

RSV DETECTION AS PART OF INTEGRATED LABORATORY SURVEILLANCE OF RESPIRATORY VIRUSES IN MACEDONIA

*Golubinka Boševska,^{1,2} Teodora Buzharov¹, Dragan Kochinski¹,
Gordana Nikolovska¹, Senada Karishik¹, Milica Simova¹, Aneta Peshnacka¹,
Elizabeta Jancheska¹, Enkela Polozani¹, Gorica Popova², Kristina Stavridis¹*

¹*Institute for Public Health of the Republic of North Macedonia, Skopje, North Macedonia*

²*Faculty of Medical Sciences, University Goce Delcev, Stip, North Macedonia*

DOI: 10.5937/BatutPHCO24009B

Background: Infections caused by Respiratory Syncytial Virus (RSV) occur most frequently in childhood causing a disease similar to a cold, but can also cause severe disease such as bronchopneumonia and pneumonia, especially in elderly above 65 years and immunocompromised persons.

Objectives and Methods: Aim is to present the integration of RSV in laboratory surveillance of respiratory viruses in Macedonia. Laboratory surveillance of respiratory viruses is conducted by the Laboratory for virology, Institute of Public Health. Nasopharyngeal and oropharyngeal swabs were collected from 793 patients (pts) as part of SARI (683 pts) and routine surveillance of influenza and SARS-CoV-2 (110 pts) during the period 2022 – May 2024. A real-time reverse transcriptase-polymerase chain reaction (qRT-PCR) test was performed for detection of RSV RNA. 52 samples were subject to sequencing.

Results: In both seasons, a total of 190 samples were positive for RSV. 172 were among children aged 0-4 years. Most of the cases (109) are from the capital city Skopje. The higher number is detected among SARI cases (174 people), which indicates the importance of following the case definition for SARI. RSV type B was detected in all sequenced samples in the season 2022-2023, and RSV type A in the season 2023-2024. Consensus sequences of RSV have been deposited in the GISAID database as well as in the WHO and EDC Respiratory Pathogen Surveillance System (TESSy) to identify pandemics and outbreaks.

Conclusions: Integration of RSV into existing respiratory pathogen surveillance programs is important to detect the burden, transmissibility, and virulence of RSV among susceptible populations and to direct preventive and control measures particularly during the emergence of outbreaks and pandemics. Molecular methods are recommended for rapid detection and genetic characterization of RSV infections.

Keywords: RSV, integrated surveillance, qRT-PCR, sequencing