

Supplementary Information

S1 Table: Period for reporting of abortion cases

Variable	Before call center establishment N = 10	Target period (within 14 days) N = 174	Total
Host			
Goats	0	66	66
Cattle	10	96	106
Sheep	0	12	12
Sub county			
Bugango Town council	6	8	14
Endinzi	0	1	1
Endinzi Town council	0	1	1
Kakamba	0	17	17
Kashumba	0	40	40
Kikagati	0	6	6
Mbaare	4	10	14
Ngarama	0	13	13
Ruborogota	0	19	19
Rugaaga	0	43	43
Rushasha	0	12	12
Rwanjogyera	0	4	4
Stage of pregnancy			
Early stage (1-3 months)	4	69	73
Middle stage (4-6 months)	6	56	62
Late stage (7-9 months)	0	45	45
Not sure	0	4	4
Environmental features			
A	0	81	81
B	0	52	52
C	0	15	15
D	10	26	36
History of animal movement			
No	10	171	181
Yes	0	3	3
Total			184

S2; Logistic regression output for IgG Brucellosis Model

Variable	Estimate	Std. Error	z value	Pr(> z)	Null_deviance
(Intercept)	-18.747	3956.180	-0.005	0.996	190.085
host_brucellosisCattle	16.760	3956.180	0.004	0.996	190.085
host_brucellosisGoat	17.766	3956.180	0.004	0.996	190.085
host_brucellosisSheep	0.709	4165.296	0.000	0.999	190.085
environmental_featuresB	0.689	0.459	1.500	0.134	190.085
environmental_featuresC	0.288	0.700	0.412	0.680	190.085
environmental_featuresD	-0.560	0.646	-0.866	0.386	190.085
stage_pregnancyLate stage (7-9 months)	0.493	0.516	0.954	0.339	190.085
stage_pregnancyMiddle stage (4-6 months)	0.369	0.478	0.772	0.439	190.085
stage_pregnancyNot sure	-14.811	1842.029	-0.008	0.993	190.085
history_animal_movementYes	-14.948	2076.100	-0.007	0.994	190.085

S3 Appendix: Questionnaire (Replicated from Predictive Factors and Risk Mapping for Rift Valley Fever Epidemics in Kenya [1])

Tool 1 (To be filled in by the call center)

Checklist for Community early warning system and reporting of abortions
Every entry is an abortion

1. Unique Id

2. Subcounty where abortion is reported

3. Village

4. Name of the reporter

5. Telephone number

6. Host species

- ☐ Cattle
☐ Goats
☐ Sheep

7. Age

8. Breed

- ☐ Local
☐ Exotic
☐ Mixed

9. Number of abortions reported

10. Action taken

- ☐ Ignored
☐ Investigated
☐ Referred

<https://ee.kobotoolbox.org/x/d5cezqxF>

**11. Reporting platform**

- ☐ SMS
☐ Facebook
☐ Whatsapp
☐ Calls

12. Date reported to the call center

yyyy-mm-dd

Tool 2 (To be filled in the community)**1. Unique Id**

2. Gender of the respondent

- ☐ Male
- ☐ Female
- ☐ Prefer not to say

3. Age

4. Education level

- ☐ PhD
- ☐ Masters
- ☐ Bachelors
- ☐ Diploma
- ☐ Certificate
- ☐ Advanced level
- ☐ Ordinary level
- ☐ Illiterate

5. Occupation

6. Household size

7. Subcounty

- ☐ Birere
- ☐ Endizi
- ☐ Kabingo
- ☐ Kabuyanda
- ☐ Kashumba
- ☐ Kikagate
- ☐ Masha
- ☐ Nyakitunda
- ☐ Ngarama
- ☐ Rugaaga

8. Parish

9. Village

10. Date for the alert

yyyy-mm-dd

11. Date for investigation

yyyy-mm-dd

12. Date for vaginal swab collection

yyyy-mm-dd

13. Vaginal swab code

<https://ee.kobotoolbox.org/x/skXReSS2>

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Tool 2 (To be filled in the community)

14. Any clinical presentation of the animal

- ☐ High mortality of new-born
- ☐ Sudden onset of abortion among pregnant animals
- ☐ Weakness /Unsteady gait
- ☐ Mucopurulent nasal discharge
- ☐ Profuse fetid diarrhea
- ☐ High fever
- ☐ I don't know

15. Is the animal vaccinated

- ☐ Yes
- ☐ No

16. Herd size

17. Number of animals vaccinated for RVF

18. Any environmental features observed

- ☐ Bushes
- ☐ Recent rainfall (less than 14 days)
- ☐ Stagnant water
- ☐ Shrubs
- ☐ Heavy forests
- ☐ Others

Others

19. History of animal movement

- ☐ Yes
- ☐ No

If yes state;

20. Origin

21. Destination

22. Image of animal

Click here to upload file. (< 10MB)

23. GPS coordinates

latitude (x,y °)

longitude (x,y °)

altitude (m)

accuracy (m)



<https://ee.kobotoolbox.org/x/skXReSS2>



Tool 3 (To be filled in by the Lab Assistant)

1. Unique Id

2. Vaginal swab id

3. Number of tests done

4. Results of ELISA, IgM



5. Mean OD value of each serum sample

6. Results of ELISA, IgG

7. Mean OD value of each serum sample

8. Id of the lab technician

9. Date for the results



yyyy-mm-dd

<https://ee.kobotoolbox.org/x/N2kkkCff>



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¹Munyua PM, Murithi RM, Ithondeka P, Hightower A, Thumbi SM, Anyangu SA, Kiplimo J, Bett B, Vrieling A, Breiman RF *et al*: **Predictive Factors and Risk Mapping for Rift Valley Fever Epidemics in Kenya.** *PLoS One* 2016, **11**(1):e0144570.



UNIVERSITY OF CAMBRIDGE
Department Of Veterinary Medicine



MINISTRY OF HEALTH



LIVESTOCK ABORTIONS REPORTING IN ISINGIRO DISTRICT

RIFT VALLEY FEVER

(what everyone needs to know)



please report any abortion to Isingiro call centre to
075 259 8184 / 077 356 8057

Rift Valley Fever (RVF) is an acute, fever-causing viral disease that several affects domestic and wild animals (such as cattle, sheep & goats) as well as humans.

How Do Humans Get RVF

- As a result of bites from mosquitoes that serve as vectors of RVF
- Direct contact with either blood, meat or other body fluids of infected animals, assisting with animal births.
- Through drinking unpasteurized or uncooked milk or Infected animals



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Figure 1: IEC Materials for RVF used during sensitizations (Front page)



TARGET ANIMALS

1

 SHEEP

2

 BUFALLOS

3

 GOATS

4

 CAMELS

5

 CATTLE

Signs and symptoms

In Animals

- Fever
- Weakness
- Abortions (loss of pregnancy)
- A high rate of severe illness and death, particularly among young animals.

In Humans

- Fever
- Weakness
- Back pain
- Dizziness at the onset of illness.

NB Typically, patients recover within two days to one week after symptoms start.



Spread of RVF

- ◆ People can get RVF through contact with blood, body fluids, or tissues of infected animals.
- ◆ Heavy rains and prolonged flooding increase habitat suitability for vector populations, determining massive hatching of RVF competent mosquitoes (e.g. Aedes and Culex), thus influencing the risk of RVF emergence, transmission spread.

What to do in case of any community/farm abortions

If you see any community/farm livestock abortions notify the following stakeholders by WhatsApp, SMS, phone call.

- ★ LC at village, parish, subcounty or district
- ★ VHT member
- ★ Veterinary services provider
- ★ District call centre - **075 259 8184 / 077 356 8057**






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S3 Appendix: IEC Materials for RVF used during sensitizations (Back page)