

CASE STUDY 1 NIGERIA  
YELLOW FEVER:

# EpiCore: Rapid & Transparent Information Exchange

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IN PARTNERSHIP WITH

# Disease Background (I)

Yellow fever (YF) is an acute viral hemorrhagic disease caused by a flavivirus that is endemic in parts of Africa and South America.

Specific mosquitoes acquire the virus by feeding on infected humans or monkeys, and then transmit it to other humans or monkeys.



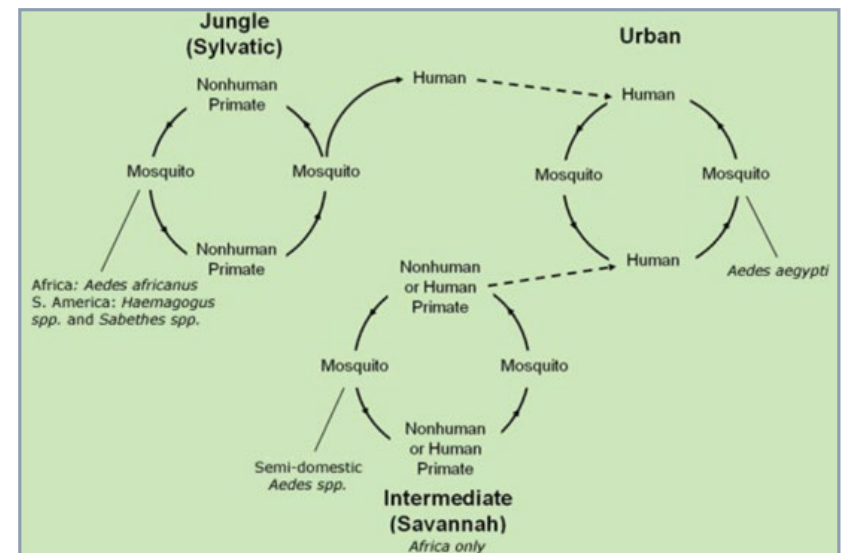
Transmission occurs via the bite of infected mosquitoes following different cycles in relation to different human habitats and presence of competent vector. Commonly, the following transmission cycles are described: 1) Jungle; 2) Intermediate and 3) Urban.



Source: US CDC



Source: US CDC



Source: US CDC

# Disease Background (II)

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**Incubation period** typically lasts 3-6 days.

**Symptoms** include fever, back pain, headache, muscle aches, nausea, vomiting, fatigue and weakness; most infected people are asymptomatic or develop only mild illness.

Most cases recover completely however about **15% of cases recover from the initial symptoms only to develop a more severe form** of the disease within 24 hours. Up to 50% of cases who enter this “toxic phase,” marked by high fever, jaundice, and bleeding, may die.

Even one YF laboratory-confirmed human case may constitute an **outbreak** in an unimmunized population, however the disease is difficult to diagnose and may be mistaken for other febrile diseases.

**Vaccination** is effective at preventing and controlling epidemics. Once an outbreak is detected, mass immunization campaigns can be mobilized to prevent further transmission among at-risk populations.

## MORE INFO

N.B. more info on YF and YF transmission available at:

### WHO YF fact-sheet

<https://www.who.int/news-room/fact-sheets/detail/yellow-fever>

### US CDC YF page:

<https://www.cdc.gov/yellowfever/index.html>

# Initial ProMed Post

4 OCTOBER 2017

**PUBLISHED DATE:** 2017-10-05

**SUBJECT:** Yellow fever Africa: Nigeria (KW) RFI

Yellow Fever Africa (09): Nigeria (Kwara) Request For Information

Media report (edited):

...residents in 9 local government areas in Kwara state (map below in red) have raised a concern of yellow fever (YF) spread. Though the Kwara State Government confirmed only 2 cases of YF in the state, there are reports that more people have died than the number reported (11 out of 17 patients taken to local hospitals). It could be recalled that in the past months residents of Oro-Ago (Kwara state) had raised the alarm about a strange illness, which had killed over 60 people...

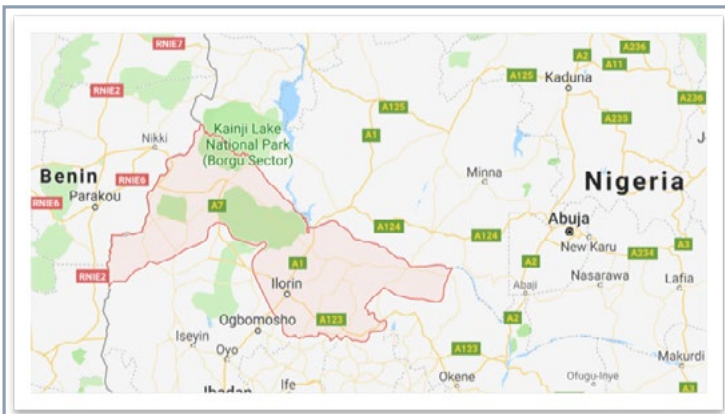
...so far, health authorities have not confirmed any of these reported case.....

## SOURCE

Punch News Nigeria

Date: 10/04/17

<http://punchng.com/residents-kwara-govt-differ-on-yellow-fever-deaths/>



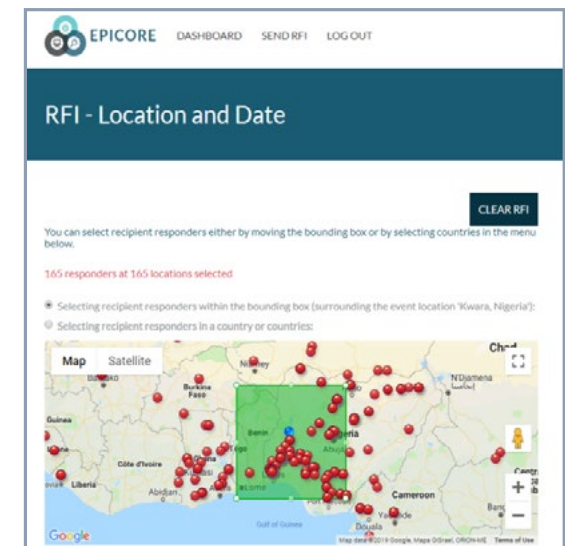
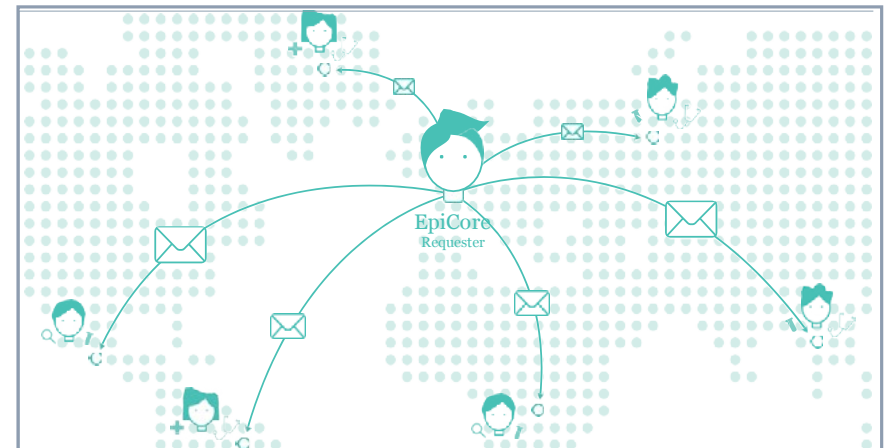
# ProMED Creates An Epicore RFI

5 OCTOBER 2017

The ProMED moderator that has created the post issues at the same time a **REQUEST FOR INFORMATION (RFI)** through **EPICORE PLATFORM**.

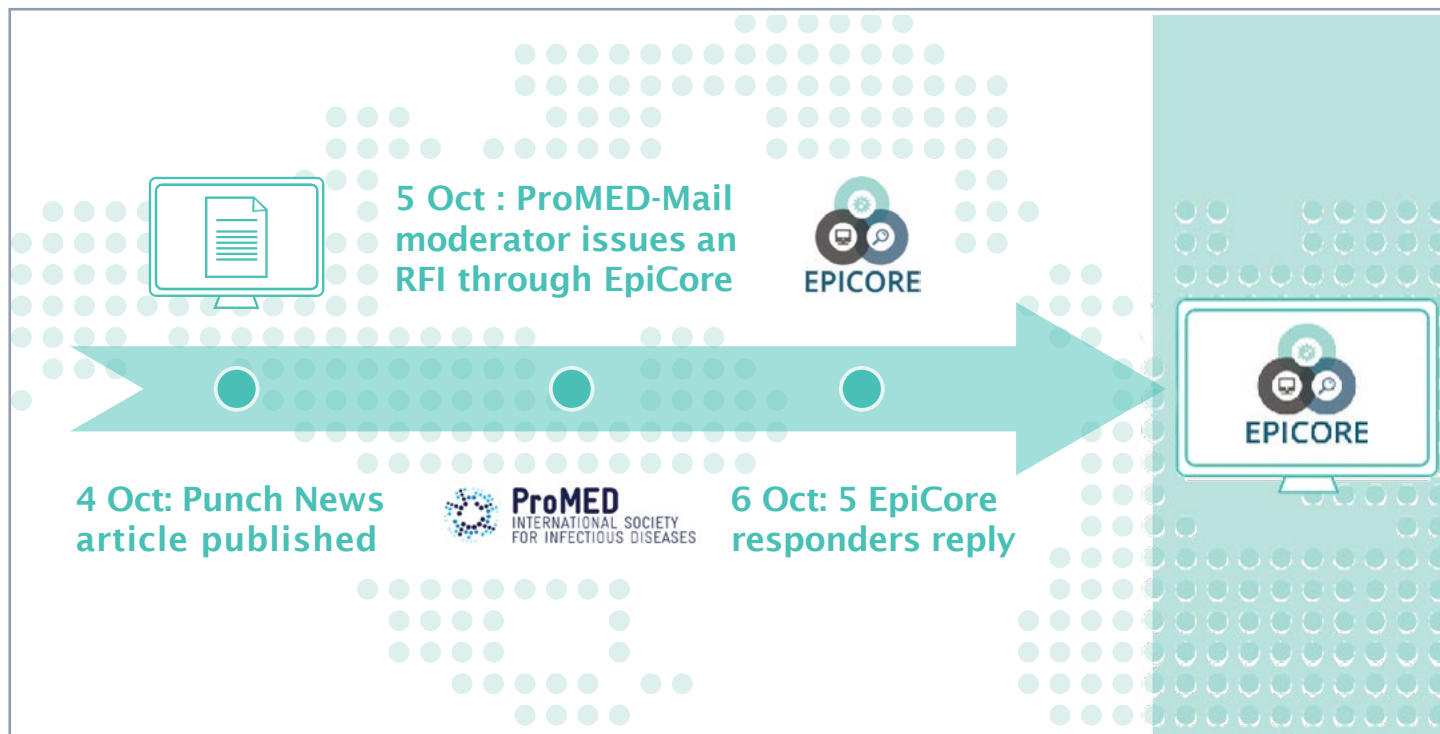
The RFI including all the relevant details is sent out to a selected number of EpiCore members (**RESPONDERS**) that are located in proximity to the reported event. The Requester may include specific questions for the network:

*“We would appreciate receiving clarification of number of confirmed/suspected cases and status of the vaccination effort.”*



# EpiCore Network Responds To RFI

Within 24 hours, 5 EpiCore responders involved in the RFI have posted contributions on the platform that included relevant information for the verification of the public health event and additional public health details useful for a comprehensive assessment of the situation and the response needs.



# EpiCore Network Responses

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6 OCTOBER 2017

## OFFICIAL REPORT

- According to the weekly Epidemiological Report for week 37 there were 43 suspected cases of yellow fever in Lfelodun LGA of Kwara state. The laboratory tests were negative for 30; 1 was invalid; and 12 results are pending.
- As of Epidemic week 37: 43 suspected cases have been identified, 1 confirmed case and vaccination is yet to commence. Suspected case: 17. Deaths: 11.

## INDIRECT REPORT

- A call to a member of the outbreak response team obtained the following information: 2 cases have been confirmed and reactive vaccination is being planned though yet to commence.
- Some health workers contacted at the local health facilities report that the exact number of deaths is not certain but surely more than 11.

## PROFESSIONAL OPINION

- The deaths reported in the past months in Oro-Ago area should also be investigated as they were never diagnosed and may be due to YF.



# EpiCore Public Dashboard Captures The Information

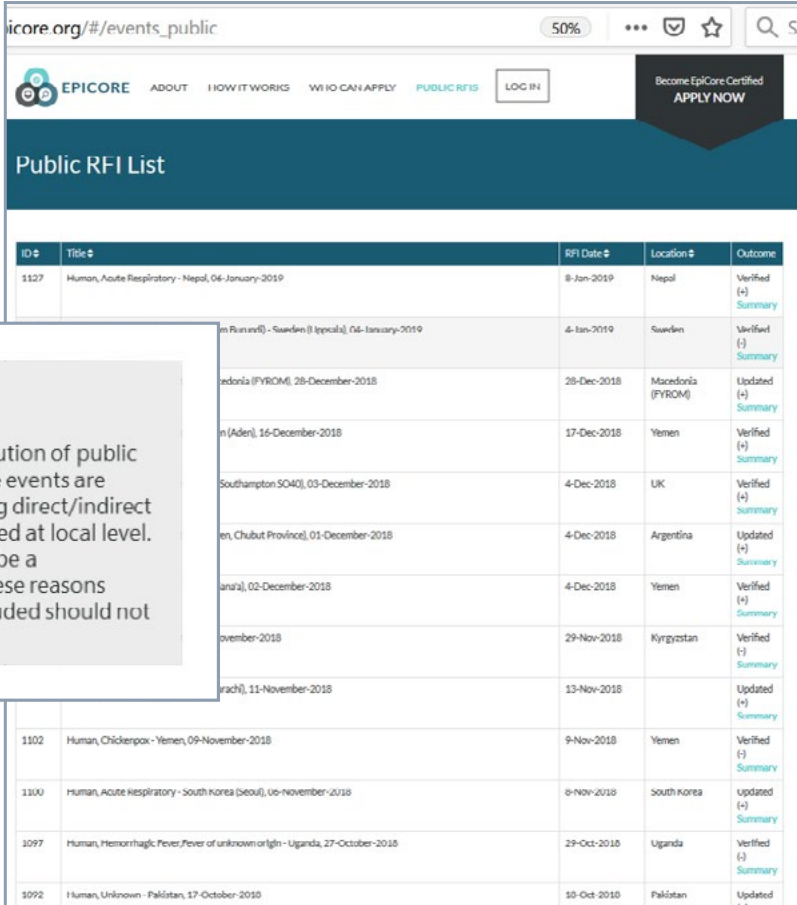
9 OCTOBER 2017

The information collected through EpiCore network is organised by the Requester in a short summary that is published on the open EpiCore Public RFI dashboard.

## Disclaimer

The information included has been verified by EPICORE, a network with a world-wide distribution of public health professionals ensuring a large spectrum of verification activities in proximity to where events are reported. EPICORE members give highest priority to reliable sources of information including direct/indirect documentation about events, official statements and complementary reliable reports obtained at local level. Despite this, EPICORE does not aim to replace any official reporting system and is meant to be a complementary surveillance tool supporting public health actors in their activities. For all these reasons please consider that this information does not represent an official report and contents included should not be qualified as "officially verified".

[https://epicore.org/#/events\\_public](https://epicore.org/#/events_public)



ID	Title	RFI Date	Location	Outcome
1127	Human, Acute Respiratory - Nepal, 04-January-2019	8-Jan-2019	Nepal	Verified (+) <a href="#">Summary</a>
	Human, Acute Respiratory - Sweden (Jönköping), 04-January-2019	4-Jan-2019	Sweden	Verified (-) <a href="#">Summary</a>
	Human, Acute Respiratory - Macedonia (FYROM), 28-December-2018	28-Dec-2018	Macedonia (FYROM)	Updated (+) <a href="#">Summary</a>
	Human, Acute Respiratory - Yemen (Aden), 16-December-2018	17-Dec-2018	Yemen	Verified (+) <a href="#">Summary</a>
	Human, Acute Respiratory - Southampton SO40, 03-December-2018	4-Dec-2018	UK	Verified (+) <a href="#">Summary</a>
	Human, Acute Respiratory - Chubut Province, 01-December-2018	4-Dec-2018	Argentina	Updated (+) <a href="#">Summary</a>
	Human, Acute Respiratory - Iran (Arak), 02-December-2018	4-Dec-2018	Yemen	Verified (+) <a href="#">Summary</a>
	Human, Acute Respiratory - Kyrgyzstan, 29-November-2018	29-Nov-2018	Kyrgyzstan	Verified (-) <a href="#">Summary</a>
	Human, Acute Respiratory - Iran (Tehran), 11-November-2018	13-Nov-2018		Updated (+) <a href="#">Summary</a>
1102	Human, Chickenpox - Yemen, 09-November-2018	9-Nov-2018	Yemen	Verified (-) <a href="#">Summary</a>
1100	Human, Acute Respiratory - South Korea (Seoul), 06-November-2018	8-Nov-2018	South Korea	Updated (+) <a href="#">Summary</a>
1097	Human, Hemorrhagic Fever/fever of unknown origin - Uganda, 27-October-2018	29-Oct-2018	Uganda	Verified (-) <a href="#">Summary</a>
1092	Human, Unknown - Pakistan, 17-October-2018	18-Oct-2018	Pakistan	Updated (+) <a href="#">Summary</a>



# ProMED Post (Update)

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12 OCTOBER 2017

The ProMED moderator uses the information collected from the EpiCore network to publish a new ProMED post about the event.

**PUBLISHED DATE:** 2017-10-12 16:22:23

**SUBJECT:** PRO/AH/EDR> Yellow fever Africa (11): Nigeria (KW)  
Yellow fever Africa (11): Nigeria (Kwara)

...The federal government will begin a nationwide vaccination against YF by December. The MoH has confirmed that the intended vaccination is in response to the current YF outbreak which started in Kwara state in September 2017...

## SOURCE

EpiCore Network

The following information  
was submitted by an EpiCore  
Surveillance Project member.

# EpiCore Impact

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- EpiCore members provided accurate event details and enabled rapid and transparent information sharing from several areas involved.
- By focusing attention on the event, the platform may contribute to the engagement of national leaders to take steps to mobilize resources for a rapid and effective response before the final confirmation of all cases.
- The collection of information by the network is supporting the processes of verification and update of public health events.

***To consider ....if a similar event happened in your own country, what sources would you use or what actions would you take to verify the details of an outbreak reported directly to the news media?***



# Case Study – Review

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## Sources or types of information used by EpiCore members to respond to the RFI:

- Indirect report (informal info received from person in situ).
- Official report (web-based or direct official documentation).
- Professional opinion (information based on personal professional opinion, with no further report/statement).

# Case Study – Review

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**Participation by EpiCore responders contributed to innovative surveillance by:**

- Providing information that has supported the verification of a reported event.
- Contributing to the engagement of national leaders for a rapid and effective response.
- Enabling rapid and transparent information sharing in the country closing a gap in formal reporting channels.

CASE STUDY 2 FOOT  
AND MOUTH DISEASE:

# EpiCore: Value of Shared Public Health Information

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IN PARTNERSHIP WITH

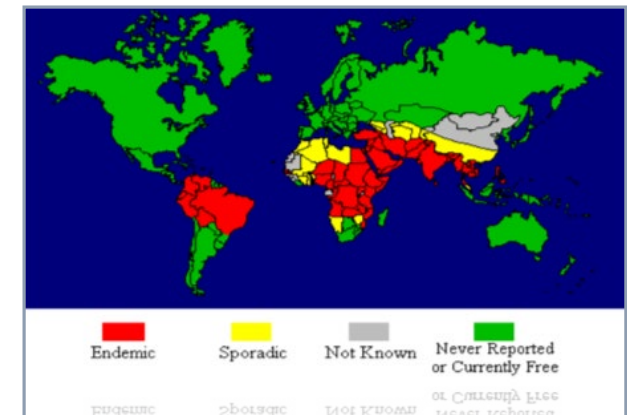
# Disease Background (I)

Foot and Mouth Disease (FMD) is a **highly contagious viral disease that affects cloven-hoofed animals with divided hooves** (such as cows, pigs, and sheep), causing fever and blister-like sores in and around the mouth and hooves.

FMD is caused by an **aphthovirus (Picornaviridae family)** that does not spread easily to humans; outbreaks in animals can cause important economic losses.

There are seven serotypes of FMD virus, and extensive variation among strains within each serotype. Although outbreaks can be contained by vaccinating livestock, vaccines must be specific to the serotype and strain, provide no cross-protection, and confer only temporary immunity. Vaccination also interferes with routinely used screening tests for FMD.

The disease is **endemic in parts of Asia, Africa and in the Middle East** and the responsible virus spreads easily via routine movement of affected animals.



Source: FAO

# Disease Background (II)

**Clinical picture:** Fever and blister-like sores on the tongue and lips, in mouth, on the teats and on the hooves. While the majority of affected animals recover, the disease often leaves them weakened and debilitated, causing severe losses in milk and meat production.

FMD is a disease listed in the World Organization for Animal Health (OIE) Terrestrial Animal Health Code and **must be reported to the OIE**. The organization has established an official list of disease-free countries and zones with or without vaccination. Disease-free countries protect their own economies by imposing strict bans on livestock trade with countries affected by FMD outbreaks; even a single detection can halt trade.

**FMD is not a threat to human health or food safety, but can have a severe economic impact.** While most animals recover, the disease can be debilitating, leading to losses in milk and meat production. FMD-free countries protect themselves by banning international livestock trade with FMD-affected countries.

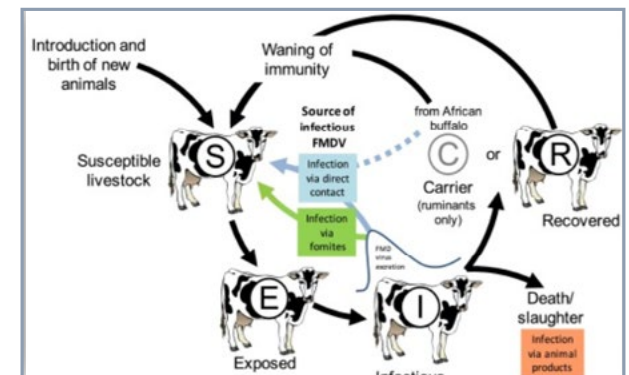
## MORE INFO

N.B. more info on

OIE FMD web-portal:

<http://www.oie.int/en/animal-health-in-the-world/fmd-portal/>

<http://www.oie.int/en/animal-health-in-the-world/fmd-portal/about-fmd/disease-information/>





# Initial ProMed Post

4 JUNE 2016

**PUBLISHED DATE:** 2016-06-04 12:23:42

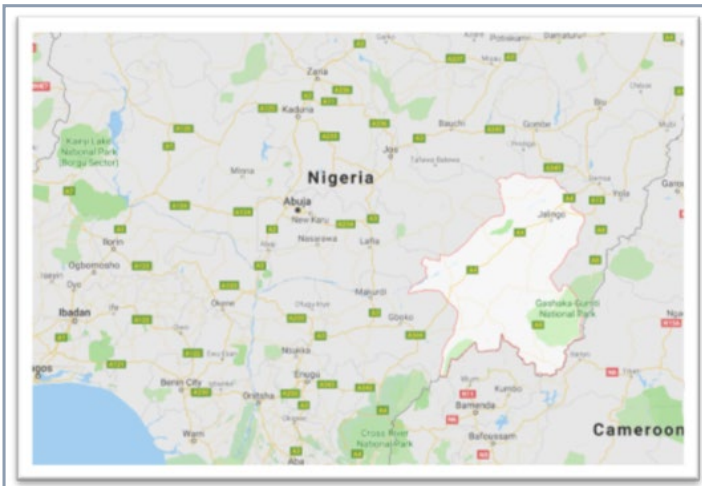
**SUBJECT:** PRO/EAFR> Foot & mouth diseases Nigeria (Taraba), bovine, new outbreak, RFI FOOT & MOUTH DISEASE - NIGERIA (TARABA), BOVINE, NEW OUTBREAK, REQUEST FOR INFORMATION

Media report (edited):

The State of Taraba has recorded an outbreak of FMD which is fast threatening the lives of cattle.

...cattle owners in Ngoroje area of Sardauna local government, whose cattle are presently begging for attention following the outbreak are alleging that the state government has not been proactive in establishing veterinary clinics in areas where

breeding and rearing of live stocks have been the major occupation. Dermatophytosis, also known as Kirchi is also afflicting the cattle....



## SOURCE

Punch News Nigeria

Date: 10/04/17

<http://punchng.com/residents-kwara-govt-differ-on-yellow-fever-deaths/>



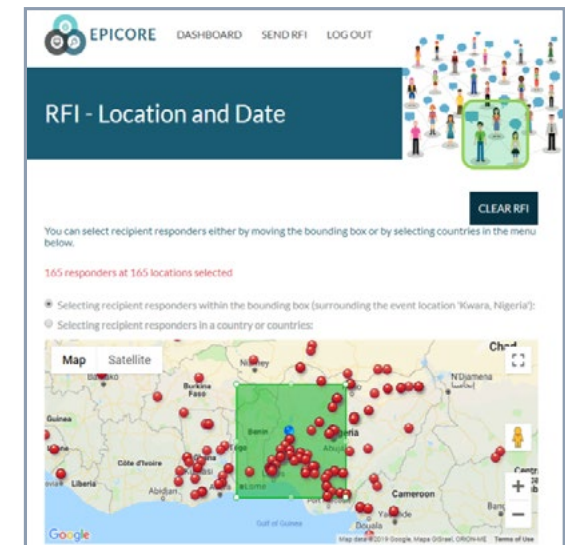
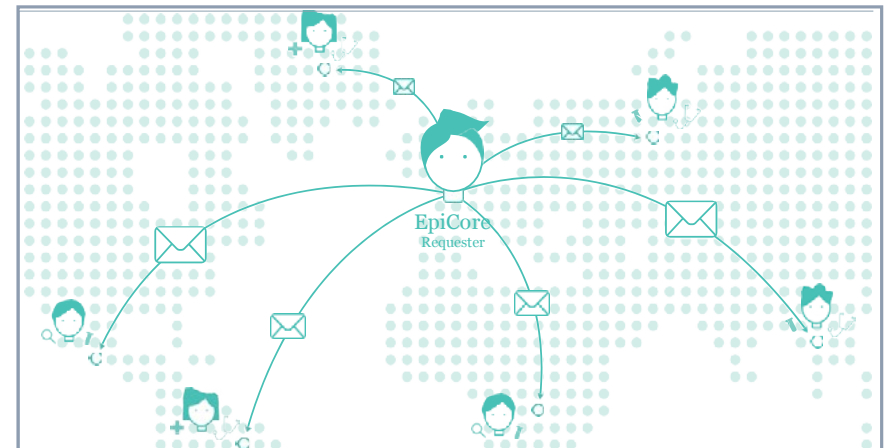
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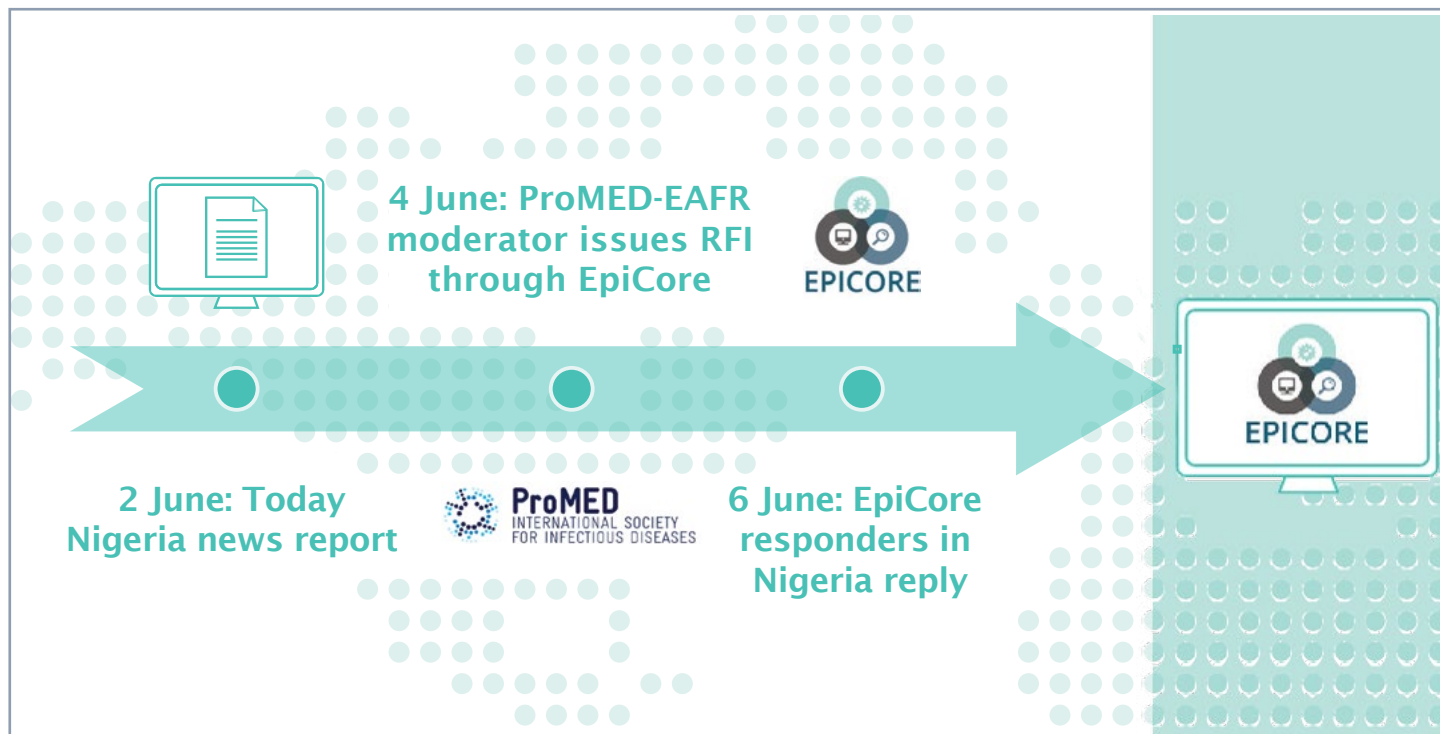
The RFI including all the relevant details is sent out to a selected number of EpiCore members (RESPONDERS) that are located in proximity to the reported event. The Requester may include specific questions for the network:

***“We would appreciate receiving more info on the reported outbreak: receptive animal population at risk, attack rate, control measures undertaken and possibly the identity of the associated virus sero/topo/genotype.”***



# EpiCore Network Responds To RFI

Within 48 hours, 2 EpiCore Platform “responders” in Nigeria posted responses.



# EpiCore Network Responses

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6 JUNE 2016

## **DIRECT REPORT**

- A field epidemiology officer from Taraba state is investigating this outbreak in the field. Unfortunately,, suspected cases are not confirmed by the national laboratory.

## **INDIRECT REPORT**

- Colleagues refer that there have been previously other cases of FMD in Taraba State. There is a recent reoccurrence of FMD in cattle grazing area of Fufore local government area (LGA) of Adamawa.

## **OFFICIAL REPORT**

- The LGA director of agriculture and veterinary services, has issued a FMD alert during an interview with New Agency of Nigeria recently.

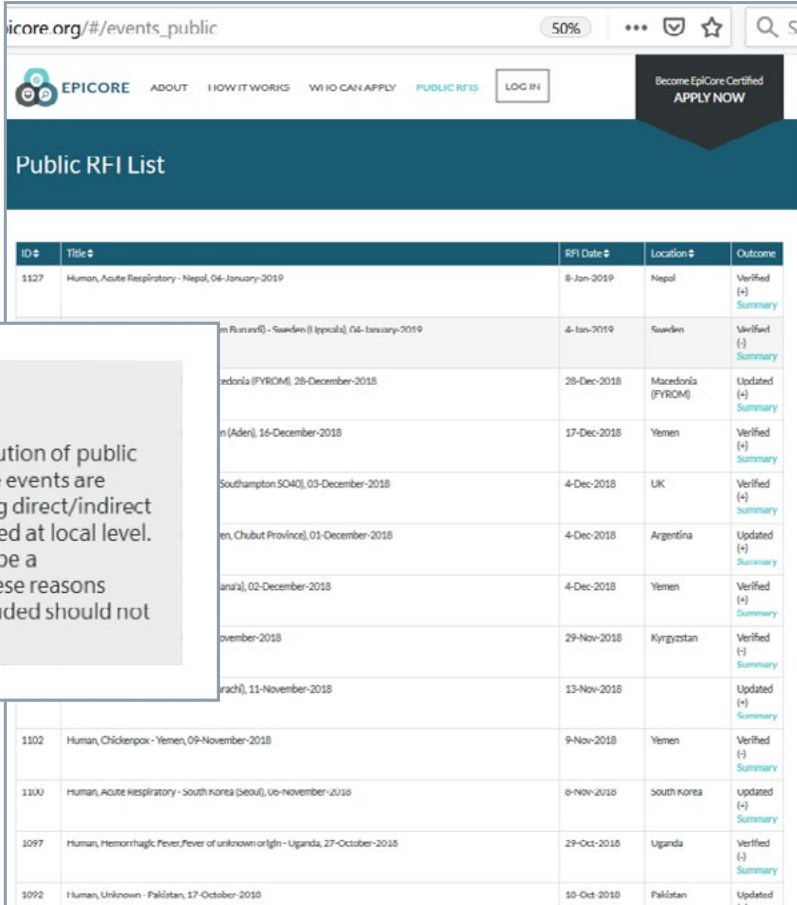
## **PROFESSIONAL OPINION**

- The nomadic nature of the herdsmen is making it difficult to tract the disease incidence and carry out immediate intervention.

# EpiCore Public Dashboard Captures The Information

7 JUNE 2016

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# ProMED Post (Update)

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7 JUNE 2016

The ProMED moderator uses the information collected from the EpiCore network to publish a new ProMED post about the event.

**PUBLISHED DATE:** 2017-06-07 16:22:23

**SUBJECT:** PRO/EAFR> Foot & mouth diseases Nigeria (02) (Taraba), bovine, RFI

...There are reported cases of foot and mouth disease [FMD] in Taraba State, Nigeria. Unconfirmed report supports that the nomadic nature of the herdsmen is making it difficult to tract the disease incidence and carry out immediate intervention. This is becoming a major threat as the disease may as well spread to neighboring states. b. There is a recent reoccurrence of FMD in cattle grazing area of Fufor local government area (LGA) of Adamawa. This is according to the director of agriculture and veterinary services in the LGA who raised the alarm during an interview with New Agency of Nigeria recently.

## SOURCE

EpiCore Network

The following information  
was submitted by an EpiCore  
Surveillance Project member

# EpiCore Impact

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- The RFI and the information shared by EpiCore Responders alerted the OIE National Focal Point to the suspected FMD outbreak in Taraba State.
- This allowed the National OIE Focal Point to take steps to engage key stakeholders in verification and notification through formal domestic and international channels.

***To consider ....if a similar event happened in your own country, what sources would you use or what actions would you take to verify the details of an outbreak reported directly to the news media?***





# Case Study – Review

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## Sources or types of information used by EpiCore members to respond to the RFI:

- Direct observation (site visit, e.g. direct involvement in situ).
- Indirect report (informal info received from person in situ).
- Official report (web-based or direct official documentation).
- Professional opinion (information based on personal professional opinion, with no further report/statement).

# Case Study – Review

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**Participation by EpiCore responders contributed to innovative surveillance by:**

- Helping to identify and close a gap in reporting through formal channels.
- Providing information supporting the verification of a reported event.