Evaluation of the Surveillance System for Rift Valley Fever in Ruminants in Mauritania, 2019

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Abstract : Introduction: Rift Valley Fever is a zoonotic arbovirosis that severely affects ruminants, as well as humans. It causes abortions in pregnant females and deaths in young animals. The disease occurs during heavy rains followed by large numbers of mosquito vectors. The objective of this work is to evaluate the surveillance system for Rift Valley Fever. Methods: We conducted an evaluation of the Rift Valley Fiver surveillance system. Data were collected from the analysis of the national database of the Mauritanian Network of Animal Disease Epidemiological Surveillance at the Ministry of Rural Development, of RVF cases notified from the whole national territory, of questionnaires and interviews with all persons involved in RVF surveillance at the central level. The quality of the system was assessed by analyzing the quantitative attributes defined by the Centers for Disease Control and Prevention. Results: In 2019, 443 cases of RVF were notified by the surveillance system, of which 36 were positive. Among the notified cases of Rift Valley Fever, the 0- to the 3-year-old age group of small ruminants was the most represented with 49.21% of cases, followed by 33.33%, which was recorded in large ruminants in the 0 to 7-year-old age group, 11.11% of cases were older than seven years. The completeness of the data varied between 14.2% (age) and 100% (species). Most positive cases were recorded between October and November 2019 in seven different regions. Attribute analysis showed that 87% of the respondents were able to use the case definition well, and 78.8% said they were familiar with the reporting and feedback loop of the Rift Valley Fever data. 90.3% of the respondents found it easy, while 95% of them responded that it was easy for them to transmit their data to the next level. Conclusions: The epidemiological surveillance system for Rift Valley Fever in Mauritania is simple and representative. However, data quality, stability, and responsiveness are average, as the diagnosis of the disease requires laboratory confirmation and the average delay for this confirmation is long (13 days). Consequently, the lack of completeness of the recorded data and of description of cases in terms of time-place-animal, associated with the delay between the stages of the surveillance system can make prevention, early detection of epidemics, and the initiation of measures for an adequate response difficult.
Keywords : evaluation, epidemiological surveillance system, rift valley fever, mauritania, ruminants
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