

## Research on Whooping Cough in a Regional Pediatric Hospital in Eastern Romania, Europe

**Elena Ariela Banu**

"St. Ioan" Pediatrics County Emergency Hospital, Galati, Romania

**Petruta Iuliana Moraru**

"St. Ioan" Pediatrics County Emergency Hospital, Galati, Romania

**Irina Profir**

"St. Ioan" Pediatrics County Emergency Hospital, Galati, Romania

**Irina Stefania Calianu**

Faculty of Science and Health, Genetics and Cell Biology Bachelor Degree, Dublin City University, Ireland

**Silvia Tara-lunga**

"St. Ioan" Pediatrics County Emergency Hospital, Galati, Romania

### Abstract:

**Introduction:** Whooping cough remains a public health problem worldwide. The implementation of vaccination programs has significantly reduced the incidence of the disease, however, in recent years, an increase in the number of cases has been observed among adolescents, but also in infants and newborns too young to be vaccinated. Infants and newborns are at the highest risk of severe complications. Aim: to highlight some epidemiological and clinical aspects of whooping cough in the Eastern region of Romania, Europe.

**Material and methods:** Descriptive study conducted on a group of 57 cases with whooping cough with *Bordetella pertussis*, hospitalized between August 2024 and February 2025, in a county emergency hospital in the Eastern region of Romania.

**Results:** Distribution by age group - 43.86% of cases in infants under 1 year; 21.06% in children 1-2 years; M:F ratio = 0.9; with more cases coming from small family outbreaks in rural areas - 59.65%. The incidence curve showed an epidemic peak in September - October (35 cases - 61.40%). Clinically, 43.85% of cases presented acute respiratory failure upon admission, of which more than half were newborns and infants under 1 year; hypovolemia with dehydration - 10.53%; anemia - 21.06%; stomatitis with *Candida spp.* - 61.4%; eosinophilia - 14.04%; essential thrombocytosis - 7.02%. As microbiological associations, the following were found: *Haemophilus influenzae* - 2 cases; *Campylobacter spp.* - 1 case; post-COVID conditions - 1 case. Admission to the NICU (neonatal intensive care unit) was mandatory for 6 (10.52%) newborns, of which 1 case with apnea.

**Conclusions:** Whooping cough is a current threat to infants and newborns, especially in socio-economically at-risk groups and in rural areas. The increase in incidence in recent years highlights the importance of vaccination and preventive measures to protect the most vulnerable members of the population.

**Keywords:**

whooping cough, pertussis, pediatrics, NICU, neonatology