Minutes of 13th meeting of the One Health Consortium

Venue: Virtual Mode

Date and time: 18th January 2022, 4.00pm-5.30pm

Topic: Sample Size Estimation

Attendees: Drs. Subeer Majumdar, AK Rawat, JPS Gill, Nagendra Hegde, KP Suresh, Azhahianambi, Pramit Ghosh

Minutes:

1. Dr. Suresh presented on the sample numbers on 10 diseases (brucellosis, Q fever, cysticercosis, CCHF, scrub typhus, swine influenza, tuberculosis, JE, listeriosis and cryptosporidiosis). It was informed that the resolution of sampling frame was low and at the state level, with minimum number of samples being projected, and that any additional samples may not necessarily provide any additional information.
2. It was decided that for states where projected sample numbers are zero, two villages with 10 samples each could be sampled. Also, it was decided to increase the number of samples by 10% for brucellosis and tuberculosis.
3. It was mentioned that investigators could choose districts based on certain factors, including risk factors. However, it was stressed that such criteria should be rationally listed by PIs of various centres and be used later for modelling and other purposes.
4. For those diseases for which multiple species are involved, the proportion of samples to be collected from the different species shall be decided based either on statewise population or based on substantiated reasons.
5. The following tentative decision was made for use of kits for animal disease surveillance
    a. Tuberculosis: IVRI's single intra-dermal test. However, it needs to be checked if IVRI can supply sufficient kits. It was also decided that a few samples (about 100) should be compared with Prionics kit.
    b. Brucellosis: BruAlert kit. It was informed that sufficient kits can be provided by TANUVAS. It was also decided that a few samples (about 100) should be compared with Svanovir kit.
    c. JE: Either Abbexa or Cusabio kits to be used; Dr. Nambi to compare the cost and recommend.
    d. CCHF: Dr. Nambi to obtain information on suitability to species, sensitivity, specificity and cost, specifically on the Zydus kit.
    e. Q Fever: Dr. Nambi to collect more information on an IgG ELISA for surveillance, rather than for antigen detection ELISA, which is typically for diagnostic purposes. It was decided to discuss with Dr. Barbuddhe.
    f. Cryptosporodiosis: OIE approved PCR following faecal DNA extraction.
    g. Dr. Barbuddhe to be consulted for salmonellosis and listeriosis.
6. Dr. Nambi was requested to share the Table on disease versus diagnostic kit and a blank form with Drs. Hegde and Gill for further discussion separately with NER and medical groups.
7. For sample numbers for transboundary animal diseases, it was decided that Dr. Barman be contacted about division of states and/or diseases for arriving at the number of samples as well as collection of samples.
8. It was suggested that SOP be developed for each disease from collection of the sample to the kit to be used to the test protocol and reporting. It was further suggested to assign one person for each disease, especially those with expertise, for the development of SOP.

9. It was decided that all centres would use a single kit for each disease. If that kit is not available, another option may be kept. It was mentioned that statistical methods could later be applied based on sensitivity and specificity of the different test kits.

(Dr. Subeer Majumdar)

(Dr. Nagendra Hegde)