ERSJ EPIDEMIOLOGICAL RESEARCH AND SURVEILLANCE JOURNAL

Review article

Epidemiological surveillance of respiratory viruses in Mexico

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Citation: Cabrera-Gaytán DA, Epidemiological surveillance of respiratory viruses in Mexico, ERSJ 2026,1(3) 155-157

Since the 2023-2024 winter season, Mexico has changed its approach to respiratory virus epidemiological surveillance, shifting from universal surveillance to sentinel surveillance. Confirmation of SARS-CoV-2 is now exclusively through virus identification using reverse transcription polymerase chain reaction (RT-PCR). The Ministry of Health's report for epidemiological week 53 of 2024 highlights that newly confirmed cases have decreased over the past five years, making it necessary to consider this trend when asserting a downward trend. However, a comparison between 2025 and 2024 reveals a preliminary 49% decrease. Despite being a viral respiratory illness, the highest positivity rate for SARS-CoV-2 in 2025 was identified during epidemiological weeks 12 to 30, while the lowest positivity rates were recorded during the first and last weeks of the year. (1) Recently, the Pan American Health Organization issued an epidemiological alert in January 2026 regarding the simultaneous circulation of seasonal influenza and respiratory syncytial virus in the Americas region (Canada and the United States of America). (2) Regarding genomic surveillance, the health authority report shows information up to June 2025, where the most prevalent variant of interest during the year was LP.8.1. However, the information available in GISAID for Mexico, covering January to September 2025, reveals the circulation of multiple variants, with varying predominance throughout the year; in January, 40% were XEC and JN.1 in 33%, by March the change was observed with LP.8.1 predominating in 60% of the samples and XGF in 90% in September 2025 (3). This demonstrates the decreasing relevance of genomic surveillance of the virus in the country. Silva and colleagues published findings highlighting the effectiveness of wastewater-based epidemiology as a viable tool for monitoring community-level SARS-CoV-2 infection trends in Mexico City during 2021 and 2022 (4).

While sentinel surveillance had proven effective in Mexico prior to the COVID-19 pandemic (5-8), the first case of human infection with avian influenza A(H5N1) in a tertiary care hospital of the Mexican Social Security Institute (9) underscored the importance of surveillance outside of sentinel

units. Therefore, it is essential to maintain epidemiological surveillance of respiratory viruses in Mexico's medical facilities to enable timely detection, monitor circulation, assess severity, and guide the response to acute respiratory infections.

You can consult:

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