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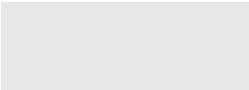


FROM CONTROL TO ELIMINATION:
**PREVENTING THE ADVERSE
EFFECTS OF RIFT VALLEY FEVER
IN SENEGAL**

2024



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KEY MESSAGES:

- The public knowledge about Rift Valley Fever (RVF) and its transmission to humans is low, despite the government efforts on surveillance and awareness creation. Only 2 out of 10 people can identify RVF in humans and livestock.
- Community engagement is vital in the response to RVF and curbing of epidemics. Local context, including socio-cultural realities and gender roles of local stakeholders, especially livestock farmers should inform state-led epidemic control strategies through the Veterinary Service Department (VSD).
- Align training and awareness initiatives to the context of communities, empower them to lead in the response, and strengthen the State's achievements through its One Health platform.



Watering point used to water livestock, road to Ourosogui.

SUMMARY

This policy brief provides evidence and recommendations based on the results of a Knowledge Attitudes and Practices (KAP) survey carried out in five regions (Louga, Saint-Louis, Matam, Kolda and Tambacounda) of Senegal on RVF. The RVF disease, an arbovirosis of domestic ruminants, first appeared in Senegal in 1987 and is on the priority list of zoonoses along with rabies, tuberculosis, avian influenza, and hemorrhagic viral diseases in Senegal (M. Fall, 2021). The government and its partners have based their strategy mainly on creating awareness, surveillance, and vaccination. However, the current level of knowledge of the people on RVF is still low, the study showed that only 2 of 10 people can ably recognize RVF in humans and livestock. The study revealed that the root cause of the low knowledge is the poor attitude and practices of the community, limited involvement of the locals in strategic interventions, and sensitivity to cultural orientation, specific needs, and circumstances. It is vital that efforts include adapting the media content and language used to communicate about RVF to the socio-cultural realities of local people, especially livestock farmers. Enable the community to optimally participate including in leadership of RVF elimination efforts at various levels and empower and integrate community level champions in government surveillance and response structures.

ABOUT THE PROJECT

This work was undertaken as part of the Africa One Health University Network (AFROHUN) program to combat neglected endemic tropical diseases and integrate risk communication into the training curriculum. This work was carried out in partnership with the Direction des Services Vétérinaire in Senegal.



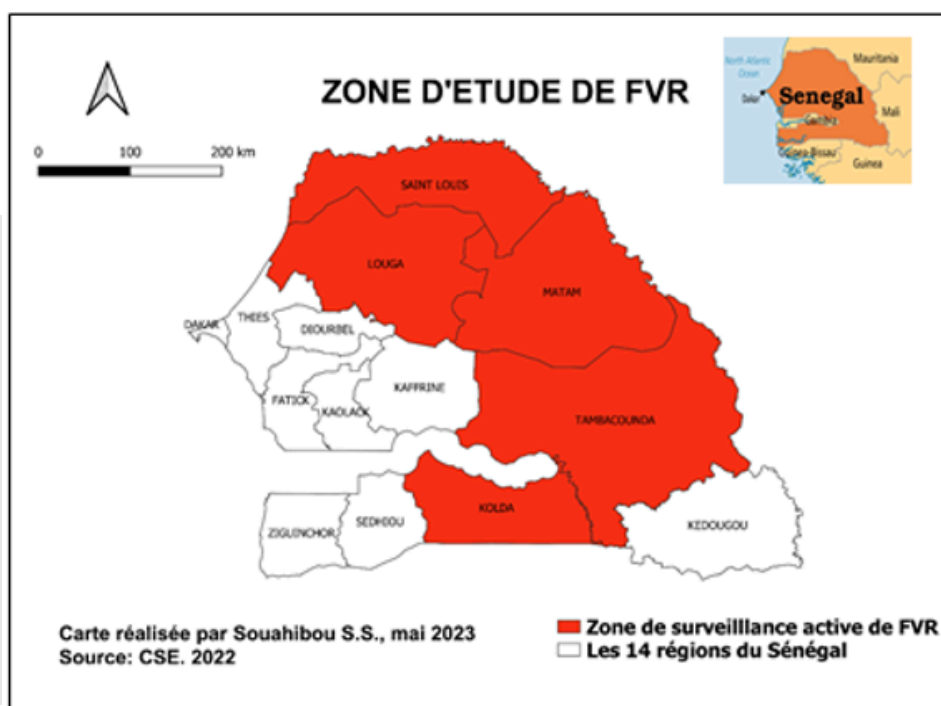
BACKGROUND

Rift Valley Fever (RVF) is a viral disease that affects many African countries including but limited to Egypt, Kenya, South Africa, Mauritania; and a number of countries in the Middle East, such as Saudi Arabia and Yemen. It is an arbovirosis – a viral disease that is transmitted to humans and other animals primarily through the bite of infected arthropods, such as mosquitoes and ticks. It is an economically important disease in animals, causing abortions (in almost 60% - 100% of pregnant females) and livestock deaths. In humans, it causes hemorrhagic fever, severe eye, and nerve damage, and sometimes leads to death but there is no human-to-human transmission.

First reported in Senegal in 1987 (Fati, 1990), RVF is characterized by a succession of episodes of silent phases of virus circulation with no clinical or phases of clinical manifestations. In response, the government has undertaken a number of initiatives, including epidemiological surveillance to gain a better understanding of the disease and propose a vaccination strategy. Based on government efforts through the Veterinary Services Department (VSD), the disease is under control and can be managed in the event of an epidemic. However, RVF has not been eradicated and continues to cause losses on farms during sporadic phases (Seck et al., 2013).

The "One Health" strategy, which is an effective multisectoral approach to zoonosis control (CIRAD - WHO - RVF Senegal, 2022), could be an excellent strategy to control and eliminate this disease. However, little information exists on the Knowledge, Attitudes and Practices (KAPs) of exposed populations about the disease and the risk factors associated with human infection.

The study investigated people's KAPs to assess their level of knowledge about RVF and carried out serological tests on blood samples from domestic ruminants to determine the rate of infection in herds.

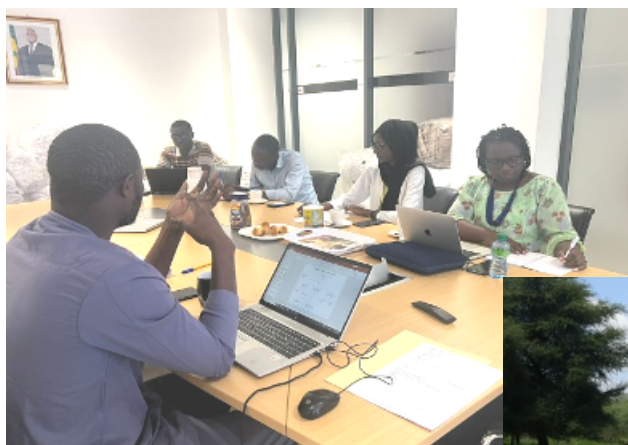


The work took place in 2023 in the DSV's active surveillance zones in sentinel herds in the regions of Louga, Saint-Louis, Matam, Kolda and Tambacounda. KAP surveys using direct interviews and KoBo Toolbox software were carried out with 56 men and women—herders from sentinel herds and neighboring herds, farmers, milk and meat sellers, human and animal health post officers, water and forestry service officers, slaughterhouse area workers.

CURRENT POLICY AND IMPLEMENTATION CONTEXT

The government and partners' efforts have broadly focused on surveillance and vaccination, and specifically on the following:

- Setting up a national surveillance network by the Veterinary Services Department (VSD): this is organized around sentinel herds in 5 regions in the Senegal River and Ferlo valleys. Blood samples are taken from domestic ruminants (cattle, sheep and goats) for serological tests (to detect antibodies) during the rainy season. The sera collected from these samples are analyzed at the National Livestock and Veterinary Research Laboratory (NLVRL) in Dakar-Hann (virus isolation, serology tests). Alongside the active surveillance, there is clinical surveillance (abortions and stillbirths) to better describe suspected RVF outbreaks (VSD, 2013).
- Development of an educational kit: The educational kit comprising of fact sheets, is a practical and illustrated package aimed at field staff to promote good practices with regard to RVF in Senegal, using a One Health approach. More specifically, the aim of these fact sheets is to provide scientific knowledge, procedures, technical elements and good practices to field staff for them to coordinate warning, prevention, biosafety and communication measures in the event of a suspected or confirmed case of RVF in the field (CIRAD - OMSA - FVR Senegal, 2022).



Introductory meeting of AFROHUN fellow and interns at Veterinary Services Department



Water pond at Ogo, Eastern Senegal



Watering point used to water livestock, located along the road to Ourosogui.



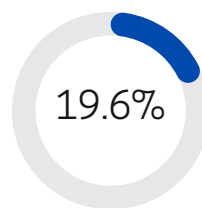
Field survey with the local population around a water point, Linguère, September 2023,



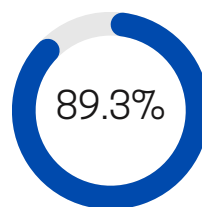
The study findings

The initial results indicate:

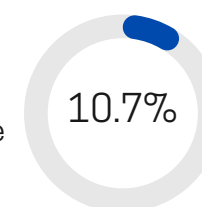
- A low level of knowledge among women and men about the symptoms of RVF in animals and humans. Only 19.64% of respondents knew the name of the disease and associated the symptoms of abortion and stillbirth with RVF.
- This low level of knowledge about the disease and its transmission inevitably has an impact on people's attitudes and practices. Indeed, 89.29% of those surveyed adopted behaviors that expose them to infection by the RVF virus i.e., frequent consumption of raw milk and poorly cooked meat (boys who graze animals and drink raw milk), unprotected handling of abortion products and animal carcasses by men and women, and assistance during parturition mainly by men—inadequate protection (poor use of mosquito nets and anti-mosquito products).
- Only about 10.71% of respondents know the risk factors associated with human infection. This is a reason for increased exposure to infections by the RVF virus. It was revealed that local communities give priorities to preventing zoonoses that are familiar to them.
- Diseases such as Q fever, brucellosis, toxoplasmosis, foot-and-mouth disease and babesiosis, directly impact the health, production (reduced fertility and milk production) and livelihood of the people. Because of similar signs and symptoms of these diseases, local people tend to confuse them with those of RVF.
- Inadequate training and awareness-creation initiatives means that male farmers and those at risk such as butchers and slaughterers are not adequately reached. Similarly, women who are in contact with the milk and the meat and who take care of the children and often provide health recommendation to children are not also informed. The initiatives are generally carried out at regional or departmental level and not at local level, excluding people most at risk.
- The content and format of the materials used during training sessions and awareness-creation sessions for people at risk are poorly adapted to gender and age differences, and to local contexts and realities. The language and vocabulary used are considered to be relatively technical, often excluding stakeholders unfamiliar with the concepts of the disease, its manifestations and control methods. A higher percentage of women have a relatively low level of education or are not educated thus mostly excluded.
- Finally, the communication channels generally used to share information about RVF (i.e. video, posters, technical booklet on screening for the disease) are not necessarily suitable for livestock farmers, who are often in remote areas if they are not on transhumance. This makes it difficult for them to access certain media (especially television). Language barriers prevent them from getting the most out of posters and technical booklets written in French, if they do have access to them.



of respondents knew the name of the disease and associated the symptoms of abortion and stillbirth with RVF



of those surveyed adopt behaviors that expose them to infection by the RVF virus



of respondents know the risk factors associated with human infection

Policy implications and recommendations

The results of the study show that RVF is endemic in this area of Senegal and poses a permanent threat to livestock and humans. The measures taken (surveillance, awareness-raising, training) by the government and its partners have not succeeded in eradicating the disease but under control and can be managed in the event of an epidemic. The efforts of State and its partners are essentially focused on surveillance, vaccination, and awareness.

Minister for Livestock and Animal Production and the partners:

- It is vital that current epidemiological surveillance cover all regions of the country and involve more and varied herds. The data recording using the KoboToolbox already concluded in the field by animal health officers, could be strengthened by involving local leaders (men and women) and be processed and disseminated as quickly as possible to help keep local people informed.
- Strengthen skills of government's One Health platform team members regarding RVF, the prevailing socio-cultural aspects and gender of populations exposed to RVF infection and involve the team. This can help them to understand the goals of the platform and how it works.
- Veterinary Services Department (VSD) and partners to consider revising the health education kit on RVF prevention, response and management good practices by taking into account the local languages, clarity of message, and locally accessible distribution channels to enable better understanding and action-planning.

Involve people of different gender and other minority groups in the government's current awareness-raising campaigns from the onset, for them to understand the information that is most useful to them and adapt it to their needs.

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