

Public Health Institutes of the World

**IANPHI**

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Networking to address global health challenges

**NPHIS  
UNRAVELLING  
HEALTH MYSTERIES**

**STRANGE ILLNESS IN TWO SOUTHERN DISTRICTS**

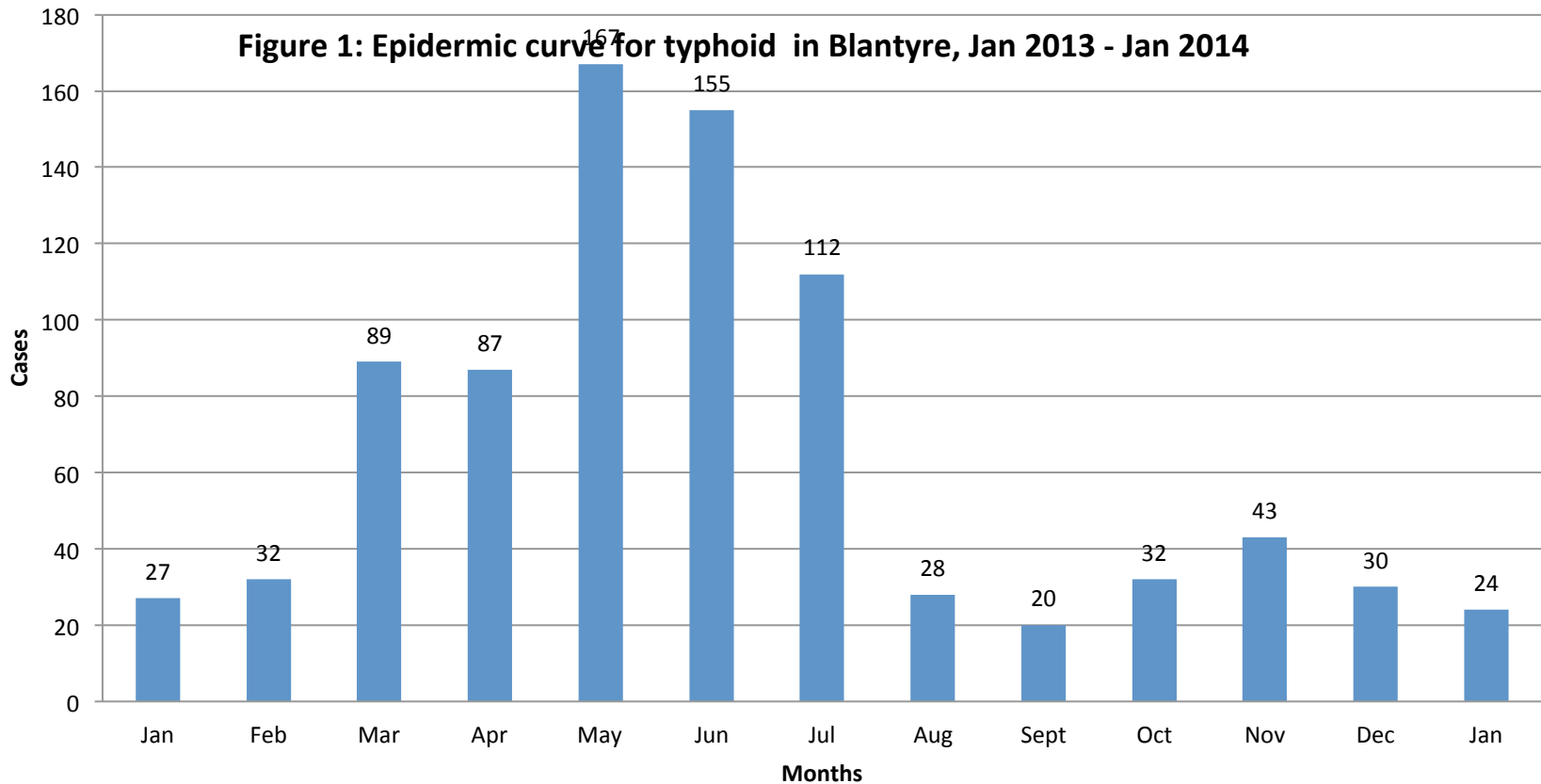
## UNEXPLAINED ILLNESS

- ▶ anecdotal reports from clinical discussions and the media indicated that Blantyre and Neno districts were experiencing an increase in the number of patients presenting with febrile illness; which included with fevers, headache and diarrhea
- ▶ Most cases were negative to malaria RDTs.
- ▶ Those given presumptive malaria treatment were not responding to the treatment.
- ▶ Public Health Institute of Malawi (PHIM) conducted an investigation exercise from 13<sup>th</sup> to 18<sup>th</sup> January 2014 to follow up on the reported incidences of a suspected outbreak in Neno and Blantyre districts to ascertain the burden of the situation.

# OBJECTIVES OF THE ASSESSMENT EXERCISE

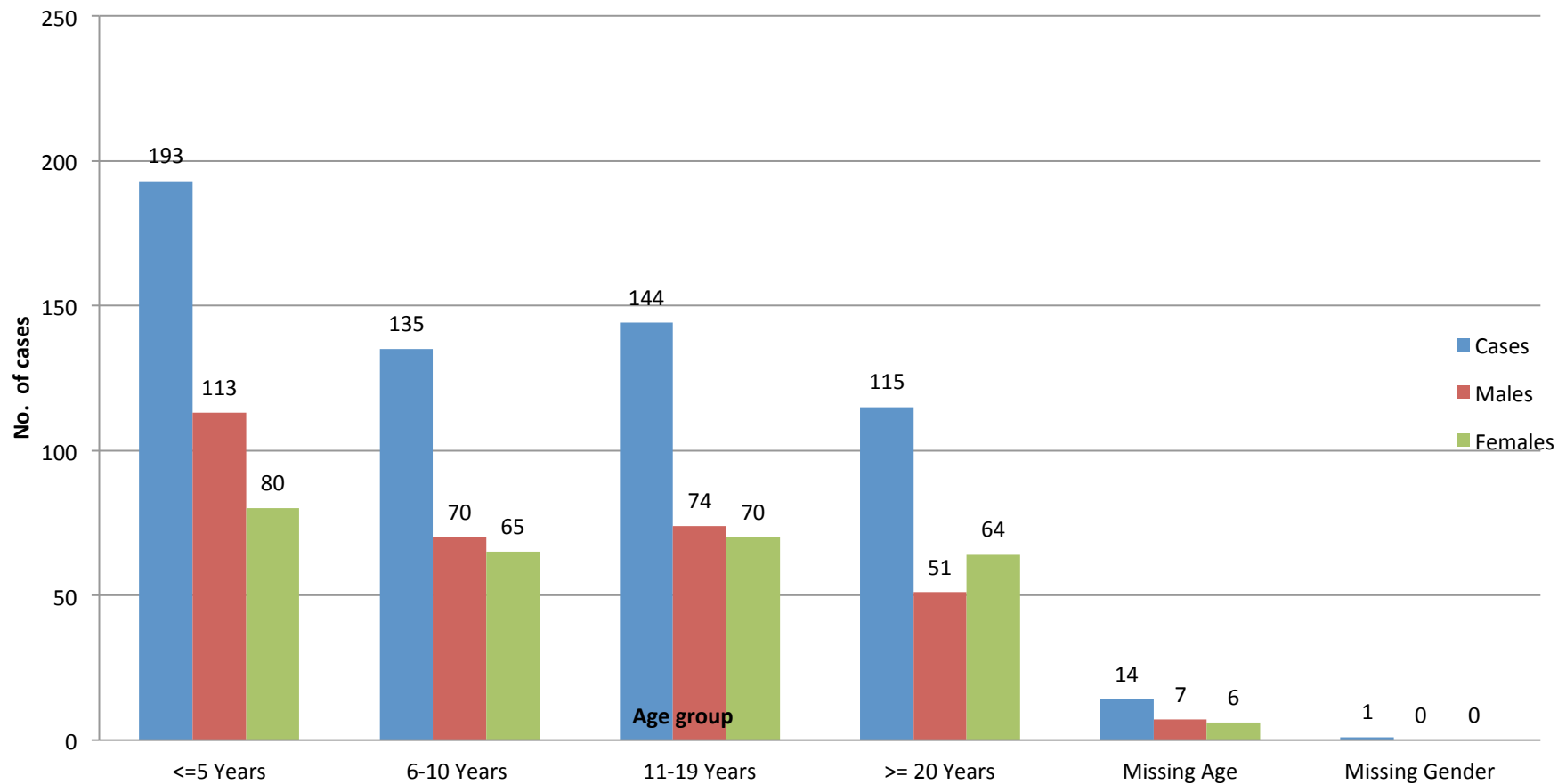
The objectives of the investigation were to:

- ▶ Conduct a data review exercise to confirm and define the typhoid situation in Blantyre and Neno
- ▶ Determine the laboratory capacity of Blantyre and Neno districts to confirm typhoid fever
- ▶ Find out challenges districts have in typhoid fever active surveillance and response in Blantyre and Neno districts



# FINDINGS

### Typhoid suspected cases per age group and sex



- ▶ No. of cases presenting with similar signs and symptoms increased steadily from the month of February 2013 to a peak of 167 cases per month in May 2013 and then dropped to about 20 cases per month in September 2013.
- ▶ No. of cases then started to increase after September 2013 to a peak of 43 cases per month in November 2013 suggesting the likelihood of two waves of typhoid outbreaks in the district.
- ▶ 362 cases had a specimen taken for blood culture of which 109 cases had a documented laboratory result
- ▶ Of the 109 cases tested, 90 had a positive culture of *Salmonella typhi*, confirming the diagnosis of typhoid
- ▶ Most of the cases were children aged 10 years and below and there was no marked difference between gender.
- ▶ Most cases were originating on the northern and north-eastern part of the city of Blantyre.
- ▶ Neno district did not have well documented information about the cases
- ▶ Suspected cases were mainly reported from the western part of the district which had confirmed outbreak previously (2009).

## FINDINGS

To contain the outbreak, the Blantyre and Neno district health offices carried out key response activities:

- ▶ Developed case definitions and case management guidelines in collaboration with key stakeholders in the respective districts.
- ▶ Trained health workers to manage the cases
- ▶ Mobilized antibiotics such as ciprofloxacin and ceftriaxone to treat the cases
- ▶ Conducted case confirmation and sensitivity testing for the various drug regimens
- ▶ Intensified surveillance activities

# FINDINGS

- ▶ The districts had limited capacity to conduct laboratory diagnostics to confirm the disease and lacked bench marks for declaring the situation as an outbreak.
- ▶ Health centres that had referred suspected cases, reported not to have received a feedback.
- ▶ Most suspected typhoid cases were referred as a whole person to QECH and not as specimens drawn/collected from them.
- ▶ Some of the referred patients might have defaulted in the process.
- ▶ There was some discordance in information between the DHOs and Health Centres
- ▶ There was no household follow up for those suspected to have typhoid.
- ▶ Salmonella Typhoid has not been on IDSR list for surveillance and does not have a formal threshold to determine an outbreak.



## CONCLUSION

- ▶ Rumours and media reports may actually give a clue that there is something happening in a district in terms of a disease outbreak.
- ▶ Though the central level may not have formal comprehensive reports on specific suspected outbreaks, it is always important to probe further to get accurate information of the situation on the ground.
- ▶ PHIM was crucial for assessing the situation on the ground to determine whether an outbreak was ongoing.
- ▶ Gave an opportunity for PHIM to assess the capacity of the districts to conduct surveillance.
- ▶ It will be essential to do an analysis/assessment to determine the threshold when to declare salmonella typhoid an outbreak.
- ▶ It was identified that most of the health workers have not been trained in the Integrated Disease Surveillance and Response (IDSR).