

# Emerging Arboviral Infections: The Importance of Epidemiology

**Keywords:** Epidemiology; Zika virus; DNA; Viral zoonoses; Disease; Infection

## Introduction

Epidemiology is the study of patterns, causes and effects of health and disease conditions, within defined human and/or animal populations [1,2]. Epidemiology shapes public health policy decisions and includes evidence-based practice by identifying risk factors for disease and by pursuing targets for preventive health care [1-4]. Epidemiology is also the study of human populations and addresses the following functions, namely:

- a. Discovering the agent, host and environmental factors;
- b. Determining the cause of illness, disability and death;
- c. Identifying risk-health determinants and
- d. Evaluating current health programmes and services [5,6].

Epidemiologic practices and viral zoonoses are geographically interlinked and selected examples within the African context are listed, namely:

- i. Crimean-Congo Haemorrhagic Fever;
- ii. Dengue Virus;
- iii. Ebola disease;
- iv. Foot- and- mouth disease;;
- v. Lassa Fever;
- vi. Marburg disease;
- vii. Measles;
- viii. Rabies;
- ix. Rift Valley Fever;
- x. Sindbis virus;
- xi. Middelburg virus;
- xii. And rotaviral gastroenteritis [7-12].

Animals play a significant role within public health practices and viral zoonoses continue to threaten public health [6-12].

## Discussion

Zika virus is an emerging viral disease in African, Asian, and recently South American countries [13,14]. It is related to Dengue, Yellow Fever, West Nile and Japanese Encephalitis viruses, all members of the family Flaviviridae [13]. Human to human transmission has been widely contested and sexual transmission

**Editorial**

Volume 3 Issue 1 - 2016

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**Received:** January 12, 2016 | **Published:** January 13, 2016

and the result of Zika virus DNA in human amniotic fluid indicates another mode of foetal infection [15]. The Zika virus is spread through mosquito bites and Zika virus infection in pregnant women with subsequent birth defects is being investigated in Brazil [16].

## Conclusion

No vaccine exists to prevent Zika virus disease and the only way to prevent Zika virus infection is through avoiding mosquito bites, which occur mostly during the daytime.

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