CLIMADE AFRICA WORKING GROUP MEETING MINUTES – WEEK 17

Host: Centre for Epidemic Response and Innovation (CERI)

Date: July 04, 2023

Time: 12:00 – 13:00 p.m. (SAST)

Facilitators: Dr Houriiyah Tegally, Jennica Poongavanan and Dr Monika Moir

Attendance/ No. of Participants: 67

Start time: 12:03p.m. (SAST)

Purpose of the meeting

Discussion on Dengue risk areas and enhancing surveillance data systems for climate-sensitive diseases in Africa.

Agenda Items

1. Welcome
2. Presentation and discussion led by Dr Houriiyah Tegally, Jennica Poongavanana and Dr Monika Moir
3. Questions and Discussion

Discussion points and questions

- Dr Houriiyah Tegally, Jennica Poongavanan and Dr Monika Moir led and chaired the discussion on Dengue risk areas and enhancing surveillance data systems for climate-sensitive diseases in Africa, focusing on;
- Risk of importation modelling and transmission potential modelling aimed at Identifying regions of high risk of Dengue introductions and onward transmission in Africa.
- The discussions were centered around the following points:
    1. Do these modelled high-risk regions actually experience imported cases and outbreaks?

2. What are the surveillance and reporting systems in these countries?
3. How can we improve these systems?

- Country discussions and feedback
  - Nigeria
    - No surveillance for incoming travelers at airports
    - Introduction of a new strain of Dengue virus in 2019, Beast analysis confirmed that the strain circulating in 2021 was introduced into Nigeria in 2019.
    - Risk of importation and transmission potential model presented by the CERI team is correct as Dengue is endemic to Nigeria with types 1 and 2 circulating Nigeria since the 1970s and types 1 to 4 currently circulating the country.
    - Dengue is the second highest cause of febrile illness and is often misdiagnosed which emphases the need for differential diagnostic kits for arboviruses.
- South Africa
    - Despite the high risk of dengue virus importations. South Africa has a low abundance of *Aedes aegypti* mosquito species which decreases the transmission potential and risk of dengue circulating in SA.
- Seychelles
    - Dengue is endemic to the country with dengue type 1 of Asian origin circulating the region since 2015.
    - The model shown correctly represents cases in the country.
    - Outdated case information.
    - Cases are validated using PCR.
- Ethiopia
    - The model correctly describes travel from India to Ethiopia.
    - Not many vectors and cases of dengue present in Addis abba (highlands).
    - Cases and transmission in the lowlands of Ethiopia.
    - The institute of public health and governmental departments are working on case data.
    - Temporal risk maps are correct.

- Tanzania

  - High risk of importations from India.
  - Need for risk of importation mapping from South-east Asia.
  - Outbreaks within the Dar es Salaam region.
  - Last outbreak in 2019 and currently low levels of dengue transmission.
  - No genomic surveillance.
  - Outbreaks occurred within metro areas likely as a result of imported case/s that led to large outbreaks in remote regions.

- Senegal
  - Dengue is not endemic to Senegal.
  - Mainly imported and cases observed around rainy seasons.
  - Surveillance needed around airports.

- Kenya
  - Seasonal outbreaks near regional ports with travel (sea) from Asia.
  - Outbreaks in Mombasa with sequence evidence suggesting importations from India.
- Uganda
  - No recent reports of dengue cases.
  - Interested in screening acute febrile cases using metagenomics.

- A need to increase surveillance systems and a large need for screening and diagnostic tests to be made available.

Adjournment and Closing points.

1. Dr Houriiyah Tegally adjourned the meeting at 12:59 p.m. (SAST).

Next Meeting

Tuesday, July 11, 2023, at 12:00 – 13:00 p.m. (SAST) – Looking at data sources.

Submitted by: Yajna Ramphal

Approved By: Monika Moir