SPEEDIER

Surveillance integrating Phylogenetics and Epidemiology for Elimination of Disease: Evaluation of Rabies Control in the Philippines

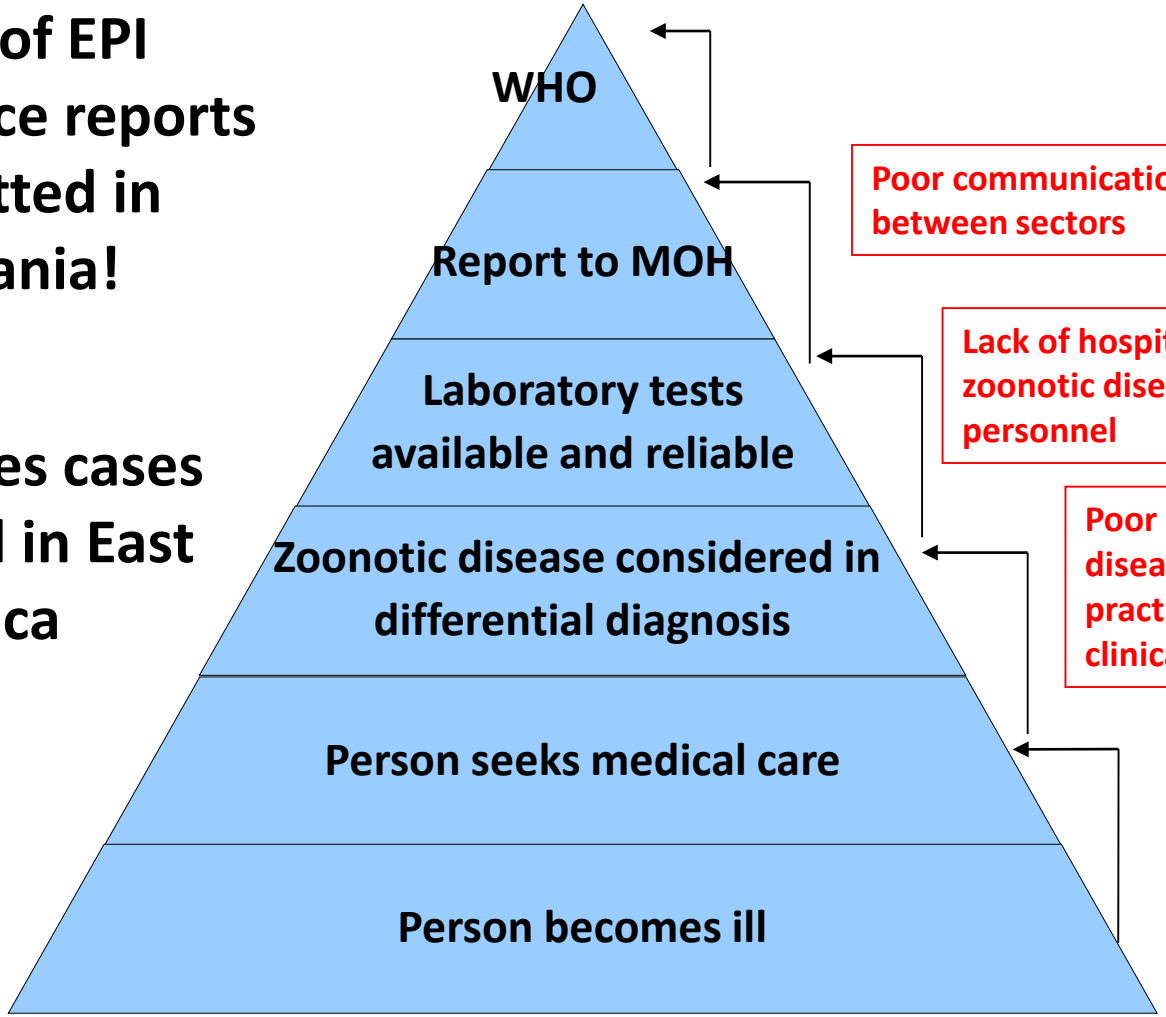
From Sample to Sequence!

…. but what about from case to sample?

…. and from sequence to action?

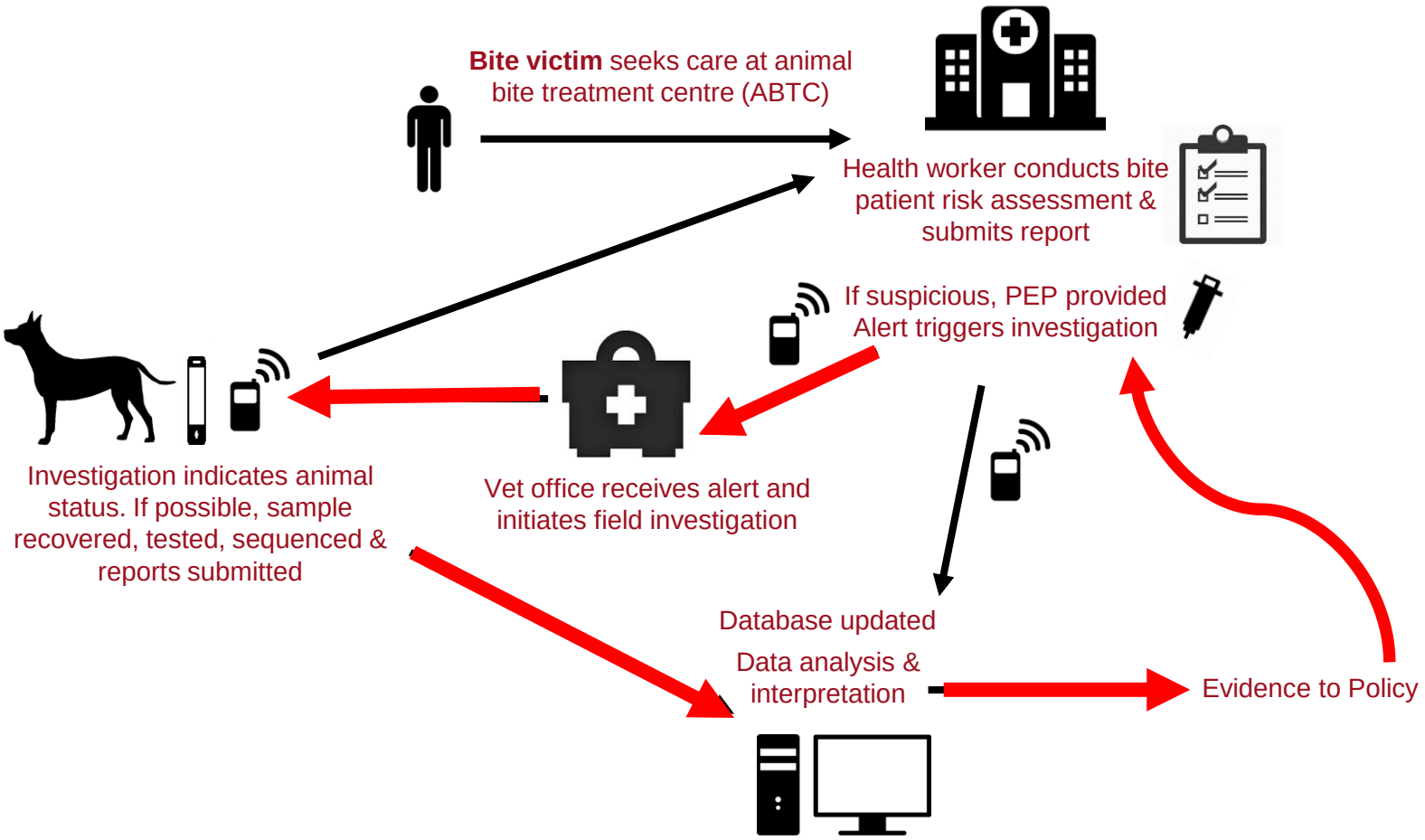
<40% of EPI surveillance reports submitted in Tanzania!

<1% rabies cases detected in East Africa



Chronic underreporting of zoonotic diseases in developing countries

Integrated Bite Case Management



Requirements for investigation

1. Rabies nurse at ABTC sends alert on risky bite to MAO (paravet) with contact details of patient/case
    a. Paravet alerts colleague in relevant MAO if necessary

2. Paravet visits patient & animal to assess risk:
    a. Healthy non-case
    b. Dead
    c. Sick:
        I. Euthanize (Veterinary officer required)
        II. Home quarantine

3. 2b or c - Take sample & test with RDT
    a. Send sample to Laboratory for confirmation & sequencing

4. Report results of 2 (to patient, MHO, ABTC, PVO, DoH)

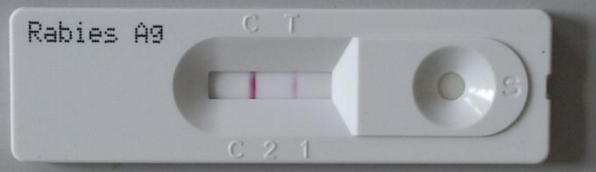
FLUORESCENT ANTIBODY TEST

Gold standard
Antigen fluoresces green
Fluorescent microscope

DIRECT RAPID IMMUNOHISTOCHEMICAL TEST

100% agreement
Antigen stain red, in <1 hour
Light microscope

LATERAL FLOW KIT



10 mins
$10
Less sensitive

Reporting

- What epidemiological information is helpful for local government:
  - ABTC staff, MAO, MHU, Provincial offices
- How can this epidemiological information be made most accessible
  - Availability of data
  - Support in interpretation

….website, dashboards, stakeholder meetings, peer support groups, direct data download etc?

- https://rabiesresearch.github.io/SPEEDIER/
- https://rabiesresearch.github.io/Serengeti/
- https://boydorr.shinyapps.io/paho_rabies/
- Philippines extension
- What crucial insights would genetic add?