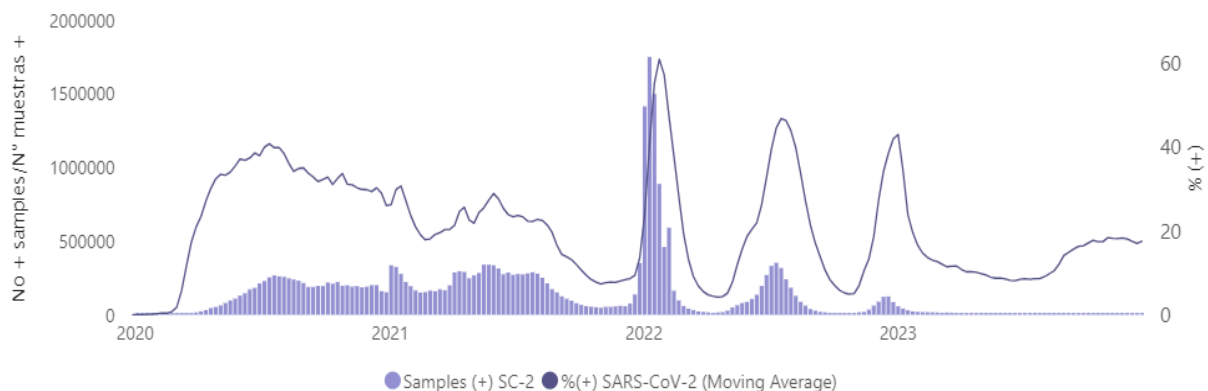


Since the introduction of the SARS-CoV-2 virus to the Americas Region in 2020, along with the circulation of respiratory viruses previously reported in the Region such as influenza and respiratory syncytial virus, high levels of acute respiratory disease activity (influenza-like illness-ILI and Severe Acute Respiratory Infection - SARI) have been reported throughout 2023, and especially in recent weeks. Currently, countries in the northern hemisphere are experiencing epidemic activity of acute respiratory disease associated with the circulation of these three viruses. Simultaneously, some countries in the southern hemisphere are reporting higher incidences of respiratory disease than expected for this season (based on data prior to 2020), due to the circulation of SARS-CoV-2. For this reason, the Pan American Health Organization / World Health Organization (PAHO/WHO) recommends that Member States maintain and strengthen respiratory virus surveillance to detect increases in the activity of acute respiratory disease. Likewise, it is recommended to keep healthcare systems prepared and alert at all levels in order to respond to a possible increase in outpatient cases and hospitalizations, especially coinciding with the epidemic period for other communicable diseases with high demand for care.

Situation Summary

Based on data reported by the countries of the Americas Region, from the end of August 2023 until epidemiological week (EW) 51, an increase in activity has been observed for SARS-CoV-2 and other respiratory viruses. This is due to moderately high activity that has been recorded since EW 30 in the subregions of North American, Andean, Brazil and the Southern Cone (Figures 1, 2) (1).

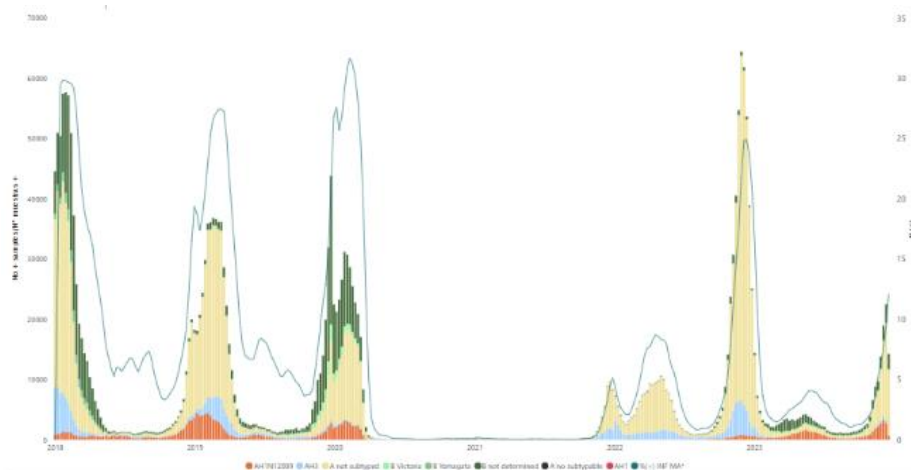
Figure 1. SARS-CoV-2 distribution and percent positivity. Americas Region, 2023 (until EW 51 2023)



Source: Pan American Health Organization / World Health Organization. Influenza Status Report. Washington, DC: PAHO/WHO; 2023 (accessed on 4 Jan 2024): Available from: <https://www.paho.org/en/influenza-situation-report>

Suggested citation: Pan American Health Organization/World Health Organization. Epidemiological Update: SARS-CoV-2 and Other Respiratory Viruses in the Americas Region. 8 January 2024, Washington, D.C.: PAHO/WHO; 2024.

Figure 2. Influenza virus distribution and percent positivity. Americas Region, 2023 (as of EW 51 2023)



Source: Pan American Health Organization / World Health Organization. Influenza Status Report. Washington, DC: PAHO/WHO; 2023 (accessed on 4 Jan 2024): Available from: <https://www.paho.org/en/influenza-situation-report>

More 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 at: <https://www.paho.org/en/influenza-situation-report>

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

North America Subregion

SARS-CoV-2 activity remains at moderate to high levels, showing stability in the last four EWs (**Figure 3**). Influenza activity has reached intermediate levels of circulation and continues to rise. Respiratory syncytial virus (RSV) activity has continued to rise in the last four EWs, reaching high levels of circulation. Cases of influenza-like illness (ILI) and severe acute respiratory infection (SARI) have increased over the last four EWs.

In the **United States**, SARS-CoV-2 and RSV activity have remained at elevated levels with hospitalization rates similar to those observed in the previous season. A pronounced increase in influenza activity above the epidemic threshold has been observed. In **Canada**, SARS-CoV-2 activity has remained high in the last four EWs, with an increase in influenza activity above the epidemic threshold, as well as RSV activity during this period.

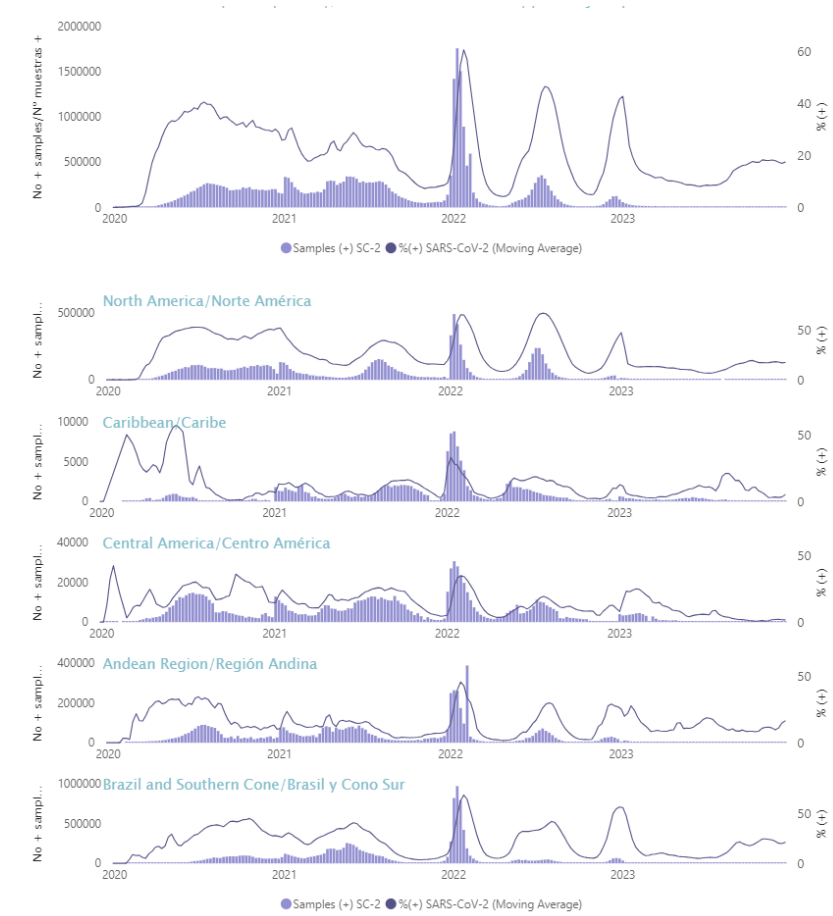
Caribbean Subregion

SARS-CoV-2 activity has remained at low levels in the last four EWs (**Figure 3**). Influenza activity has remained fluctuating at moderate levels over the past four EWs. RSV activity, after an increase in previous EWs, has remained fluctuating at moderate levels in the last four EWs. ILI and SARI cases have continued to decline in the last four EWs, with a higher proportion of ILI and SARI cases associated with influenza.

In **Belize**, SARS-CoV-2 has reached levels above the epidemic threshold in the last EW. Influenza activity has increased in the last four EWs, reaching moderate levels. **Saint Lucia**

continues to exhibit high levels of SARS-CoV-2 activity, coinciding with an increase in SARI cases above the moderate activity threshold.

Figure 3. SARS-CoV-2 distribution and percent positivity at the Regional level and by Subregion in the Americas, 2023 (up to EW 51 2023)



Source: Pan American Health Organization / World Health Organization. Influenza Status Report. Washington, DC: PAHO/WHO; 2023 (accessed on 4 Jan 2024): Available from: <https://www.paho.org/en/influenza-situation-report>

Andean Subregion

SARS-CoV-2 activity has remained at moderate levels and has been increasing in the last four EWs (**Figure 3**). Influenza activity, although remaining at low levels of circulation in the last two EWs, has shown a slight increase. SARI cases have shown a slight increase associated with the rise in the proportion of positive influenza cases in the last four EWs.

In **Bolivia**, SARS-CoV-2 circulation has remained high, and SARI cases have stayed at epidemic levels in the last four EWs. In **Ecuador**, SARS-CoV-2 has reached high levels, and influenza activity has remained at epidemic levels in the last four EWs, accompanied by an increase in SARI cases positive for influenza. In **Venezuela**, influenza activity has remained fluctuating around the epidemic threshold in the last four EWs, with a slight increase in RSV activity.

Southern Cone Subregion

SARS-CoV-2 activity has remained at intermediate to high levels in the last four EWs (**Figure 3**). Both SARI and ILI activity have remained low in the last four SEs, with most positive cases attributable to SARS-CoV-2.

In **Argentina**, the percentage of SARS-CoV-2 positivity reached intermediate levels in the last four EWs. In **Brazil**, SARS-CoV-2 activity continues at high levels, although with a decrease in the last four EWs. In **Chile**, SARS-CoV-2 activity has remained very high, with an increase in influenza activity above the epidemic threshold in the last four EWs. ILI cases are at epidemic levels. In **Paraguay**, SARS-CoV-2 circulation continues at moderate levels, with an increase in the last four EWs, and SARI activity is decreasing to epidemic levels, with the majority of positive cases of ILI and SARI attributable to SARS-CoV-2.

Recommendations

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

Surveillance

PAHO/WHO recommends Member States integrate surveillance of influenza, RSV, SARS-CoV-2, and other respiratory viruses into existing national platforms and report surveillance data weekly through the FluNET and PAHO/WHO FLUID.

Member States are recommended to continue strengthening ILI sentinel surveillance and prioritize severe SARI sentinel surveillance by complementing it with other surveillance strategies to monitor epidemiological changes and viral circulation trends to evaluate transmission patterns, clinical severity, the impact on the health system and society, and identify risk groups for developing associated respiratory complications (2).

PAHO/WHO recommends Member States implement event-based surveillance to accompany indicator-based surveillance. Event-based surveillance is the organized and rapid capture of information about events that may pose a potential risk to public health. The information may come from rumors and other ad-hoc reports transmitted through formal (pre-established routine information systems) or informal -not pre-established routine information systems (i.e., media, direct communication from health care workers, or non-governmental organizations) channels. Event-based surveillance is a functional component of the early warning and response mechanism (3).

Respiratory events that are unusual should be investigated and reported in accordance with the International Health Regulations (4). Unusual events include cases with atypical clinical progression; acute respiratory infection associated with animal disease exposure or observed in travelers to areas prone to novel influenza virus emergence; SARI among health care professionals; or clusters of respiratory viral infections outside the regular circulation season.

As part of routine respiratory surveillance and for the etiological confirmation of unusual cases, nasopharyngeal and oropharyngeal specimens (or bronchial lavage in severe cases) should be obtained to detect respiratory viruses. Laboratory analysis of the most severe cases should always be prioritized, especially those admitted to ICU and fatal cases (deaths), where processing tissue samples from the respiratory tract is also recommended when available. All

biosafety measures for respiratory pathogens should be granted. The technical guidelines and diagnostic algorithms of the National Influenza Center or the national reference laboratory responsible for laboratory surveillance should be followed. The recommended testing algorithms for influenza, RSV and SARS-CoV-2 are available online from PAHO/WHO (5).

Influenza-positive specimens from severe cases or those with unusual presentations must be sent to the PAHO/WHO Collaborating Center at the United States Centers for Disease Control and Prevention (CDC) in Atlanta for further characterization, according to WHO guidelines (6). Influenza A samples, for which the virus subtype cannot be determined (those positive for Influenza A but where the PCR for subtyping is negative or inconclusive), should also be sent immediately to the PAHO/WHO CC at the US CDC (6).

Influenza-positive specimens from animals, must be sent to the PAHO/WHO Collaborating Center at St. Jude's 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 disease indicated in previous PAHO/WHO guidelines and Epidemiological Alerts and Updates continue to apply (7). Groups at higher risk of developing influenza-associated complications include children less than two years of age; adults over 65 years; pregnant or post-partum women; people with underlying clinical morbidity (e.g., chronic lung disease, asthma, cardiovascular diseases, chronic kidney disease, chronic liver disease, diabetes mellitus, neurological conditions such as central nervous system injuries and delayed cognitive development); people with immunosuppression (e.g., HIV/AIDS or due to medications); and people with morbid obesity (body mass index greater than 40) (8).

Any person with severe or progressive clinical presentation of respiratory illness should be treated with antivirals as soon as influenza is suspected or treated according to the recent guidelines in case of COVID-19 is suspected (9). Treatment should be initiated even before having laboratory confirmation of respiratory infection as treatment is more successful if started early. In persons with suspected or confirmed influenza virus infection with or at risk of severe illness (i.e., including seasonal influenza, pandemic influenza and zoonotic influenza), we suggest administering oseltamivir as soon as possible. We suggest not administering inhaled zanamivir, inhaled laninamivir, intravenous peramivir, corticosteroids, passive immune therapy macrolide antibiotic for treatment of influenza (8).

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

In settings where batch RT-PCR or other rapid molecular influenza assays (with similar high sensitivity and high specificity) are not available to provide results within 24 hours, we suggest a strategy of not testing for influenza and treating with oseltamivir as soon as possible.

For more details consult the WHO Guidelines for the clinical management of severe illness from influenza virus infections (8) and the WHO Clinical care of severe acute respiratory infections – Tool kit (9).

Guidelines for the clinical management of COVID-19, including the use of Antivirals, Monoclonal Antibodies, and Other Interventions for the Management of COVID-19 Patients (10) are available through the PAHO/WHO Technical Documents on Coronavirus Disease (COVID-19) (11) and the WHO Clinical management of COVID-19 (12).

With regards RSV clinical management and prophylaxis, young infants are at higher risk for severe complications and hospitalization with RSV infection and represent the highest morbidity burden. Many risk factors for RSV infections are like those identified for all-causes lower respiratory tract infections. There are no effective treatment and supportive care remains the cornerstone of clinical management. Currently, RSV treatment is symptomatic with no effective antiviral drugs. Passive immunization with monoclonal antibodies - palivizumab- constitutes an appropriate intervention to reduce severe acute respiratory infection by RSV among at-risk infants (13).

Palivizumab prophylaxis is available for children <24 months at increased risk of severe RSV disease, as it was associated with a 43% rate reduction of RSV-related hospitalizations among children with hemodynamically significant congenital heart disease, and a reduction in recurrent wheezing. The cost and method of administration of the drug remain a challenge, although its cost-effectiveness is well-documented (13).

Recently, two RSV vaccines for older adults were approved by the US Food & Drug Administration (FDA) (14,15) for use in the United States for the prevention of lower respiratory tract disease (LRTD) caused by RSV in individuals 60 years of age and older. In clinical randomized trials, the vaccines reduced the risk of developing RSV-associated LRTD by 66.7%-6% and reduced the risk of developing severe RSV-associated LRTD by 94.1% (14). Currently there has been a resurgence of vaccine development (vaccine candidates and long-lasting immunoprophylaxis with monoclonal antibodies) along with significant progress in the understanding of immune responses to RSV.

Key recommendations for RSV clinical management include (16,17,18):

- The diagnosis of bronchiolitis and assessment of disease severity should be based on history and physical examination. Laboratory and radiologic studies should not be routinely ordered for diagnosis.
- Risk factors for severe disease such as age less than 12 weeks, premature birth history (particularly under 32 weeks), underlying cardiopulmonary disease (including bronchopulmonary dysplasia and haemodynamically significant congenital heart disease), neuromuscular disorders, or immunodeficiency should be assessed when making decisions about evaluation and management of children with bronchiolitis.
- Bronchodilators (albuterol, salbutamol), epinephrine, and corticosteroids should *not* be administered to infants and children with the diagnosis of bronchiolitis. Likewise, nebulized hypertonic saline should *not* be administered to infants with the diagnosis of bronchiolitis in the emergency department. Nebulized hypertonic saline may 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 who require >21% O₂ for 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 vicinity of patient, and after removing gloves. Alcohol rubs are the preferred method for hand decontamination. Clinicians should educate personnel and family on hand sanitation.
- Infants should not be exposed to tobacco smoke.
- Exclusive breastfeeding for at least 6 months is recommended to decrease 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 from any age group. Vaccination prior to the start of seasonal virus circulation remains the best preventive measure against severe influenza.

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

People with fever and respiratory symptoms should avoid going to workplaces or public places until the fever subsides. Similarly, school-age children with respiratory symptoms and / or fever should stay at home and not go to school.

To leverage on the knowledge that most of the public has acquired on respiratory disease prevention -brought by the COVID-19 pandemic-, and to prevent confusion and exercise effective communication, Member States should consider developing risk communications strategies and campaigns that integrate prevention messaging for respiratory viruses. Integration of communication is also advised for the promotion of influenza and COVID-19 vaccination.

Vaccination

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

PAHO/WHO recommends the vaccination of groups at particular risk of severe illness from COVID-19 or influenza. These groups include older adults, people with underlying conditions, and pregnant women. Healthcare workers are at increased risk of exposure and transmission of influenza virus and SARS-CoV-2 and should therefore also be prioritized. Vaccination against influenza is also recommended for children between the ages of 6 months and 5 years (19,20).

Apart from vaccination, personal measures such as hand hygiene, physical distancing, respiratory etiquette, mask use, and staying home when sick, should be observed, which are effective in limiting respiratory viruses transmission (21).

Non-pharmacological public health measures in populations

As recently evidenced during the COVID-19 pandemic, non-pharmacological public health measures complement the response to respiratory events.

For more details consult the WHO guidance on non-pharmaceutical public health measures for mitigating the risk and impact of epidemic and pandemic influenza (21) and the PAHO/WHO Guidance for implementing non-pharmacological public health measures in populations in situations of vulnerability in the context of COVID-19 (22).

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