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Improving outbreak response using the One Health approach Delayed detection delays the whole response

BACKGROUND

- Timely detection, reporting and response is of utmost importance in control of outbreaks.
- An anthrax outbreak was declared in Lumezi District following laboratory confirmation in the hippopotamus population on 23rd October, 2023.
- The first human case was reported on the 14th of October 2023, with a history of consuming hippopotamus meat.
- Forty-seven human cutaneous cases were reported.
- We measured the response to the anthrax outbreak using the 7-1-7 metric.

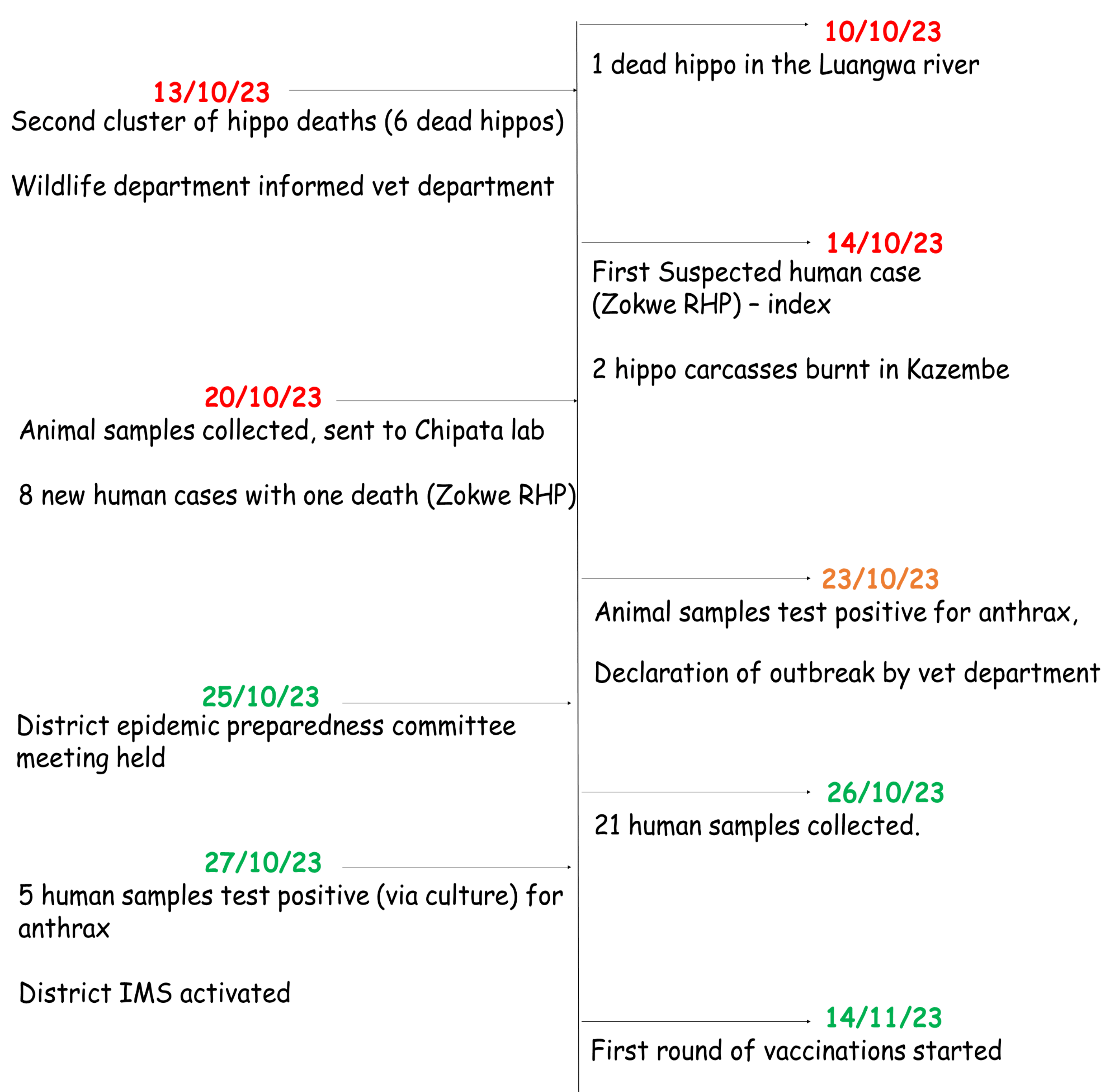
METHODS

- We conducted an outbreak investigation between 19th to 23rd December 2023.
- We reviewed facility registers, line lists and interviewed key informants to measure the outbreak response using the 7-1-7 metric, where a suspected outbreak is detected within seven days of emergence, notified for investigation and response within one day, and effectively responded to within seven days.

RESULTS

- District response to the outbreak included treatment, prophylaxis, risk communication, livestock vaccination, and wildlife surveillance.
- The Incident Management System structure was used to coordinate the response, but didn't incorporate key stakeholders from wildlife and veterinary departments.

Figure 1: Event timelines



RESULTS CONTINUED

Figure 2 : Epi-curve of human Anthrax cases, Lumezi district, Zambia 2023

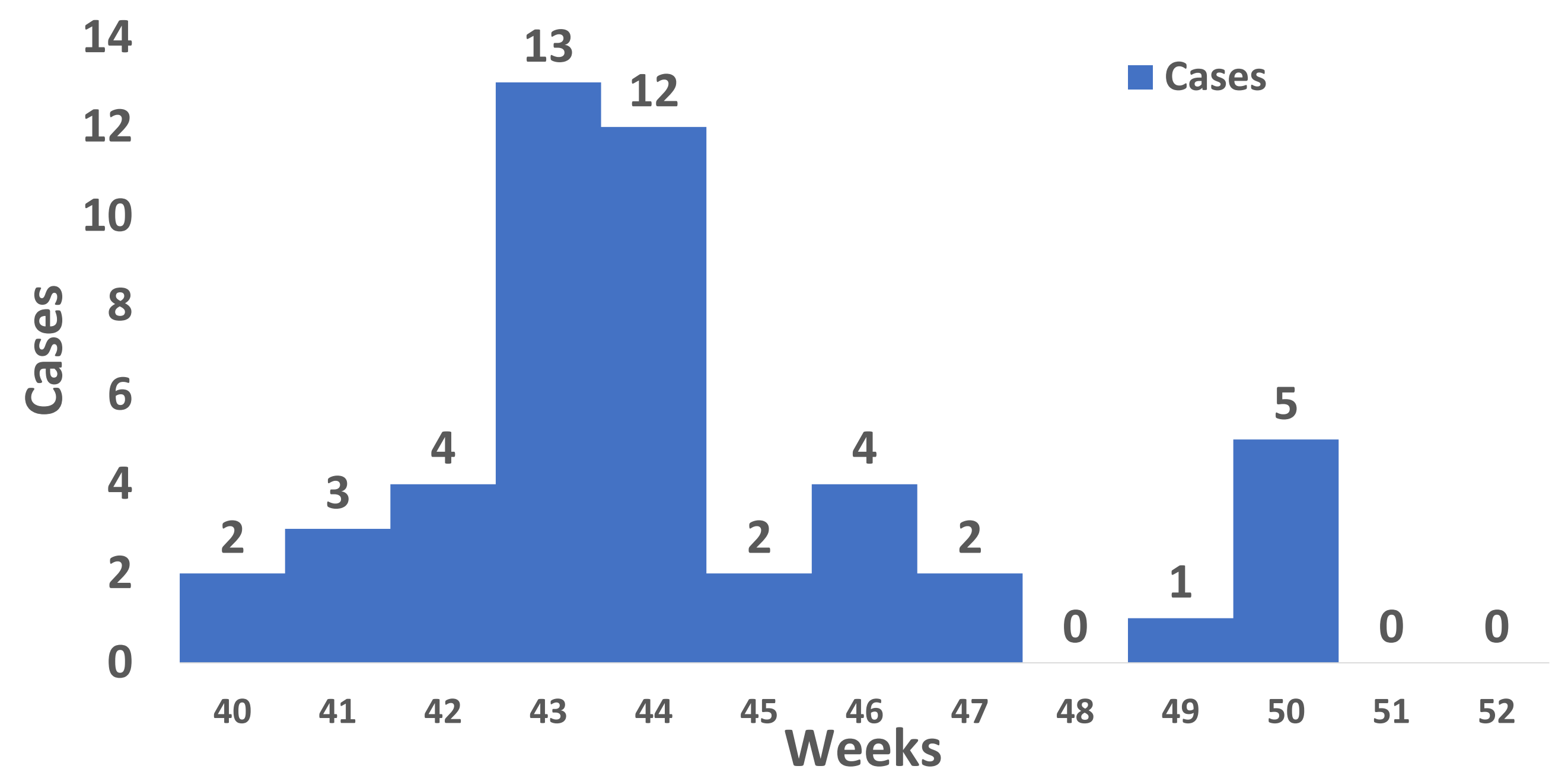


Figure 3 : 7-1-7 assessment

Interval	Calculation In days	Timeliness In days	Target In days	Met target? Yes/No
Detection	Difference between dates of emergence and detection	13	7	No
Notification	Difference between dates of detection and notification	1	1	Yes
Response	Difference between dates of notification and completion of the last early response action	4	7	Yes

CONCLUSIONS

- There was a delay in the detection of the outbreak.
- The delayed detection and other challenges encountered such as lack of involvement of key stakeholders, underscore the importance of addressing gaps through a One Health lens.
- This experience has taught us that close collaboration of the animal and human health sectors at the lowest level, by means of capacity building, will help us better prepare for future outbreaks.
- We recommend capacity building trainings on one health approach to be conducted among frontline responders.

ADDITIONAL KEY INFORMATION

Additional Resources

<https://717alliance.org/digital-toolkit/>



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Conflicts of Interest

There is no conflict of interest

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