THIRD MEETING OF THE STANDING GROUP OF EXPERTS ON AFRICAN SWINE FEVER (SGE ASF) FOR AFRICA : GF-TADS FOR AFRICA

SILVERMOON HOTEL

ABIDJAN

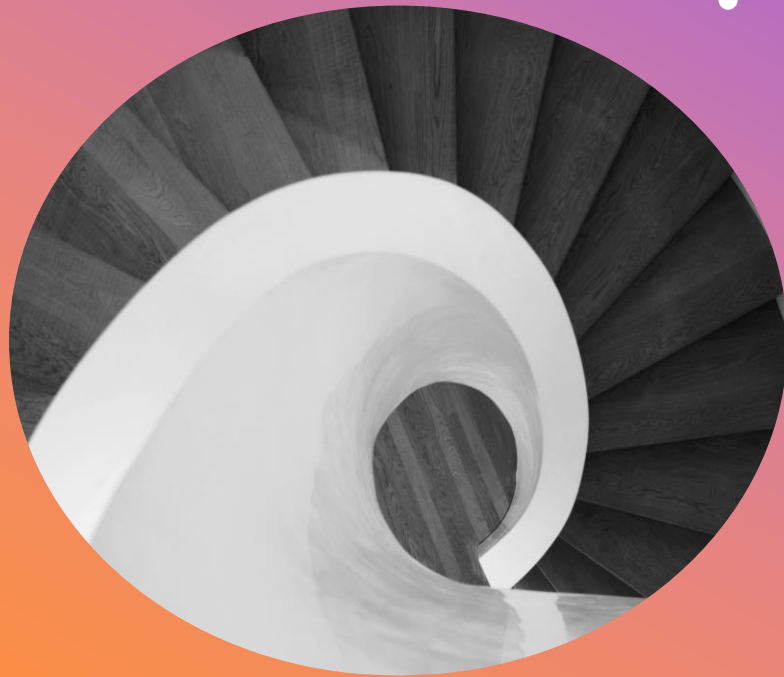**1 - 3 AUGUST 2023**

Purposes of surveillance : disease control or disease intelligence ?

Misheck Mulumba

SURVEILLANCE: FOR DISEASE CONTROL OR FOR DISEASE INTELLIGENCE?

OUTLINE

What is Surveillance?

As Opposed to Monitoring

Why Do we do surveillance?

Surveillance for disease intelligence plus why

Different types of Surveillance

Types of surveillance

WHAT IS SURVEILLANCE

Epidemiological Surveillance

Defn:

An observational method based on:

> ➢ continuous recording to follow the animal health status or risk factors in a defined population
> ➢ particularly to detect the appearance of pathological processes and
> ➢ study their development over time and space,

with a view to adopting appropriate control measures (B. Dufour and P. Hendrikx, 2009)

It involves 3 notions that must co-exist:

> ➢ **Gathering, recording and analysis of data**
> ➢ **Dissemination of information to interested parties on a long term basis so that**
> ➢ **Action can be taken**

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EPIDEMIOLOGICAL SURVEILLANCE defn

Defn from FAO/EMPRES manual on livestock disease surveillance and information systems:

❖ Animal disease surveillance encompasses systematic collection of long-term data on disease events, risk factors and other relevant parameters followed by analyzing the same with reference to temporal and spatial characteristics to arrive at a conclusion so that necessary preventive measures can be taken

❖ Contains same notions as the defn by Dafour and Hendrikx defn i.e.
  1. Gathering, recording and analysis of data (Descriptive epidemiology)
  2. Long term action
  3. Perspectives for action

EPIDEMIOLOGICAL SURVEILLANCE defn

WOAH defn:

❖ the systematic ongoing collection, collation, and analysis of information related to animal health and the timely dissemination of information so that action can be taken

❖ Similar but just misses out the concept of in time and space

❖ Further, elaborates that it is a tool to monitor disease trends, to facilitate the control of infection or infestation; to provide data for use in risk analysis, for animal or public health purposes; to substantiate the rationale for sanitary measures and for providing assurances to trading partners.
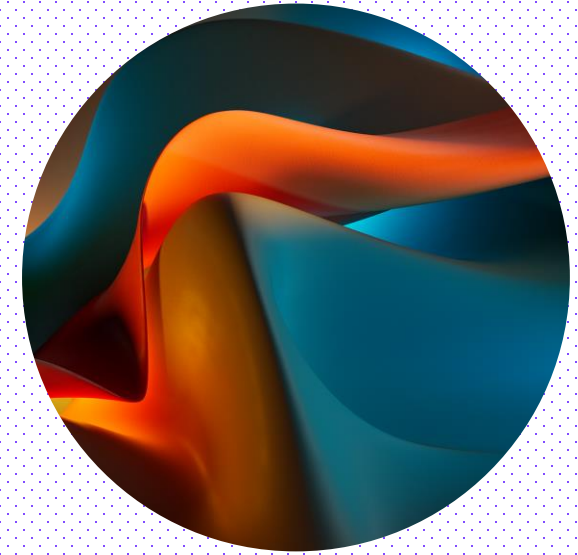
OBJECTIVES OF SURVEILLANCE

OBJECTIVES

❖ **Each and every surveillance activity must have a discrete set of objectives:**

➢ **To declare of freedom from a specific disease**

➢ **To determine the level of a disease in a population**

➢ **detect a new or emerging threat**

- Constitutes a long-term system for "**continuous**" recording of information

- Generation of animal health data with a view to implementation of appropriate action

As opposed to monitoring which is the routine collection of information on disease, productivity and other characteristics in a population

# But then: Surveillance for disease intelligence:

Infectious disease intelligence is the idea that relevant + information can be collected, robustly analyzed, and expertly communicated to scientists, public health authorities, business leaders, and the public in a timely way so that the best decisions to protect animal and human lives and our economy can be made.

Surveillance for disease intelligence (cont):

(Objective)

➢ Usually concerned with the threat of new and reemerging infectious diseases that will (likely) pose a rising global health threat and will complicate global security

➢ Usually done to enhance national/global emergency preparedness to minimize economic losses/disruptions and/or even loss of life

➢ New concept that is still constrained by inadequate coordination and funding at the international level and lack of capacity, funds, and commitment in many developing countries

SARS CoV2 virus

➢ SARS CoV2 was a classic example of the lack of surveillance capacity for disease intelligence
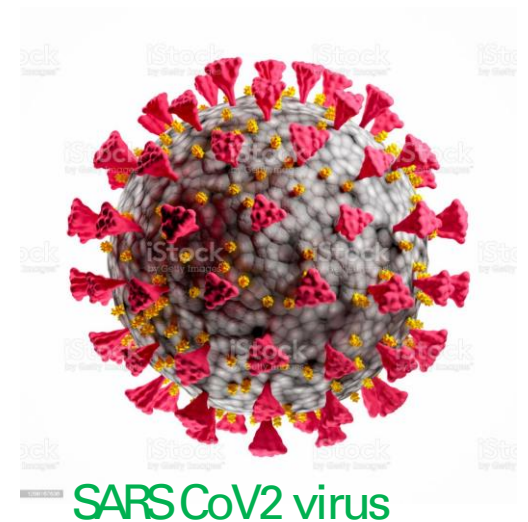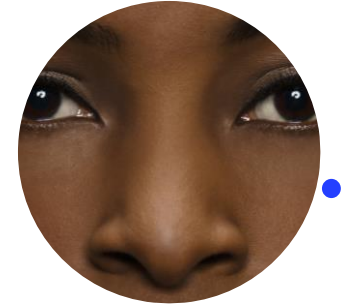
TYPES OF SURVEILLANCE SYSTEMS

The type of surveillance applied depends on the objectives of the surveillance, the available data sources and the outputs needed to support decision-making

Can be classified in several ways:

Examples - based on:

❖ **Means by which data are collected**
  ➢ **PASSIVE** – Passive surveillance refers to systems where information on disease events is brought to the attention of Veterinary Authorities without them actively seeking it; examination of only clinically affected cases of specific disease

  ➢ **ACTIVE** – The activity is conducted specifically for the purpose of surveillance, i.e. the Veterinary Authority designs and conducts the activity specifically to collect and act on data of interest

❖ **Disease focus**

Another way in which surveillance systems may be classified
is whether they provide information on a single disease
(targeted) or whether they can be used to detect multiple
Diseases

❖ **Population Coverage**
describes whether a particular surveillance activity covers the whole population of interest or whether it covers only a sample of the population

CONCLUSION

➢ Surveillance, which is the ability to document the occurrence of disease, remains an essential part of gathering information for control/eradication of disease or for disease intelligence for preparedness.

➢ SARS COV2 showed us that we must have effective systems in place to protect the continent's animal and human population and the environment.

Selected references:

1. FAO/EMPRES manual on livestock disease surveillance and information systems. 1999

2. Dufour B. and Hendrikx P. Epidemiological surveillance in animal health. 2nd edition. OIE, Paris 2009

3. Michael Thrushfield . Veterinary Epidemiology, third edition reissued 2008.

4. Surveillance and Epidemiology. Manual 5 OIE 2018.

5. The UK Surveillance Forum version 1.1 September 2019

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THANK YOU