

Given the concurrent or consecutive circulation of different respiratory viruses, such as SARS-CoV-2, influenza, and respiratory syncytial virus (RSV), the Pan American Health Organization / World Health Organization (PAHO/WHO) recommends that Member States maintain constant surveillance, contribute to regional genomic surveillance for early detection of the circulation of variants of concern and at the same time maintain updated preparedness and response plans of the health care system at all levels to respond to a possible increase in outpatient cases, hospitalizations and deaths, as well as continue efforts to increase the proportion of vaccinated persons, mainly in vulnerable and high-risk populations.

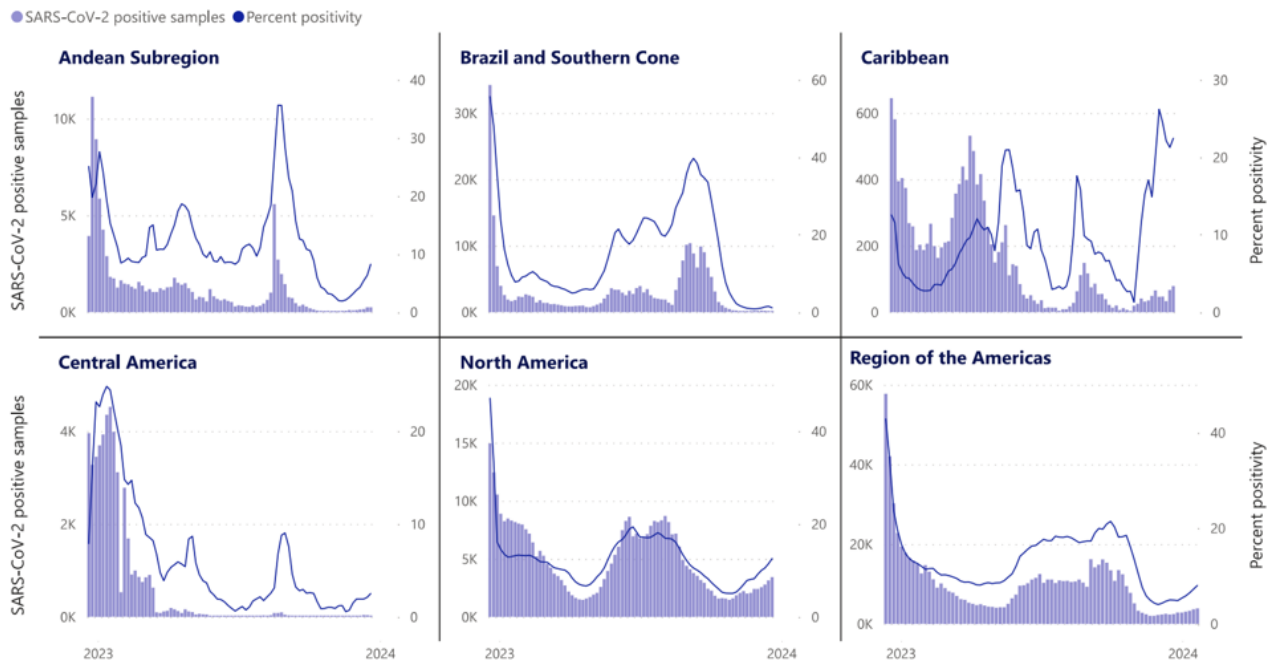
Summary of the situation

With the introduction of SARS-CoV-2, patterns of increased acute respiratory viral illness activity have been observed when there is concurrent circulation of different respiratory viruses or activity outside of the typical seasonal periods for these viruses. Concurrent or consecutive circulation of different respiratory viruses, such as SARS-CoV-2, influenza, and respiratory syncytial virus (RSV), can increase pressure on healthcare activity, especially when the circulation of any of these viruses is coupled with the seasonal occurrence of other illnesses.

Based on respiratory virus surveillance data reported by countries in the Region of the Americas to the Pan American Health Organization/World Health Organization (PAHO/WHO), a progressive increase in SARS-CoV-2 activity has been observed from epidemiological week (EW) 17 to EW 28 of 2024. This increase has been observed particularly in the subregions¹ of the Caribbean since EW 17, North America since EW 18, Andean since EW 20 and Central America since EW 23 (**Figure 1**) (1). The circulating variants with the highest prevalence in the Americas region, according to data available on the Global Initiative for Shared Respiratory Virus Data (GISAID) platform, are JN.1, with a gradual increase in subvariants KP.2, KP.3, and LB.1 (**Figure 2**) (2). These subvariants have shown increased immune evasion and infectivity, suggesting a potential increase in transmission and cases of COVID-19 (3). This SARS-CoV-2 circulation coincides with influenza epidemic activity, predominantly of subtype A(H3N2), in the Andean and Central American subregions and some Caribbean countries (**Figure 3**) (1), and of RSV in the Andean and Central American subregions (**Figure 4**) (1).

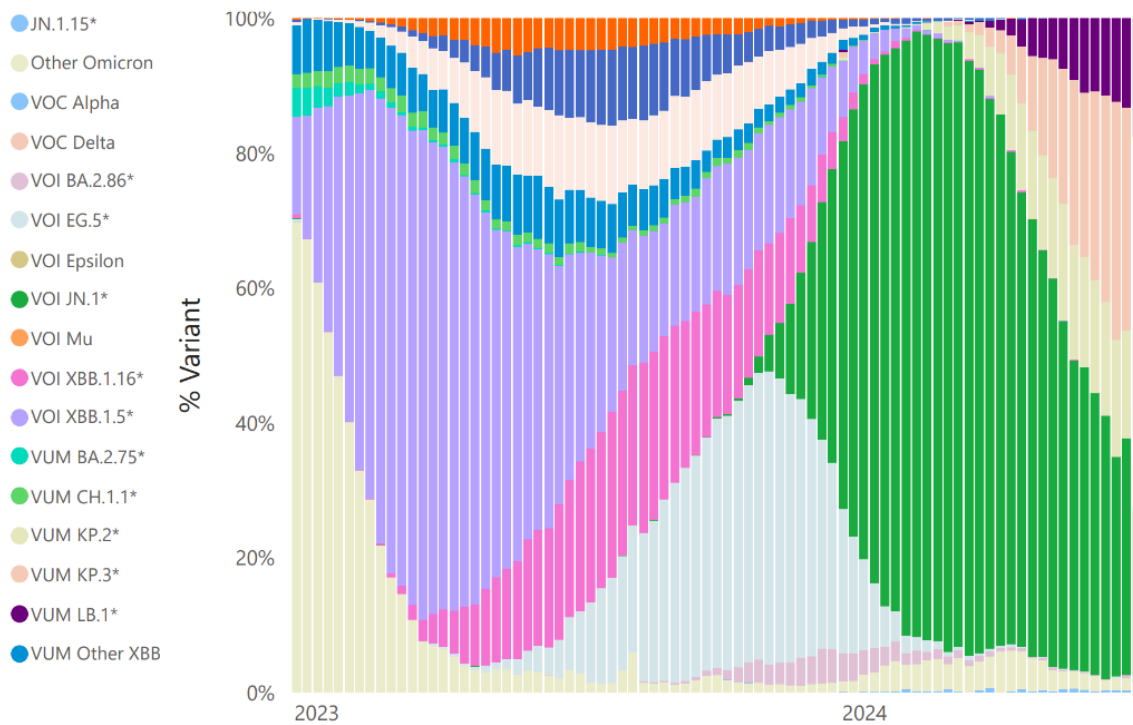
¹ Note: The corresponding subregions, countries, and territories follow the divisions described in Influenza, SARS CoV-2, Influenza and other Respiratory Viruses Situation - Region of the Americas. Washington, D.C.: PAHO/WHO; 2024 [cited 30 July 2024]. Available from: <https://www.paho.org/es/informe-situacion-influenza>

Figure 1. Distribution of positive samples and percentage of positivity for SARS-CoV-2. Region of the Americas, between EW 1 of 2023 and EW 28 of 2024



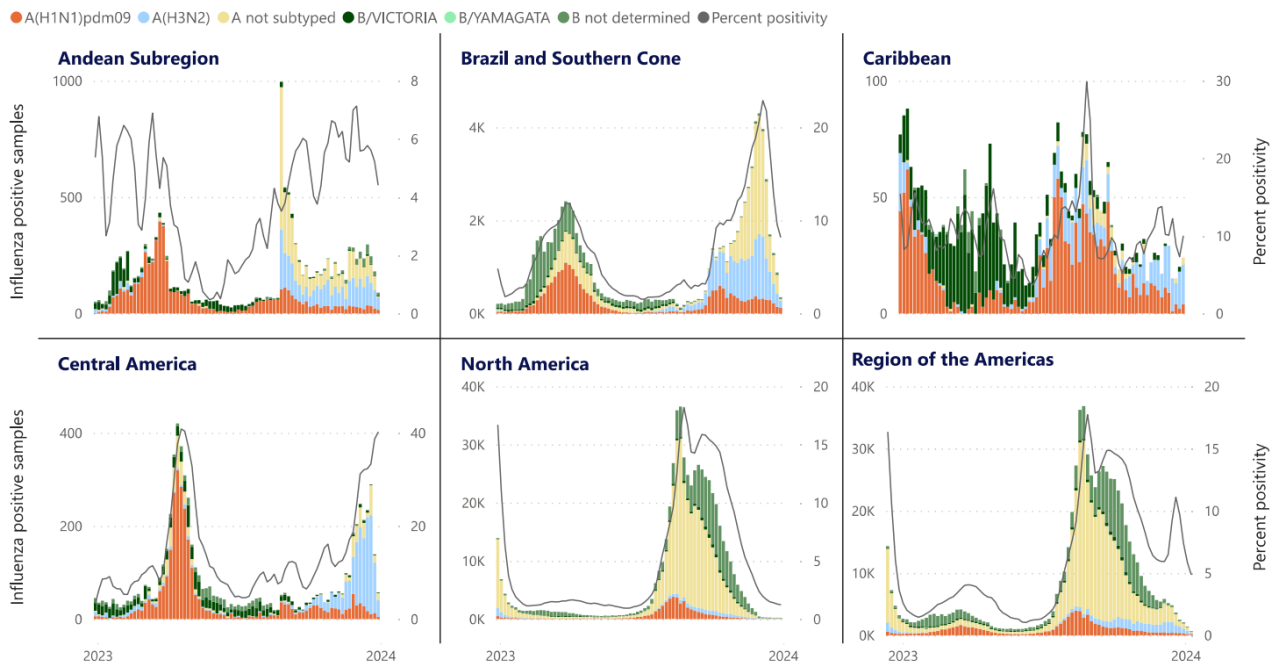
Source: Adapted from Pan American Health Organization / World Health Organization. Influenza, SARS CoV-2, RSV and other Respiratory Viruses Regional Situation - Region of the Americas. Washington, D.C.: PAHO/WHO; 2024 [cited 30 July 2024]. Available from: <https://www.paho.org/en/influenza-situation-report>.

Figure 2. Distribution of SARS-CoV-2 variants reported to GISAID. Region of the Americas, between EW 1 of 2023 and EW 28 of 2024



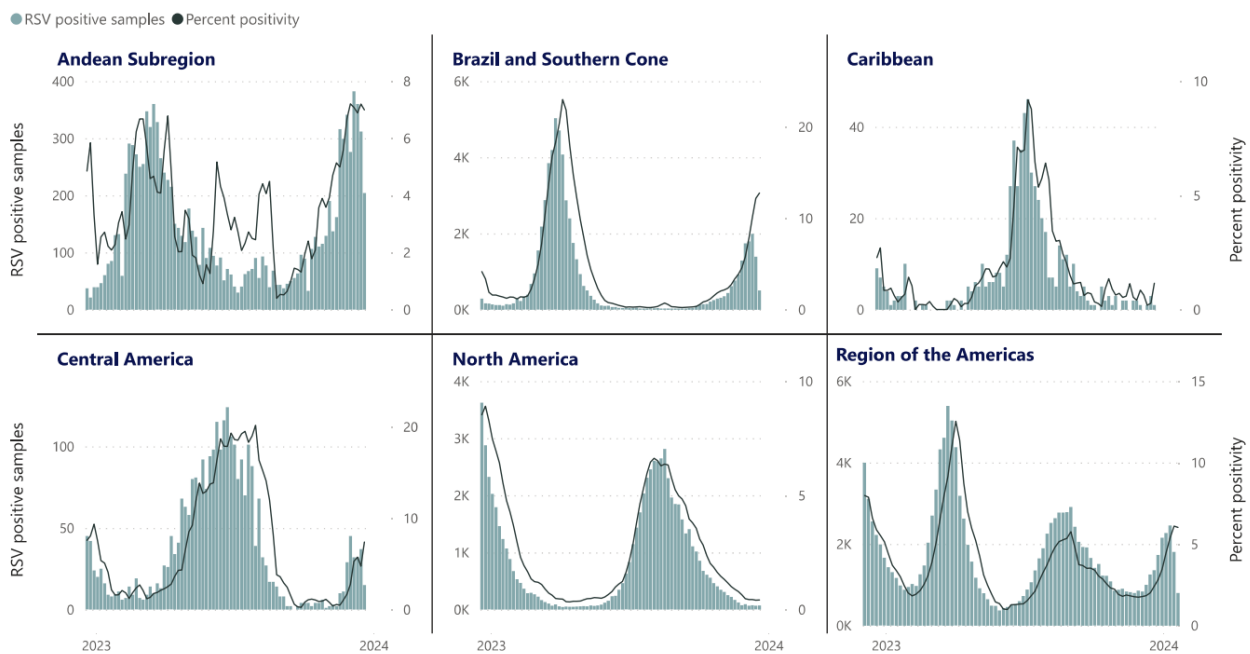
Source: Pan American Health Organization. SARS-CoV-2 Variants Tracking in the Region of the Americas. Washington, D.C.: PAHO/WHO; 2023. [cited 30 July 2024]. Available from: <https://www.paho.org/en/covid-19-weekly-updates-region-americas>.

Figure 3. Distribution of influenza-positive specimens by subtype and lineage and percentage of positivity. Region of the Americas, between EW 1 of 2023 and EW 28 of 2024



Source: Adapted from Pan American Health Organization / World Health Organization. Influenza, SARS CoV-2, RSV and other Respiratory Viruses Regional Situation - Region of the Americas. Washington, D.C.: PAHO/WHO; 2024 [cited 30 July 2024]. Available from: <https://www.paho.org/en/influenza-situation-report>.

Figure 4. Distribution of positive samples and percentage of positivity for RSV. Region of the Americas, between EW 1 of 2023 and EW 28 of 2024



Source: Adapted from Pan American Health Organization / World Health Organization. Influenza, SARS CoV-2, RSV and other Respiratory Viruses Regional Situation - Region of the Americas. Washington, D.C.: PAHO/WHO; 2024 [cited 30 July 2024]. Available from: <https://www.paho.org/en/influenza-situation-report>.

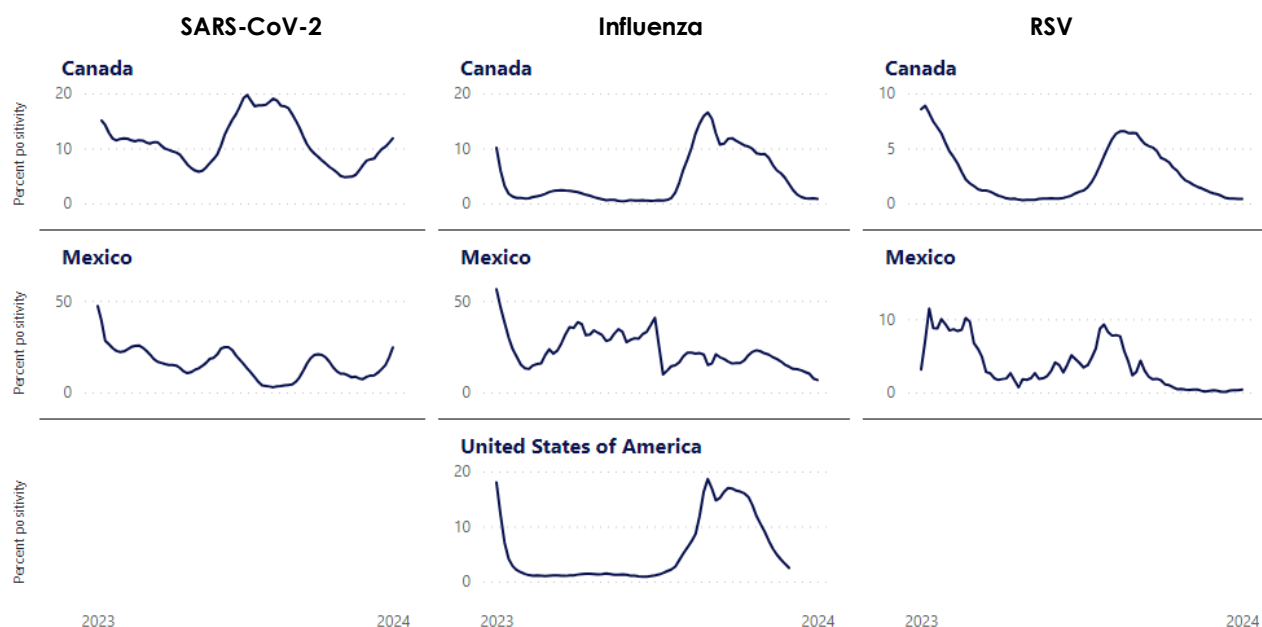
Detailed information on influenza and other respiratory viruses can be found in the PAHO/WHO Regional Influenza Update, published weekly on the PAHO/WHO website from: <https://www.paho.org/en/influenza-situation-report>.

The following is a summary of the situation in selected subregions and countries of the Region of the Americas that have shown increases in SARS-CoV-2 and other respiratory viruses (1):

North America Subregion ²

SARS-CoV-2 activity is on the rise, reaching levels similar to the maximum levels observed in the wave registered in the 2023-2024 season (**Figures 1 and 5**) (1). Influenza and RSV activity remains at low levels, in accordance with the patterns expected for this time of the year (**Figures 3, 4 and 5**) (1). Cases of severe acute respiratory infection (SARI) and influenza-like illness (ILI) in **Mexico** and hospitalizations due to respiratory viruses in the **United States of America** have shown slight increases and the proportion of cases associated with SARS-CoV-2 has increased in the last four weeks (**Figure 6**) (1, 4). In **Mexico**, when comparing the epidemic curve of cases in 2024 with the last four years, using information from the Viral Respiratory Disease Monitoring Health Units (USMER, per its acronym in Spanish) and cases confirmed by RT-qPCR, a lower burden of viral disease associated with COVID-19 was observed compared with previous years. With cumulative preliminary information (EW 1-29) of 2024, 37% fewer cases are reported compared to the same period in 2023. Those over 65 years of age are the most affected group, with an incidence rate of 16.35 per 100,000 population (5).

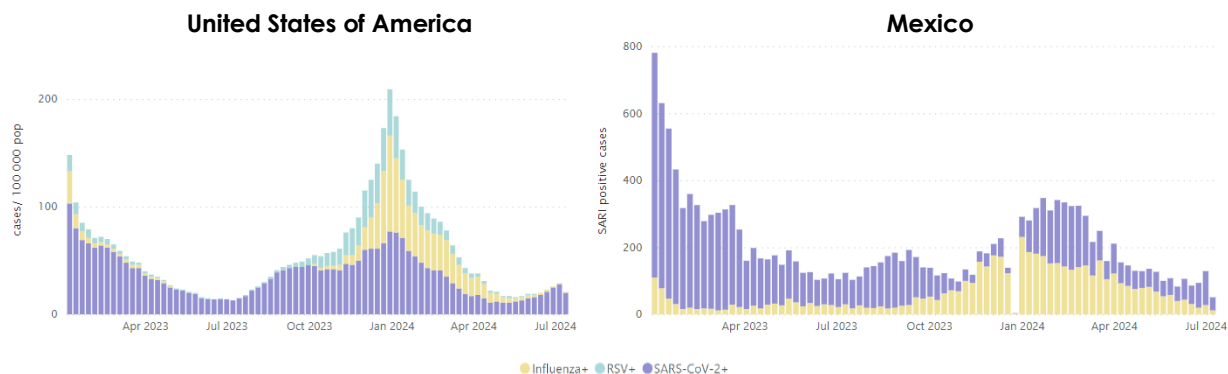
Figure 5. Percentage of SARS-CoV-2, Influenza and RSV positivity by country. North America, between EW 1 of 2023 and EW 28 of 2024, reported by Member States to PAHO/WHO Flunet/FlUID platforms



Source: Adapted from Pan American Health Organization / World Health Organization. Influenza, SARS CoV-2, RSV and other Respiratory Viruses Regional Situation - Region of the Americas. Washington, D.C.: PAHO/WHO; 2024 [cited 30 July 2024]. Available from: <https://www.paho.org/en/influenza-situation-report>.

² Canada, Mexico and the United States of America.

Figure 6: Influenza, SARS-CoV-2 and RSV-associated hospitalization rates per 100,000 population in the United States and positive SARI cases for Influenza, SARS-CoV-2, and RSV in Mexico, between EW 1 of 2023 and EW 28 of 2024



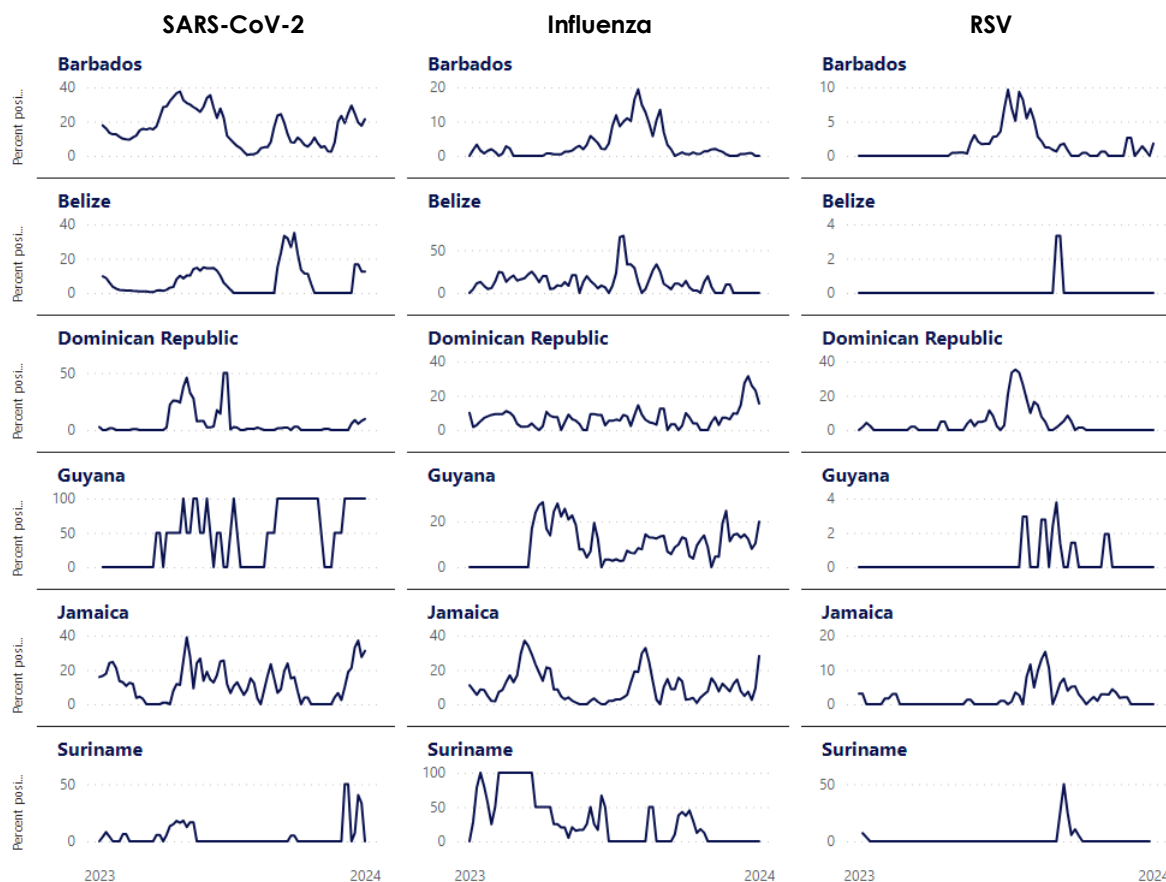
Source: Adapted from Pan American Health Organization / World Health Organization. Influenza, SARS CoV-2, RSV and other Respiratory Viruses Regional Situation - Region of the Americas. Washington, D.C.: PAHO/WHO; 2024 [cited 30 July 2024]. Available from: <https://www.paho.org/en/influenza-situation-report>.

Caribbean Subregion³

SARS-CoV-2 activity has risen to levels above those observed at the peaks of 2023 and early 2024 (**Figures 1** and **7**) (1). Influenza activity has remained at moderate levels (**Figures 3** and **7**) (1). RSV activity has remained at low levels (**Figures 4** and **7**) (1). In the last two months, most of the cases reported by sentinel surveillance for ILI were positive for SARS-CoV-2 and influenza in the subregion. In this period, hospitalized cases with SARI have decreased (1).

³ Belize, Barbados, Cuba, the Cayman Islands, Dominica, the Dominican Republic, Grenada, Guyana, Haiti, Jamaica, Saint Lucia, Suriname, Saint Vincent and the Grenadines, and Trinidad and Tobago.

Figure 7. Percentage of SARS-CoV-2, Influenza and RSV positivity by country. Caribbean, from EW 1 of 2023 to EW 28 of 2024, reported by Member States to PAHO/WHO Flunet/Fluid platforms



*Note: Only countries where increases in SARS-CoV-2 activity have been observed in the last four EW are shown.

Source: Adapted from Pan American Health Organization / World Health Organization. Influenza, SARS CoV-2, RSV and other Respiratory Viruses Regional Situation - Region of the Americas. Washington, D.C.: PAHO/WHO; 2024 [cited 30 July 2024]. Available from: <https://www.paho.org/en/influenza-situation-report>.

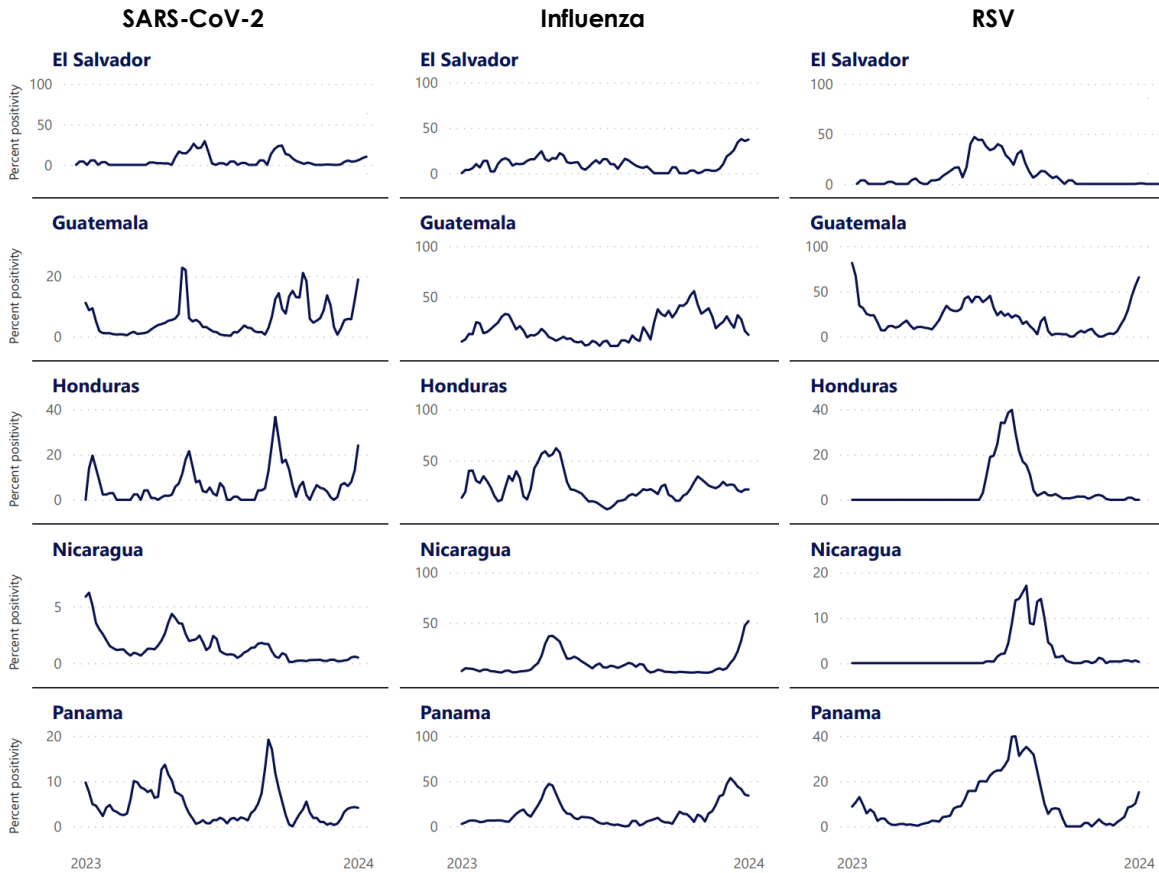
Subregion Central America⁴

SARS-CoV-2 activity has shown a slight increase since EW 23 of 2024, with levels lower than those observed in 2023 (**Figures 1 and 8**) (1). Influenza activity is on the rise and at levels above the epidemic threshold in several countries of the region (**Figures 3 and 8**) (1), reaching moderate levels in **Panama** and **Honduras**, and high levels in **Nicaragua** and **El Salvador**. In **Guatemala** and **Panama**, the proportion of RSV-positive samples is on the rise, with levels below the peaks reached in previous seasons (**Figures 4 and 8**) (1).

This concurrent circulation of influenza, SARS-CoV-2 and RSV has resulted in epidemic levels of SARI in **Honduras**, **Guatemala**, and **Panama** (**Figure 9**) (1). In **El Salvador**, as of 2024, the number of samples for sentinel surveillance of respiratory viruses has increased at the national level, and the epidemic curves for pneumonia, acute respiratory infections (ARI), and SARI are below the seasonal level, despite the increase in the percentages of positivity for influenza and SARS-CoV-2 (6). In **Guatemala**, during the last four weeks, hospitalizations for SARI associated with RSV have predominated, followed by influenza, while outpatient cases are mostly influenza (1). In **Honduras**, a majority of SARI and ILI cases are positive for influenza virus, followed by SARS-CoV-2, with hospitalizations remaining at epidemic intensity (1).

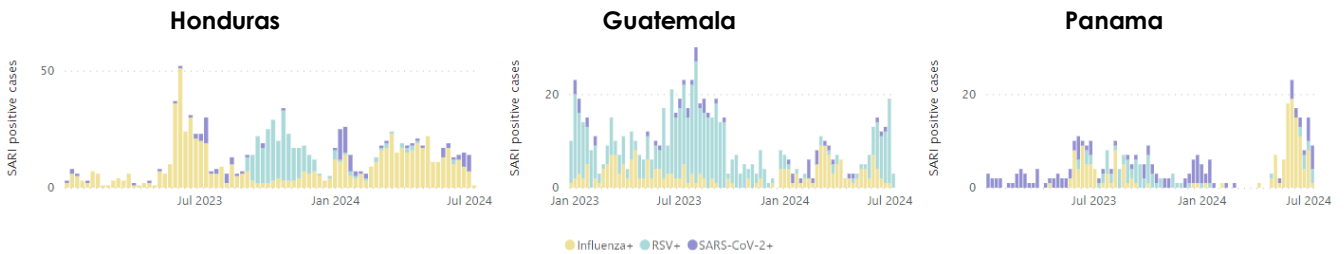
⁴ El Salvador, Guatemala, Honduras, Nicaragua, and Panama.

Figure 8. Percentage of SARS-CoV-2, Influenza and RSV positivity by country. Central America, between EW 1 of 2023 and EW 28 of 2024, reported by Member States to PAHO/WHO Flunet/FlUID platforms



Source: Adapted from Pan American Health Organization / World Health Organization. Influenza, SARS CoV-2, RSV and other Respiratory Viruses Regional Situation - Region of the Americas. Washington, D.C.: PAHO/WHO; 2024 [cited 30 July 2024]. Available from: <https://www.paho.org/en/influenza-situation-report>.

Figure 9: Positive SARI cases for Influenza, SARS-CoV-2 and RSV in Honduras, Guatemala, and Panama between EW 1 of 2023 and EW 28 of 2024



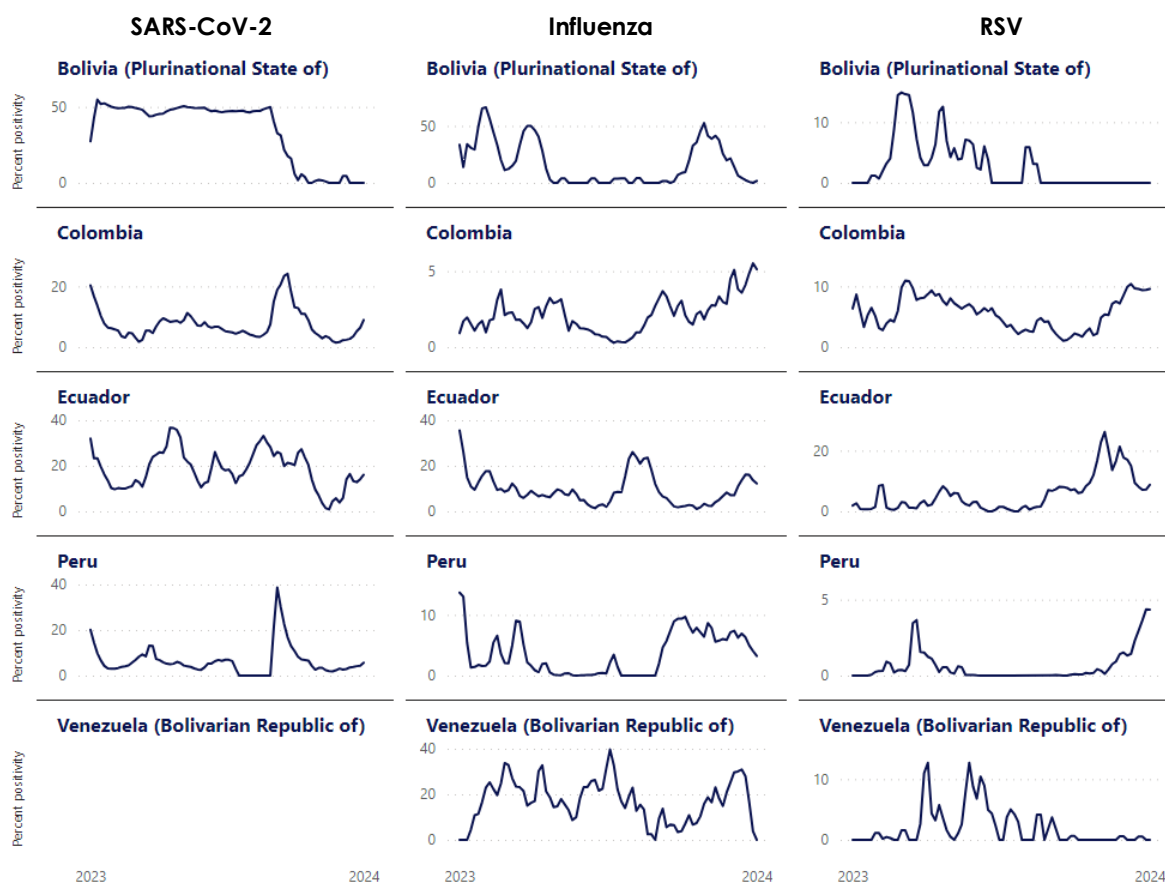
Source: Adapted from Pan American Health Organization / World Health Organization. Influenza, SARS CoV-2, RSV and other Respiratory Viruses Regional Situation - Region of the Americas. Washington, D.C.: PAHO/WHO; 2024 [cited 30 July 2024]. Available from: <https://www.paho.org/en/influenza-situation-report>.

Andean Subregion⁵

SARS-CoV-2 activity has increased since EW 20 of 2024, although for the time being at levels lower than those observed in 2023 (Figures 1 and 10) (2). Although influenza activity is decreasing in the region, epidemic levels are observed in **Ecuador** (Figures 3 and 10) (1). RSV is at levels similar to the peaks reached in previous seasons, especially in **Peru** and **Colombia** (Figures 4 and 10) (1). This co-circulation of respiratory viruses has resulted in epidemic levels of SARI in **Ecuador**, **Peru**, and **Colombia** (Figure 11) (1).

In **Colombia**, as of EW 28 (7), there has been a decrease in cases of ARI in external consultations, emergencies and hospitalizations, with a percentage variation of -0.08%, and in general ward with -0.02%; this behavior is observed at the national level. However, there has been an increase in notifications of ARI morbidity in Intensive Care Units (ICU) and Intermediate Care Units of 0.03%, compared to the same period of the previous year (7). In **Peru**, hospitalizations due to severe acute respiratory infection (SARI) and outpatient cases of influenza-like illness (ILI) associated with RSV predominated, followed by influenza (1). Among cases of SARI requiring intensive care or resulting in death in **Peru** and **Ecuador**, most have been associated with influenza, followed by SARS-CoV-2 (1).

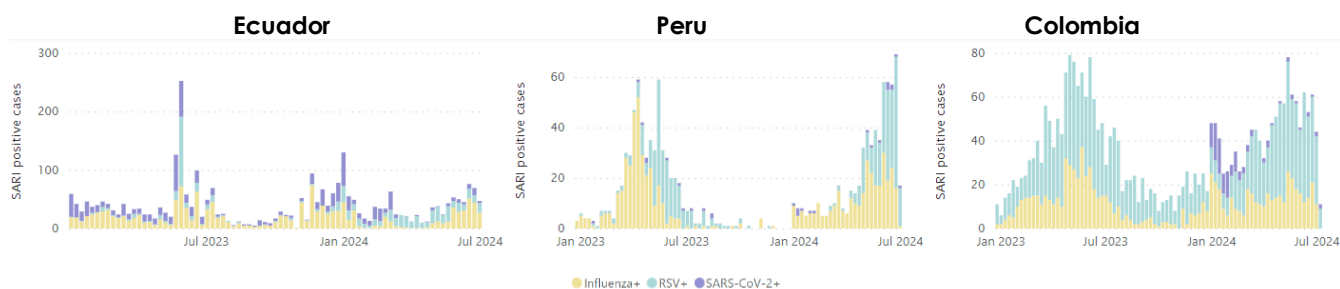
Figure 10. Percentage of SARS-CoV-2, Influenza and RSV positivity reported by country. Andean Subregion, between EW 1 2023 and EW 28 2024, reported by Member States to PAHO/WHO Flunet/FluID platforms.



Source: Adapted from Pan American Health Organization / World Health Organization. Influenza, SARS CoV-2, RSV and other Respiratory Viruses Regional Situation - Region of the Americas. Washington, D.C.: PAHO/WHO; 2024 [cited 30 July 2024]. Available from: <https://www.paho.org/en/influenza-situation-report>.

⁵ Plurinational State of Bolivia, Colombia, Ecuador, Peru and the Bolivarian Republic of Venezuela.

Figure 11: Positive SARI cases for Influenza, SARS-CoV-2 and RSV in Ecuador, Peru, and Colombia between EW 1 of 2023 and EW 28 of 2024



Source: Adapted from Pan American Health Organization / World Health Organization. Influenza, SARS CoV-2, RSV and other Respiratory Viruses Regional Situation - Region of the Americas. Washington, D.C.: PAHO/WHO; 2024 [cited 30 July 2024]. Available from: <https://www.paho.org/en/influenza-situation-report>.

Recommendations

The following is a summary of the main recommendations for surveillance, clinical management and prophylaxis, risk communication, and vaccination.

Surveillance

PAHO/WHO recommends that Member States integrate surveillance for influenza, RSV, SARS-CoV-2 and other respiratory viruses into existing national platforms and report surveillance data on a weekly basis through PAHO/WHO's FluNET and Fluid platforms.

It is recommended that Member States continue to strengthen sentinel surveillance of ILIs and prioritize sentinel surveillance of SARI by complementing it with other surveillance strategies to monitor epidemiological changes and viral circulation trends to assess transmission patterns, clinical severity, and impact on the health system and society, and to identify groups at risk of developing associated respiratory complications (8).

As a complement to indicator-based surveillance, PAHO/WHO recommends that Member States implement event-based surveillance. Event-based surveillance is the organized and rapid capture of information on events that may represent a potential public health risk. The information may come from rumors and/or other ad-hoc reports transmitted through formal routine information systems (routine, pre-established information systems) or informal, non-pre-established information systems (i.e., mass media, direct communication from health workers or non-governmental organizations). Event-based surveillance is a functional component of the early warning and response mechanism (9).

Respiratory events that are unusual should be investigated immediately and reported to PAHO/WHO in accordance with the regulations of the International Health Regulations (10). Unusual events include cases of acute respiratory illness with atypical clinical progression; acute respiratory infection associated with exposure to sick animals or observed in travelers from areas prone to novel influenza viruses; cases of SARI in health care professionals who are medically caring for severe respiratory cases of unknown etiology; or clusters of influenza viral infections outside the typical season of circulation.

As part of routine indicator-based surveillance, and for etiologic confirmation of unusual cases, nasopharyngeal and oropharyngeal specimens (or bronchial washings in severe cases) should be obtained for detection of respiratory viruses. Laboratory testing should always be prioritized for the most severe cases, especially those admitted to the ICU and fatal cases (deaths) in which respiratory tract tissue sampling is also recommended (if possible). All biosafety measures for

respiratory pathogens should be taken. The technical guidelines and diagnostic algorithms of the National Influenza Center or the national reference laboratory responsible for laboratory surveillance should be followed. Recommended testing algorithms for influenza, RSV, and SARS-CoV-2 are available on the PAHO/WHO website (11).

According to WHO guidelines, influenza-positive specimens from severe cases or cases with unusual clinical respiratory presentations should be sent to the PAHO/WHO Collaborating Center (CC) at the U.S. Centers for Disease Control and Prevention (CDC) in Atlanta for further characterization (12). Influenza A specimens that cannot be subtyped (those positive for Influenza A but where PCR for subtyping is negative or inconclusive) should also be sent immediately to the PAHO/WHO CC at the U.S. CDC (12).

Influenza-positive samples from animals should be sent to the PAHO/WHO CC at St. Jude Hospital in Memphis, Tennessee, in the United States, for further characterization.

Clinical management and prophylaxis

Recommendations for the clinical management of patients with severe respiratory illness as outlined in PAHO/WHO epidemiologic alerts and influenza updates remain in effect (13). Groups at higher risk for complications related to influenza infection include children younger than 2 years; adults older than 65 years; pregnant or postpartum women persons with underlying clinical morbidity (e.g., chronic lung disease, asthma, cardiovascular disease, chronic kidney disease, chronic liver disease, diabetes mellitus, neurologic conditions such as central nervous system lesions, and delayed cognitive development); persons with immunosuppression (e.g., HIV/AIDS or due to medications); and persons with morbid obesity (body mass index greater than 40) (14).

Anyone with severe or progressive clinical presentation of respiratory illness should be treated with antivirals as soon as influenza is suspected or treated according to recent guidelines for suspected COVID-19 (15). Treatment should be initiated even before laboratory confirmation of influenza infection, as treatment is more successful if initiated early. In persons with suspected or confirmed influenza virus infection at risk for severe disease (i.e., including seasonal influenza, pandemic influenza, and zoonotic influenza), we suggest administering oseltamivir as soon as possible. We suggest not to administer inhaled zanamivir, inhaled laninamivir, intravenous peramivir, corticosteroids, macrolide antibiotics or passive immunotherapy for the treatment of influenza (14).

In settings where batch RT-PCR or other rapid molecular assays for influenza (with similarly high sensitivity and specificity) are available and results are expected within 24 hours, we suggest a strategy of testing for influenza, administering oseltamivir treatment as soon as possible, and re-evaluating treatment when the test result is available.

In settings where batch RT-PCR or other rapid molecular assays for influenza (with similarly high sensitivity and specificity) are not available to have a result within 24 hours, we suggest a strategy of not testing for influenza and administering oseltamivir as soon as possible. Once test results are available, the treatment will be re-evaluated.

For more details, refer to the Guidelines for the Clinical Management of Severe Illness Caused by Influenza Virus Infections (14) and Clinical Care of Severe Acute Respiratory Infections - Toolkit (15).

Guidelines for the clinical management of COVID-19, including the use of antivirals, monoclonal antibodies, and other interventions for the management of patients with COVID-19 (16) are available through PAHO technical documents (17) and WHO Clinical Management of COVID-19 (18).

With regard to clinical management and prophylaxis of RSV, young infants are at increased risk for severe complications and hospitalization for RSV infection and represent the greatest burden of

disease. Many of the risk factors for RSV infections are similar to those identified for all causes of lower respiratory tract infections. There are no effective treatment and supportive care remains the cornerstone of clinical management. Currently, treatment for RSV infections is symptomatic and there are no effective antiviral drugs. Passive immunization with monoclonal antibodies - palivizumab - is an appropriate intervention to reduce severe acute respiratory RSV infection in at-risk infants (19).

Prophylaxis with palivizumab is available for children <24 months at increased risk for severe RSV disease, as it was associated with a 43% reduction in the rate of RSV-related hospitalizations in children with hemodynamically significant congenital heart disease and a reduction in recurrent wheezing. The cost and method of drug administration remain a challenge, although its cost-effectiveness is well documented (19).

Key recommendations for the management of RSV include (20, 21):

- Diagnosis of bronchiolitis and assessment of the severity of the disease should be based on clinical history and physical examination. Laboratory and radiological studies should not be routinely requested for diagnosis.
- Risk factors for severe disease, such as age less than 12 weeks, history of preterm birth (particularly less than 32 weeks), underlying cardiopulmonary disease (including bronchopulmonary dysplasia and hemodynamically significant congenital heart disease), neuromuscular disorders, or immunodeficiencies, should be assessed when making decisions about the evaluation and management of infants with bronchiolitis.
- Bronchodilators (albuterol, salbutamol), epinephrine and corticosteroids should not be administered to infants and children diagnosed with bronchiolitis. Likewise, nebulized hypertonic saline should not be administered to children diagnosed with bronchiolitis in the emergency department. Nebulized hypertonic saline can be administered to infants and children hospitalized for bronchiolitis.
- Antibiotics should not be used in children with bronchiolitis unless there is a concomitant bacterial infection.
- Palivizumab prophylaxis should be administered during the first year of life to infants with hemodynamically significant heart disease or chronic lung disease of prematurity (<32 weeks gestation requiring >21% O₂ during the first 28 days of life).
- To prevent the spread of RSV, hands should be decontaminated before and after direct contact with patients, after contact with inanimate objects in the vicinity of the patient, and after removing gloves. Alcohol is the preferred method for hand decontamination. Physicians should educate staff and family on hand sanitation.
- Infants should not be exposed to tobacco smoke.
- Exclusive breastfeeding is recommended for at least 6 months to reduce the morbidity of respiratory infections.

Risk communication

Seasonal influenza is an acute viral infection that spreads easily from person to person. Seasonal influenza viruses circulate worldwide and can affect anyone in any age group. Influenza vaccination before the onset of seasonal virus circulation remains the best preventive measure against severe influenza.

The public should be informed that the primary mode of transmission of influenza is interpersonal contact. Hand washing is the most efficient way to decrease transmission. Knowledge of "respiratory etiquette" also helps prevent transmission.

People with fever should avoid going to work or public places until the fever subsides. Similarly, school-aged children with respiratory symptoms, fever, or both, should stay home from school.

To take advantage of the knowledge that most of the public has acquired about respiratory disease prevention in the wake of the COVID-19 pandemic, and to avoid confusion and exercise effective communication, Member States should consider developing risk communication strategies and campaigns that integrate prevention messages for respiratory viruses. The integration of communication for the promotion of vaccination against COVID-19 -and influenza is also recommended.

Vaccination

Immunization is an important strategy to prevent severe seasonal and COVID-19 influenza outcomes, including hospitalizations and associated deaths.

PAHO/WHO recommends vaccination of groups at particular risk for severe influenza, including older adults, persons with underlying medical conditions, children between 6 and 59 months of age, and pregnant women. Health care workers are at increased risk of exposure and transmission of influenza virus and SARS-CoV-2 and therefore should also be prioritized (22, 23). It is recommended that the same high-risk priority groups (with the exception of children younger than 59 months) receive booster doses of COVID-19 vaccine at 6 to 12 months after the last dose. Finally, the Strategic Advisory Group of Experts on Immunization (SAGE) recommends that all persons aged 6 months and older receive at least one dose of COVID-19 vaccine if they have never received one (24).

Recently, two RSV vaccines for older adults were approved by the U.S. Food and Drug Administration (FDA) for use in the United States for the prevention of RSV-caused lower respiratory tract disease in persons aged 60 years and older (25). In randomized clinical trials, the vaccines reduced the risk of developing RSV-associated lower respiratory tract infections by 66.7% and reduced the risk of developing severe RSV-associated lower respiratory tract infections by 94.1% (25). The FDA approved the same vaccine for pregnant women at 32-36 weeks gestation to prevent lower respiratory tract infections and severe infections caused by RSV in infants from birth to 6 months of age (26). Argentina's national regulatory agency (27) approved the use of the same vaccine for the same target population, with implementation beginning March 1, 2024. Canada (28) and Uruguay approved the use of the same vaccine for the same target population, but not yet implemented. Finally, the European Medicines Agency (EMA) also approved the same vaccine for pregnant women between 24 and 36 weeks (29). In addition, several countries in the region are also using the monoclonal antibody nirsevimab for the prevention of severe disease in infants.

Several RSV vaccines and long-lasting monoclonal antibodies are currently under clinical investigation, in addition to significant progress in the understanding of the immune response to RSV.

In addition to vaccination, personal measures such as hand hygiene, physical distancing, respiratory etiquette, use of masks and staying home when sick should be observed, which are effective in limiting transmission of respiratory viruses (30).

Non-pharmacological public health measures in the population

As recently evidenced during the COVID-19 pandemic, nonpharmacologic public health measures complement the respiratory event response. For more details, see the guidelines: Nonpharmacological Public Health Measures to Mitigate the Risk and Impact of Epidemic and Pandemic Influenza (30) and the manual Guidance for the Application of Nonpharmacological Public Health Measures in Vulnerable Population Groups in the Context of COVID-19 (31).

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