



## 8. EPIDEMIOLOGICAL TRENDS AND CHARACTERISTICS OF HUMAN RABIES CASES IN THE REPUBLIC OF MOLDOVA, 1950–2022

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**Introduction.** Rabies is a zoonotic viral disease responsible for the death of approximately 59,000 people worldwide, with more than 3.7 million disability-adjusted life years lost annually. Due to acute progressive encephalitis, rabies is fatal once clinical signs appear. Rabies is present on all continents except Antarctica. Rabies remains endemic in Moldova and has high public health importance.

**Aim of study.** Analysis of the epidemiological situation on the territory of the Republic of Moldova regarding the circulation of the rabies and high risk areas.

**Methods and materials.** We obtained data from the National Agency for Public Health archive for the period 1950-2022. The data included demographic information regarding the patient's origin, age, and gender. Clinical data included estimated date of animal exposure, site of bite, type of exposure, incubation period.

**Results.** 117 data on human rabies deaths reported to the ANSP were analyzed to explore trends in human rabies over time. The highest number of cases was reached in 1951 ( $n = 15$ ; 0.38 per 100.000), 1953 ( $n = 8$ ; 0.20 per 100.000), and in 1955, 1966, 1976 there were 6 cases or 0.15 cases per 100.000. It is important to note that from 1991 to 2022 there were only 3 cases of human rabies in the entire country (in the years 2003, 2016 and 2019). According to the territorial distribution, we can mention that the most cases were recorded in the districts in the north of the country: Edinet - 9 cases, Soroca - 7 cases; and the center – Criuleni, Orhei has 6 cases each. There was a higher number of deaths from rabies in males compared to females (81% vs 19%). Among the victims who died of rabies, 62% were adults, most cases being in the 51-60 age group ( $n=15$ ; 30%); 38% children, most cases ( $n = 15$ ; 45%), registering in children aged between 11-15 years. Dogs represented the majority of exposure sources ( $n = 47$ ; 46%), followed by foxes ( $n = 41$ ; 40%) and cats ( $n = 11$ ; 10.7%). The incubation period of rabies ranged from 5 days (the shortest incubation period) to 635 days (the longest incubation period), with an average of 79 days. The median rabies incubation period was 46 days (range: 7–135 days) in cases with head and neck exposure sites; 85 days (range: 5–635 days) for upper limbs; and 100 days (range: 9–210 days) for the lower limbs. 52% of cases had an incubation period between 31-90 days, 17% - 15-30 days and 16% - 91-180 days.

**Conclusion.** Although there are still cases of rabies in the country, there have been only 3 cases in the last 30 years. The most cases were recorded in the districts in the north of the country, among adults (62%). The average of the incubation period is 79 days. Dogs represented the majority of exposure sources 46%, followed by foxes 40% and cats 10.7%. Strengthening and promoting cross-sectoral involvement through the One Health approach is essential for the sustainability of the rabies elimination programme in the Republic of Moldova.