4)syndromic: monitoring of illness syndromes

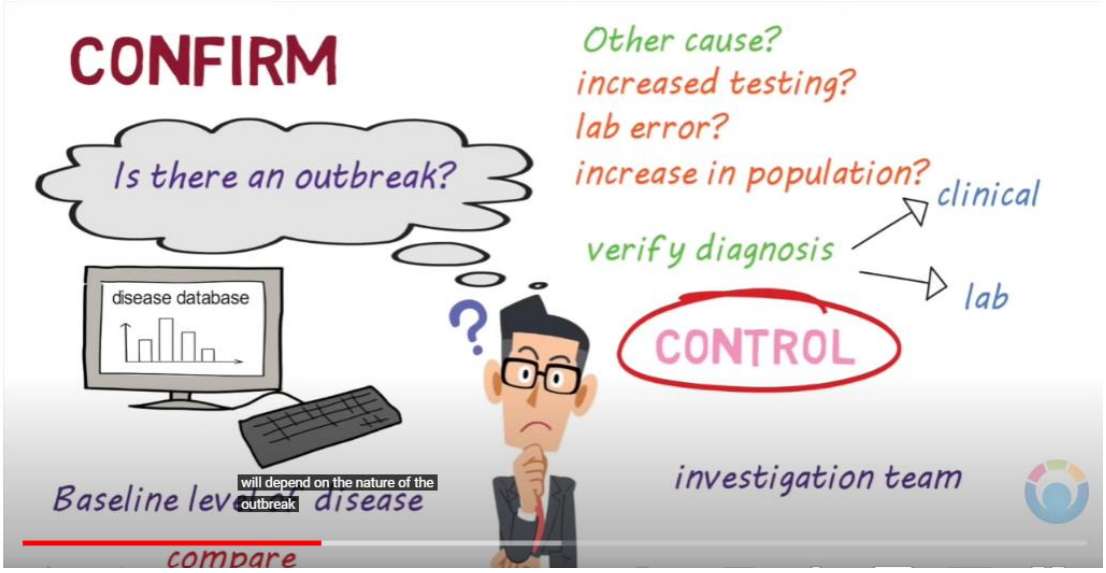
5)others: social media, news, hearsay,…



Outbreak investigation steps:

More than one step may happen at the same time, changing in the order, number, and content can occur

The first step: CONFIRM



-to determine whether there are more cases than expected, we need to know the baseline of the illness in that population for that given time, then compare it with the level of the illness we are seeing

-even if there are more cases, the causes could be:

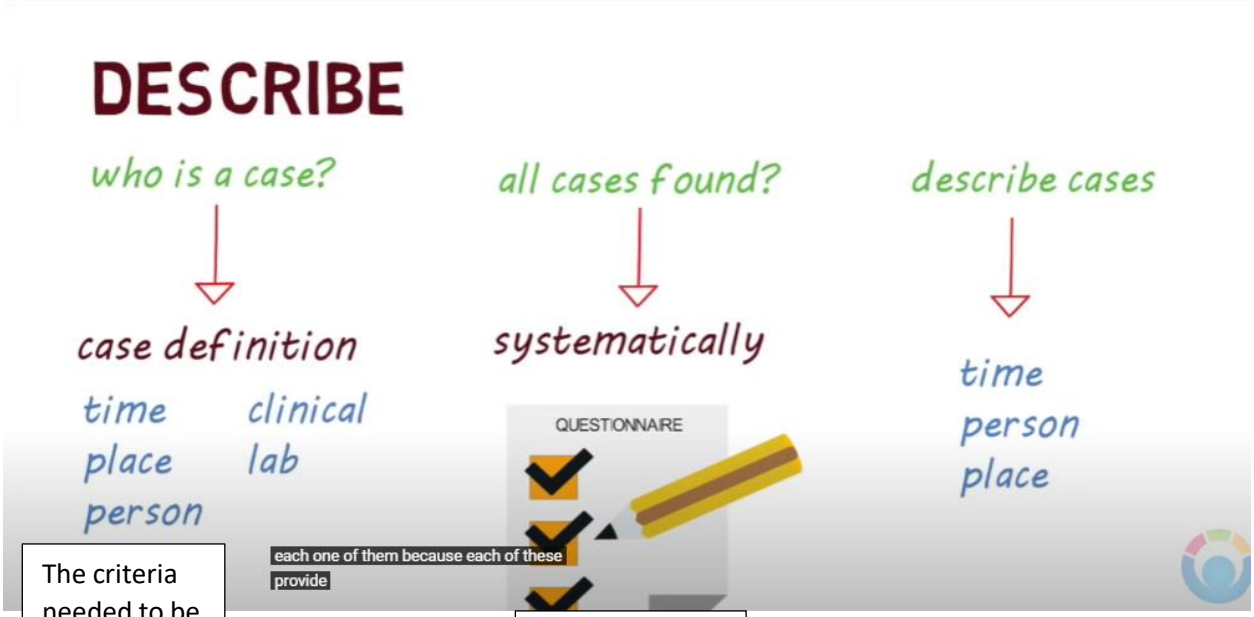
1)increasing tests 2)increasing laboratory errors 3)increasing in population to be ruled out

-to work out what is causing the outbreak and to help decide on the best control method: we should verify the diagnosis (by receiving the clinical and lab findings)

-at this stage, there could be immediate actions to control the outbreak, especially if the source and mode of transmission are known to proceed with the outbreak investigation, it may be necessary to gather the size of the team will depend on the nature of the outbreak.

The second step: DESCRIBE

-it provides an insight into who is affected. Where the illness occurred? And other characteristics



The criteria needed to be met to classify a person as the case

Studying the time, place, lab,…

Mainly by questionnaires

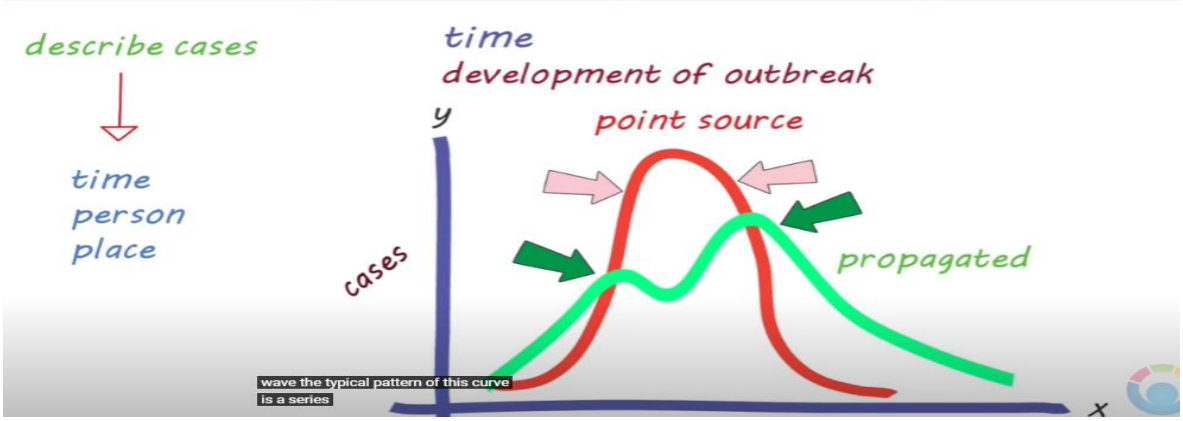
Describe cases, time:

By the epidemic curve

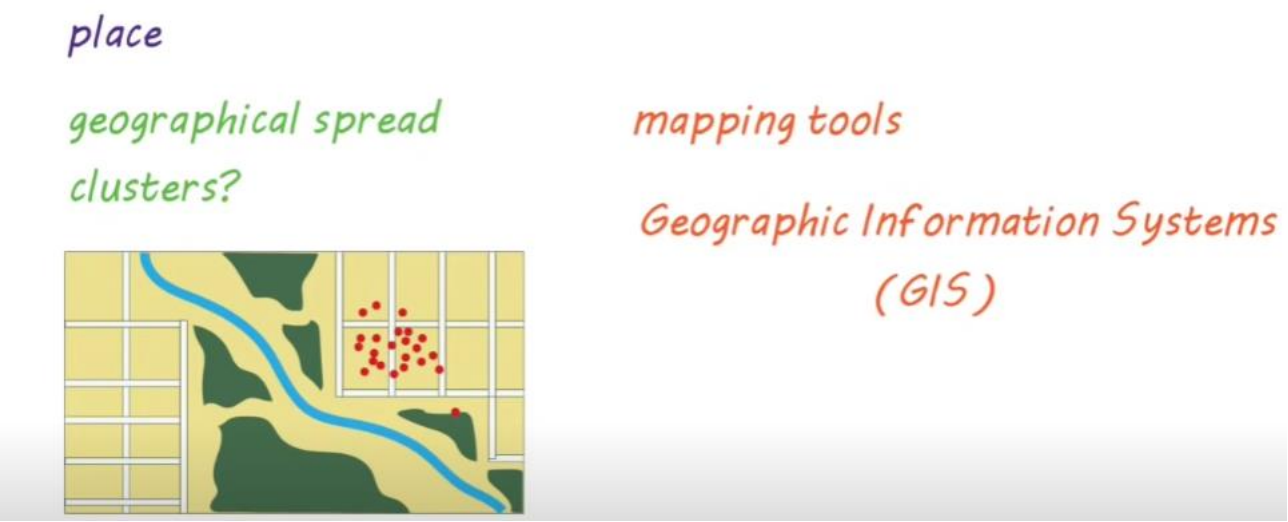
There are 2 types of this curve:

1)point source: where the outbreak comes from a point source, ex: the outbreak of gastroenteritis after eating a contaminated dish served at a restaurant, the typical pattern of this curve is a sharp rise in cases followed by a rapid decline.

2)propagated outbreak: when the infection is passed from person to person and the first wave of the infection is the cause for the other wave, the typical pattern for this curve is a series of progressive peaks of illness.



Describe cases: place:



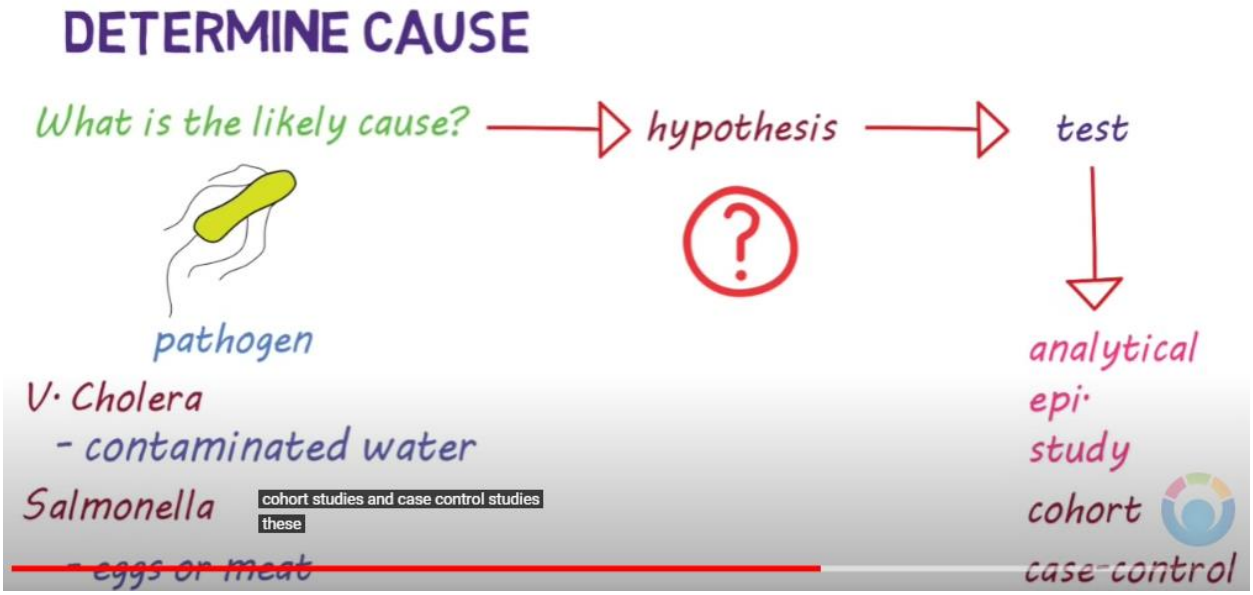
Describe cases: person:

The third step: determine the cause:

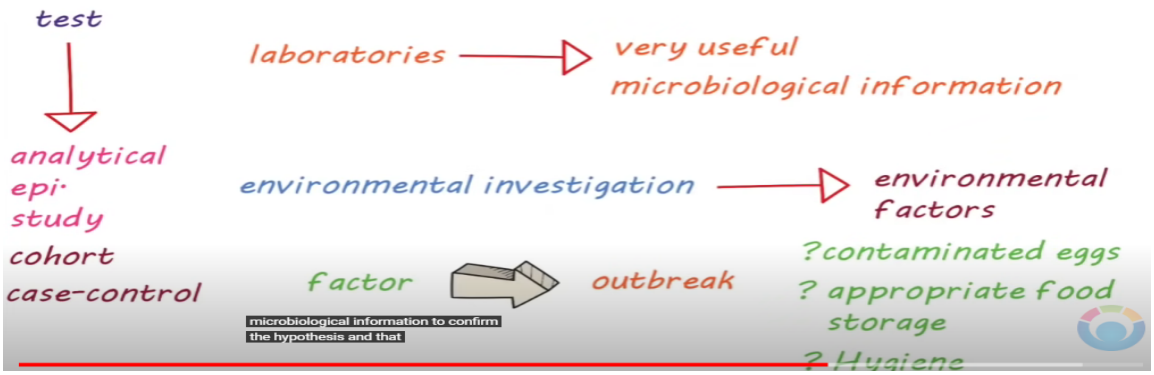
By putting the hypothesis

1)if the pathogen is known, this will help in determining the cause, if it is salmonella the source may be contaminated egg or meat

2)if the hypothesis isn't clear, it should be developed by testing and confirming, by analytical epidemiological study, mainly by cohort and case-control study, to determine how certain factors are the causes f the outbreak.



Also, laboratories tests and environmental investigation can help in confirming the hypothesis, for example in a foodborne outbreak in the mental investigation, we could identify factors like:



The 4th and last step: CONTROL

-it is the primary goal in the investigation in the outbreak

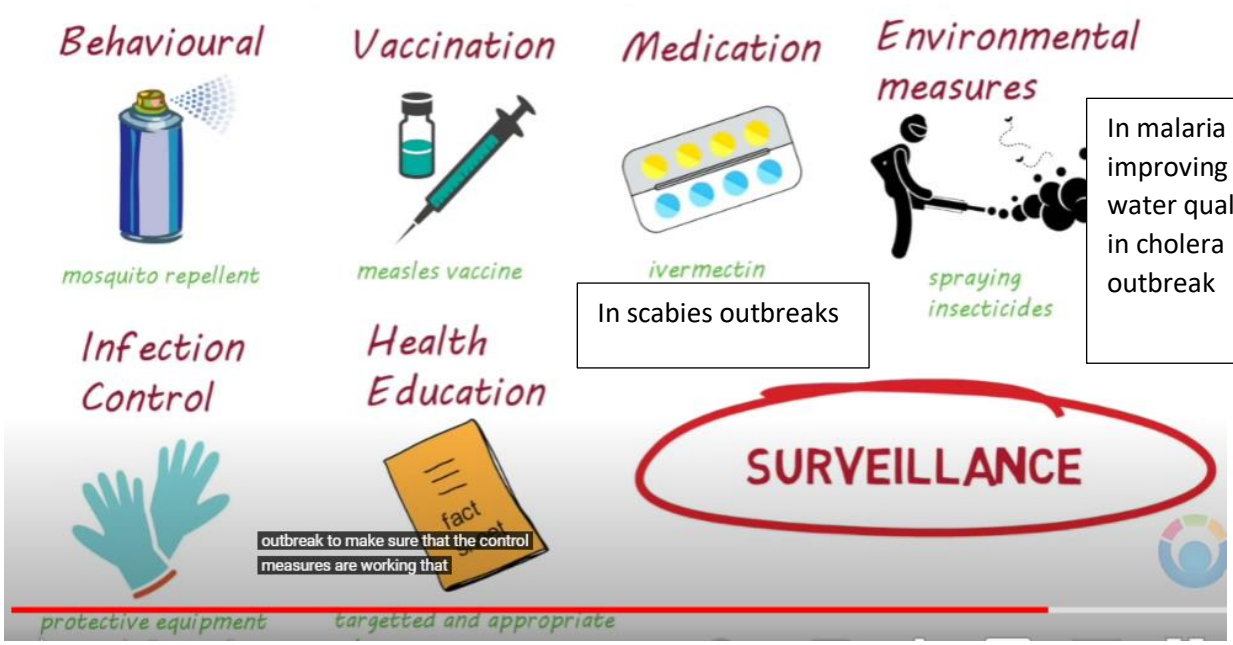
CONTROL

can be at any stage of investigation

transmission pathways

- *agent*
- *host*
- *environment*

Control measures:



In scabies outbreaks

In malaria or improving water quality in cholera outbreak

Health education to stop spreading the diseases in ill people and prevent illness for the healthy ones

After control measures, active surveillance should be done to monitor the outbreaks to make sure that the control measures are working.

-communication is important after the control

It would be internal and external, also media help in managing for future outbreaks


COMMUNICATION
important in any outbreak
accurate
timely
Internal
External
media
sharing information
online
journals
other
organizations
public
protective
behaviours
surveillance
reduces:
anxiety
confusion
misinformation


OVER!!!!
OUTBREAK
generally - after 2 incubation
periods

done