

Mass dog vaccination against rabies – Itezhi-Tezhi District, Zambia, 2021

Chilufya S. A. Mulenga^{1,2}, D. Mayer³, J. Bailey³, R Murton⁴, D. Banda², M. Kapina², N. Sinyange^{1,2}, R. Hamoonga², P. Munthali⁵, L. Mushimbwe⁵, G. Muuka⁵

¹Zambia Field Epidemiology Training Program; ²Zambia National Public Health Institute; ³Mission Rabies; ⁴Game Rangers International; ⁵Ministry of Fisheries & Livestock, Lusaka, Zambia

The mass dog vaccination pilot against rabies in Itezhi-tezhi District achieved a minimum 70% coverage required to bring rabies under control in reservoir populations

Abstract Reference

PP22

BACKGROUND

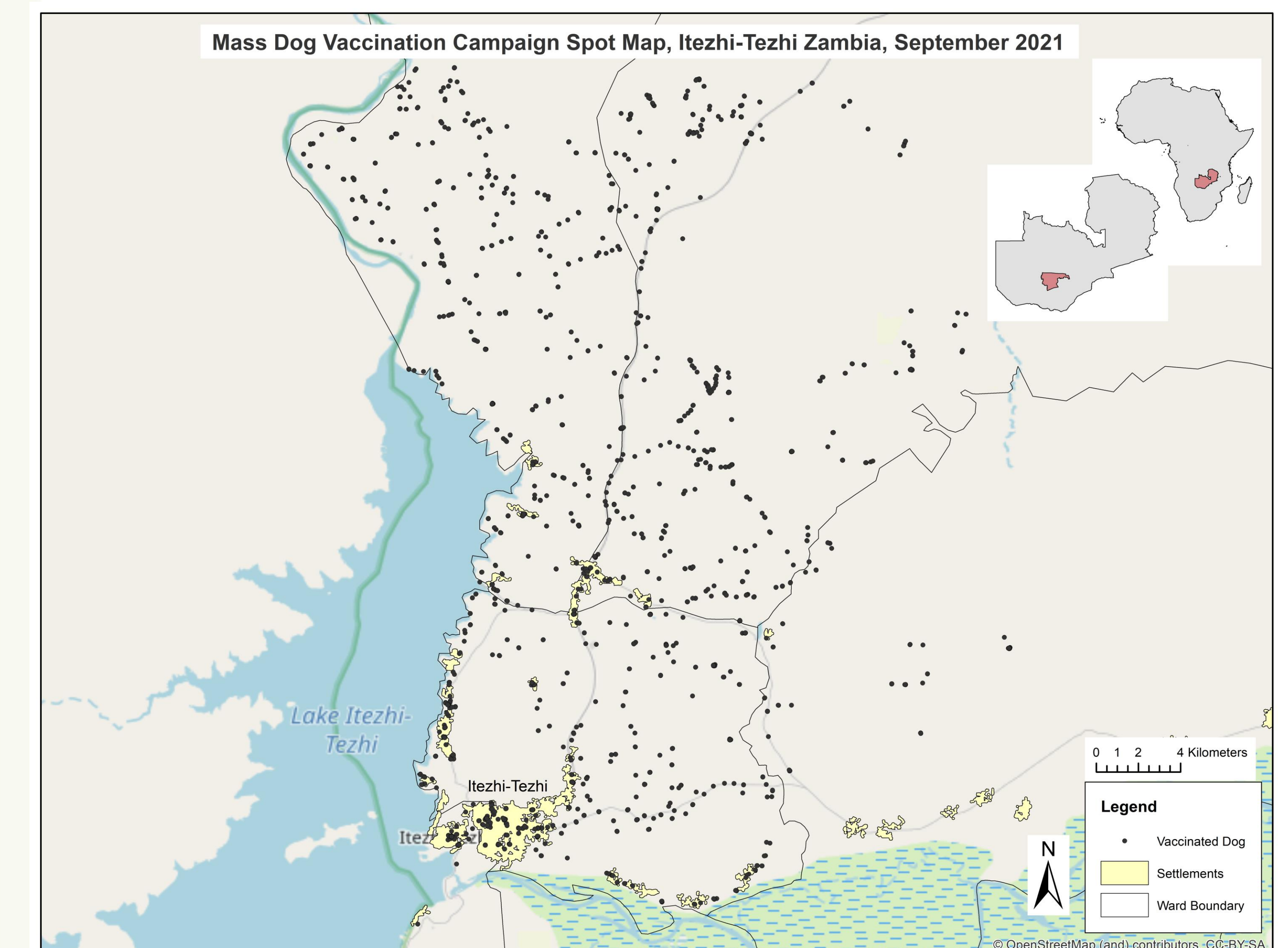
- ❑ Rabies is a 100% fatal but preventable viral zoonotic disease affecting the central nervous system. It is caused by a Rhabdovirus and mostly transmitted to humans via domestic dog bites.
- ❑ Rabies is neglected tropical disease with the majority of the cases occurring in lower income countries with inadequate access to basic health care services
- ❑ Rabies causes an acute progressive encephalitis which is almost 100% fatal. Prompt delivery of post exposure prophylaxis almost prevents human rabies deaths
- ❑ In Zambia, where rabies is endemic, 23 rabies deaths and over 16,000 dog bites were reported in 2018. although the true burden is estimated to be >10x that number.
- ❑ Itezhi-Tezhi district has in the last 5 years been recording over 100 human dog bites per year and no rabies case.
- ❑ Dog mass vaccination is the WHO recommend control strategy demonstrated to eliminate human rabies.
- ❑ We evaluated a mass dog vaccination pilot campaign in Itezhi-Tezhi, Zambia, in 2021 to learn lessons that will inform subsequent campaigns.

METHODS

- ❑ Zambia conducted a dog rabies vaccination campaign in Kaingu Chiefdom of Itezhi-Tezhi in September 2021 for ten (10) days, with a targeted coverage of 70%.
- ❑ Data was entered into an online app at the point-of-service when a dog or cat were vaccinated.
- ❑ Vaccination coverage was calculated as number of dogs vaccinated against harmonised estimated district dog population (5, 500) and post vaccination survey.
- ❑ We report demographic characteristics, vaccination and health status and responses from owners whose dogs were not vaccinated.

RESULTS

- ❑ A total of 3,931 dogs were vaccinated out of 5,500 estimated District dog population, achieving 71% vaccination coverage.
- ❑ The dogs vaccinated were mostly adult 75% (2,950/3,931) and females accounted for 60% (2353/3931) of the dogs vaccinated.
- ❑ 99.7% (3,921/3,931) had never been vaccinated before.
- ❑ 99% (3,893/3,931) were healthy
- ❑ Vaccination coverage in the area was affected mainly by owners' lack of information, unavailability and failure to restrain their dogs.



CONCLUSIONS

- ❑ Itezhi-tezhi conducted a successful pilot mass dog vaccination. These findings show that WHO benchmarks can be achieved through mass vaccination campaign and be used as a template to facilitate high-number, high-coverage vaccination campaigns.
- ❑ Mass Dog vaccination against rabies should be rolled out to the rest of the country as one of the strategies inline with WHO strategy to ending dog mediated human rabies by 2030.

ACKNOWLEDGEMENTS

- ❑ Zambia Field Epidemiology Training Program
- ❑ Ministry of Fisheries & Livestock
- ❑ Mission Rabies
- ❑ Game Rangers International

CONTACT

Email; chilufyam2007@gmail.com
Cell phone: +260966526116

