



PAHO interactive influenza data: http://ais.paho.org/phis/viz/ed_flu.asp

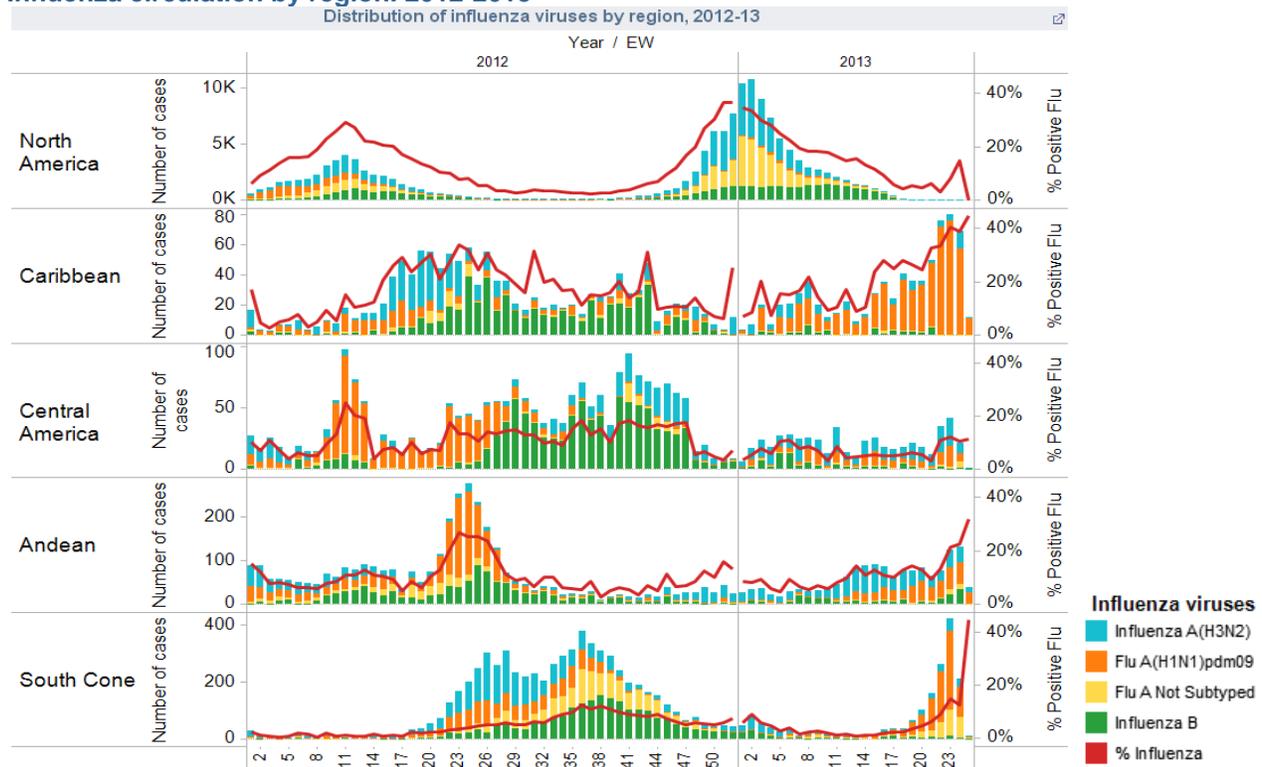
Influenza Regional Reports: www.paho.org/influenzareports

The information presented in this update is based on data provided by Ministries of Health and National Influenza Centers of Member States to the Pan American Health Organization (PAHO) or from updates on the Member States' Ministry of Health web pages.

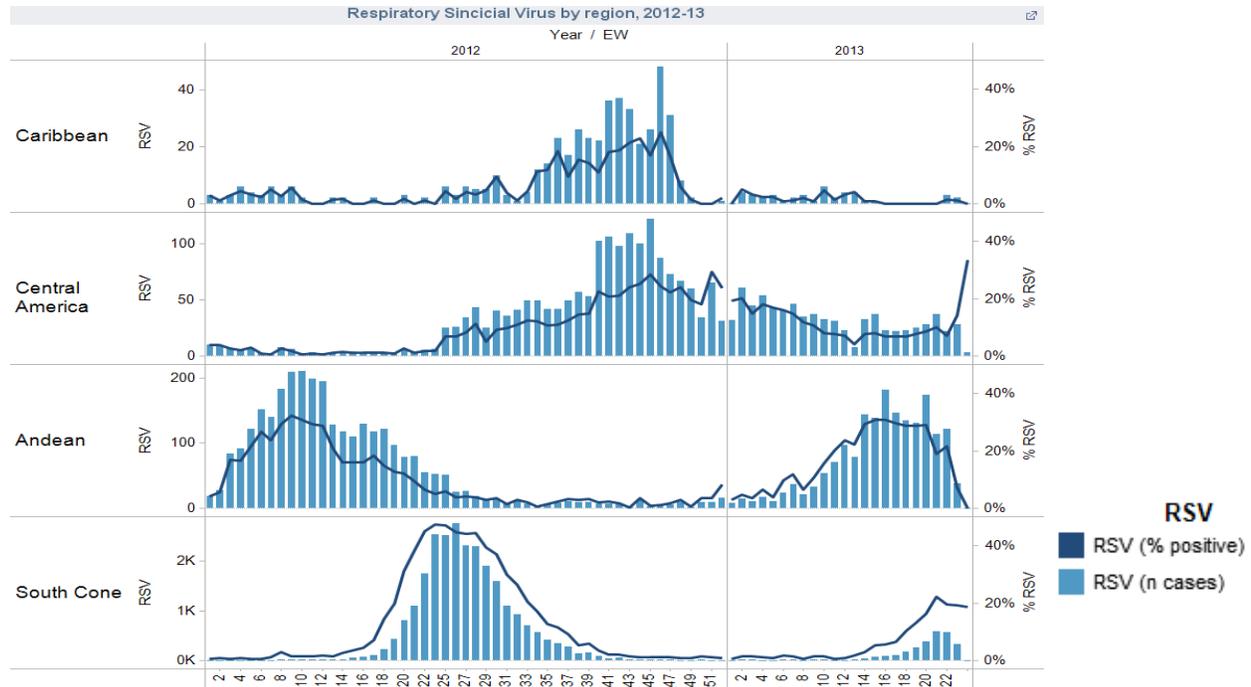
WEEKLY SUMMARY

- **North America:** most influenza activity indicators were low and within expected levels for this time of year. Influenza B remained the dominant circulating influenza virus in Canada. In the US and Mexico, influenza A remained the most prevalent virus.
- **Central America and the Caribbean:** the influenza activity in Cuba and Dominican Republic remained high, associated with circulation of influenza A(H1N1)pdm09. El Salvador reported increase circulation of RSV and influenza A(H3N2). Acute respiratory illness in Central America and other countries of the Caribbean remained low or within the expected levels.
- **South America – Andean Countries:** acute respiratory illness activity remained stable, except in Colombia and Venezuela where influenza A(H1N1)pdm09 continued circulating. RSV predominates in Ecuador and Peru, influenza A(H1N1)pdm09 in Colombia and Venezuela, A(H3N2) in Bolivia-La Paz and influenza B in Bolivia-Santa Cruz.
- **South America - South Cone:** acute respiratory illness activity was high and continued increasing. In Chile ILI activity is above the epidemic threshold. RSV predominated in most countries, with co-circulation of influenza A(H1N1)pdm09 in Argentina, Chile and Uruguay and influenza A(H3N2) in Paraguay. In Brazil, through EW 23, influenza A(H1N1)pdm09 was predominant, followed by influenza B in some States.

Influenza circulation by region. 2012-2013



Respiratory Sincial Virus circulation by region. 2012-2013

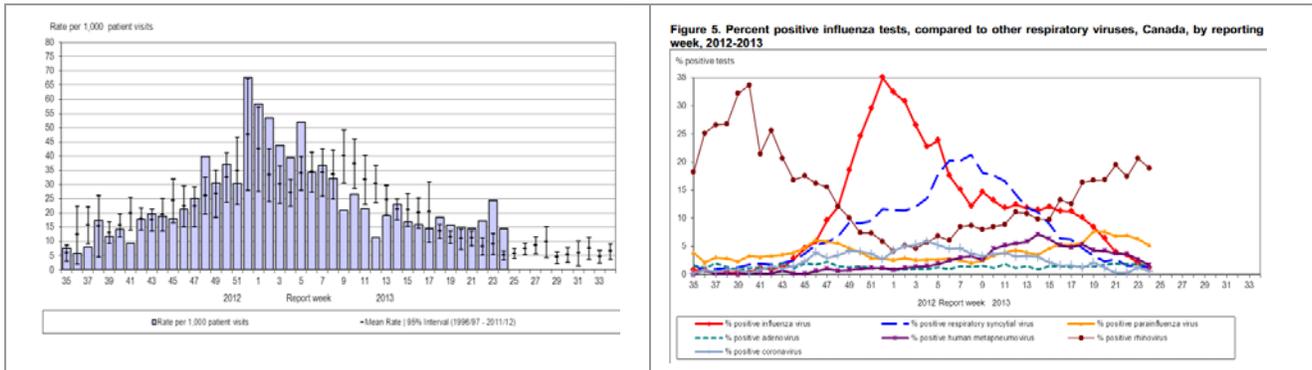


EPIDEMIOLOGIC AND VIROLOGIC UPDATE OF INFLUENZA & OTHER RESPIRATORY VIRUSES BY COUNTRY

North America:

In Canada¹, in epidemiological weeks (EWs) 23 & 24, influenza activity continued to decline with only one region reporting localized activity during this 2-week period. Nationally, the influenza-like-illness (ILI) consultation rate (14.4 ILI consultations per 1,000 patient visits in EW 24) has been similar for the past ten weeks. The ILI rates observed in EWs 18 to 24 were above the expected range. Among the total samples analyzed, the percentage of positive influenza tests decreased, and was 2% in EW 23 and 1.1% in EW 24. Of all the positive influenza cases in EWs 23 & 24, 75.5% were influenza B and all influenza A viruses were either A(H3) or A(undetected). As for other respiratory viruses, detections of rhinovirus continued the upward trend since EW 01, and was 18.9% in EW 24. The percentage of positive tests for all other viruses decreased over EW 23 and 24. During the 2012-13 season, 1396 influenza viruses have been antigenically characterized: 100% of influenza A(H3N2) and A(H1N1)pdm09 viruses were antigenically similar to the vaccine strain. Among the influenza B viruses, 77.6% (n=409) were antigenically similar to the vaccine strain B/Wisconsin/01/2010 (Yamagata lineage) and 22.3% (n=118) were similar to B/Brisbane/60/2008 (Victoria lineage). During the 2012-13 season, 1378 influenza viruses have been tested for antiviral resistance; among these, one A(H3N2) virus was resistant to oseltamivir and zanamivir and one A(H1N1)pdm09 virus was resistant to oseltamivir.

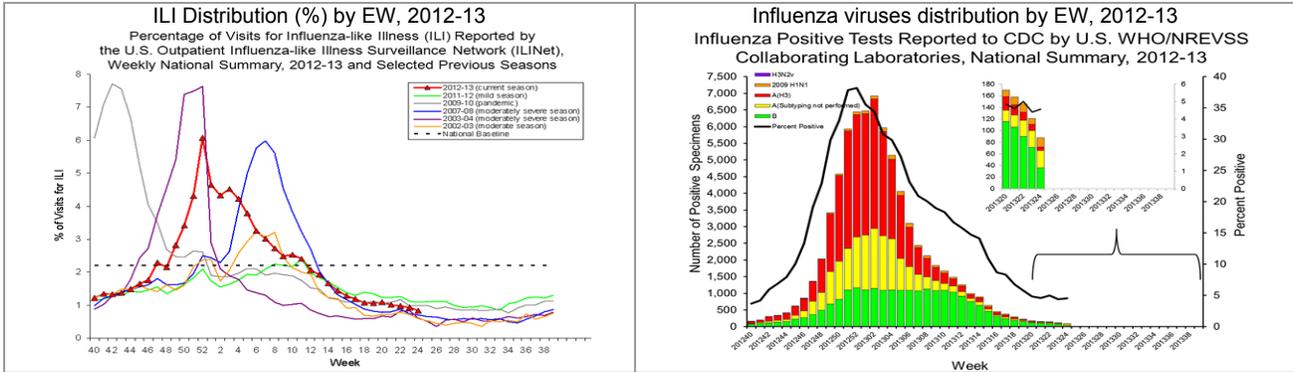
Canada



¹ FluWatch Report. EW 23&24. Available at <http://www.phac-aspc.gc.ca/fluwatch/>

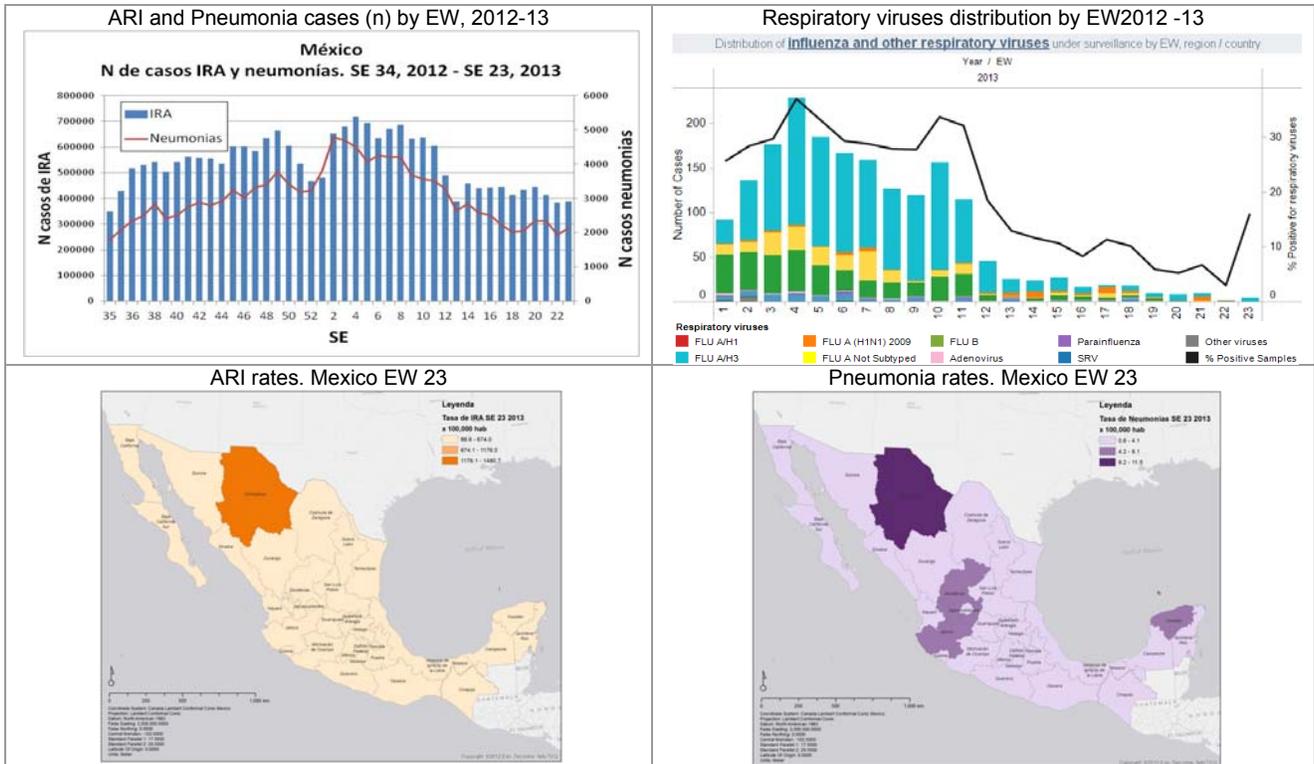
In the United States², during EW 24, influenza activity remained low. Nationally, the proportion of ILI consultations (0.8%) was below the national baseline of 2.2%. Nationally, the proportion of deaths attributed to pneumonia and influenza for EW 24 (6.5%) was below the epidemic threshold for this time of year. In EW 24, one influenza-associated pediatric death was reported (associated with influenza A unsubtype). Among all samples tested during EW 24 (n=1,930), the percentage of samples positive for influenza (4.5%) were similar as compared to the previous week. Nationally, among the positive samples, 59.1% were influenza A (with co-circulation of A(H3N2) and A(H1N1)pdm09) and 40.9% were influenza B.

United States



In Mexico³, nationally in EW 23, the number of ARI cases increased by 1.3% as compared to EW 22 and the number of pneumonia cases increased by 10.6% as compared to the previous week; however, since their peaks (EW 02 for ARI and EW 04 or pneumonia), both showed decreasing trends during 2013. Regionally, the states that reported the highest rates of pneumonia per 100,000 inhabitants in EW 23 were: Zacatecas (7), Yucatán (5.5), Jalisco (4.1), Nuevo Leon (3.5), Aguas Calientes (3.3) and Colima (3.2). According to laboratory data, between EWs 21-24, among 450 samples tested, 8% were positive for influenza. Among the positive influenza cases, 96.3% were influenza A (with co-circulation of A(H3N2) and A(H1N1)pdm09) and 3.7% were influenza B.

Mexico



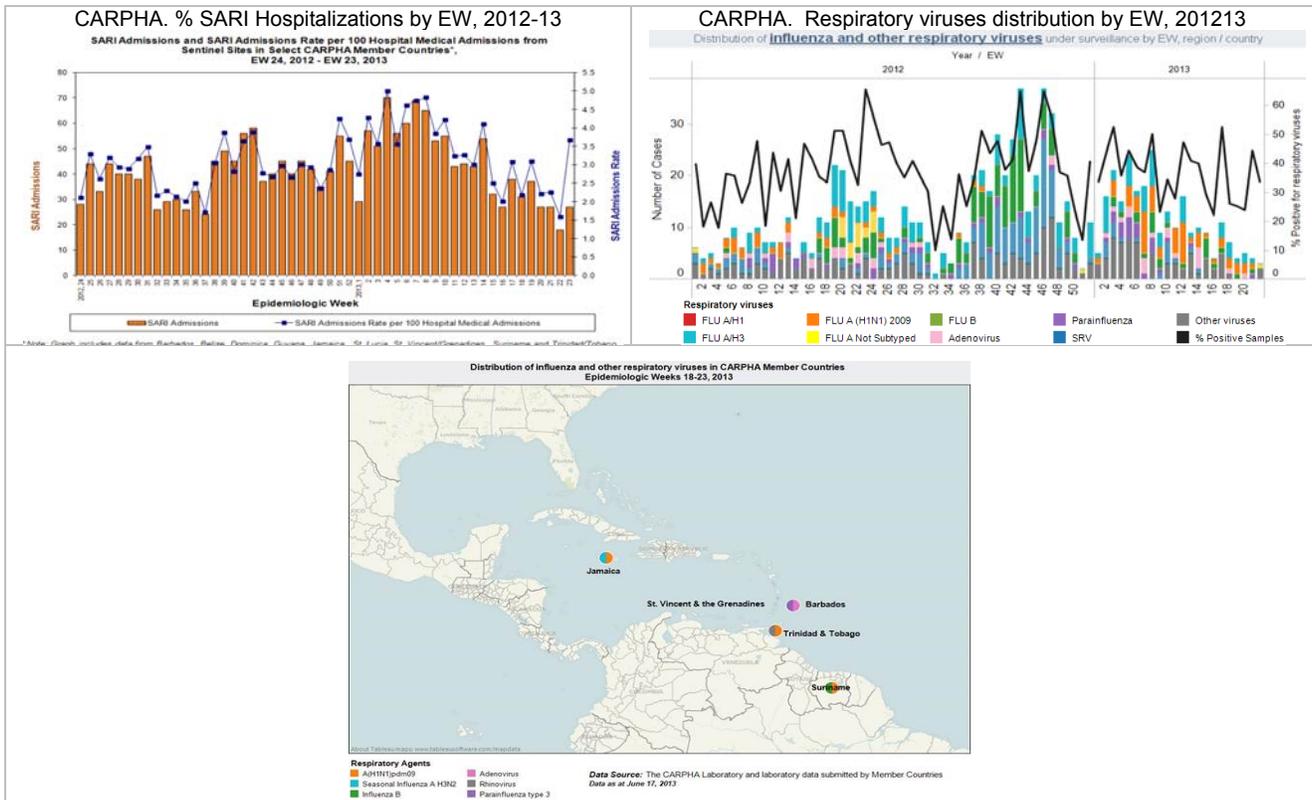
² USA: CDC FluView report. EW 24. Available at: <http://www.cdc.gov/flu/weekly/>

³ México. Dirección General de Epidemiología. Información epidemiológica. SE 24.

Caribbean

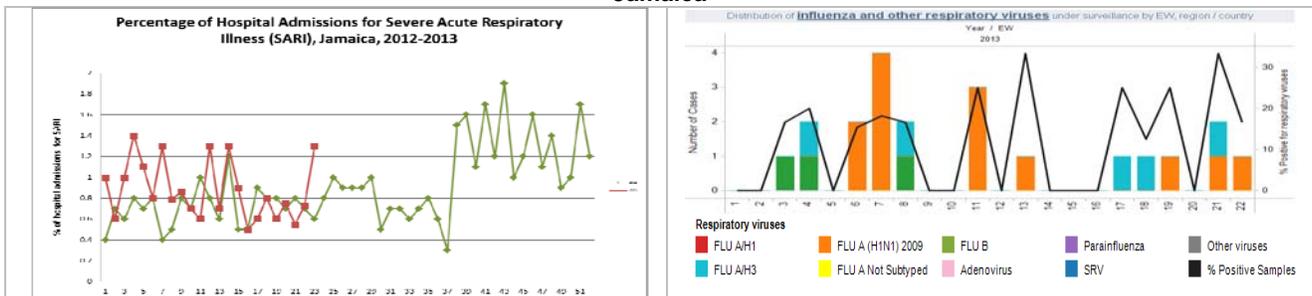
CARPHA⁴, received weekly SARI/ARI data from 5 countries for EW 23, 2013: Barbados, Jamaica, St. Lucia, St. Vincent & the Grenadines and Trinidad & Tobago. In EW 23, 2013, the proportion of severe acute respiratory infection (SARI) hospitalizations was 3.7%. The highest rate of SARI was among children under 6 months of age (7.3% of hospital medical admissions for children under 6 months of age were due to SARI). No SARI deaths were reported from the region in EW 23, 2013. For cases with dates of onset between EW 18 to EW 23, 2013, the following viruses have been laboratory confirmed in member countries: influenza A (H1N1)pdm09 (Jamaica, Suriname & Trinidad and Tobago); influenza A(H3N2) (Jamaica); influenza B (Suriname), adenovirus (Barbados); parainfluenza (Barbados) and rhinovirus (Trinidad & Tobago). In 2013, to date, the CARPHA laboratory has confirmed 194 cases as positive for 1 or more respiratory agent. For cases with dates of onset in 2013, the overall percentage positivity for specimens tested is 34%.

CARPHA



In Jamaica, for EW 23, sentinel data show that the proportion of consultations for Acute Respiratory Illnesses (ARI) was 4.1% which was a 0.1% decrease compared to that reported for EW 22. The proportion of admissions due to SARI was 1.3%, a 0.6% increase compared to the previous week. There was no SARI death reported for EW 23. According to laboratory data, among samples tested in EW 19-22 (n =23), the average percentage positivity for respiratory viruses was 18.8% with influenza A(H1N1)pdm09 and influenza A(H3N2) being the viruses detected.

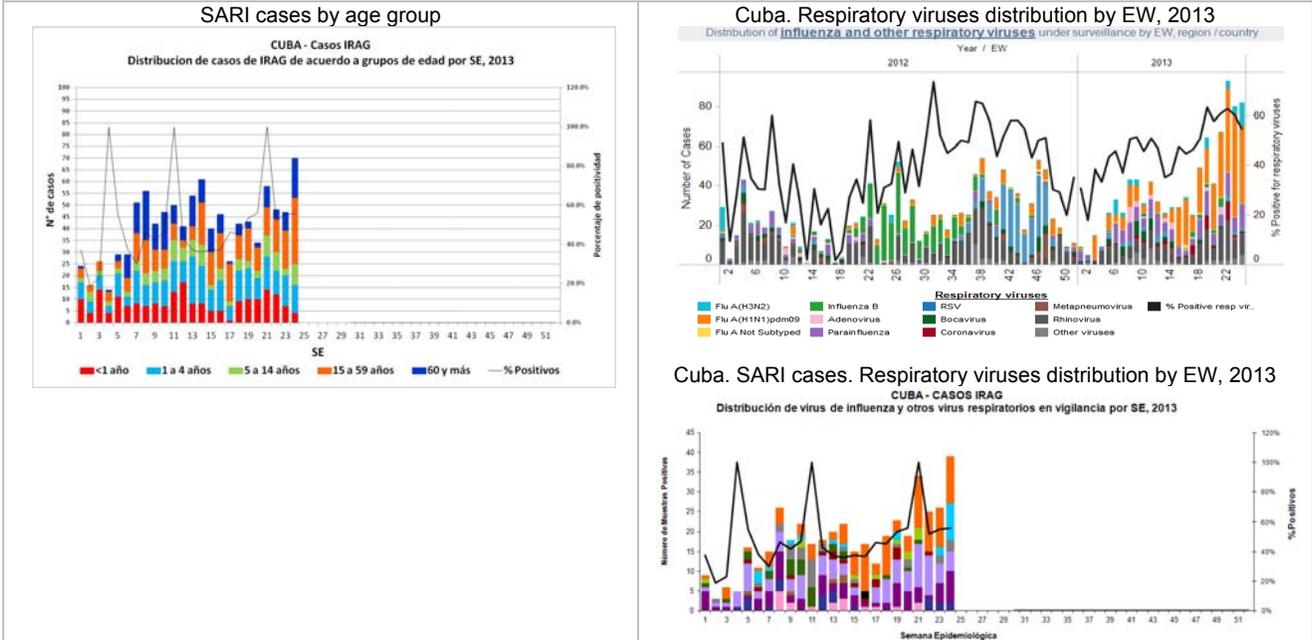
Jamaica



⁴ Agencia de Salud Pública del Caribe (CARPHA por sus siglas en inglés) EW 24.

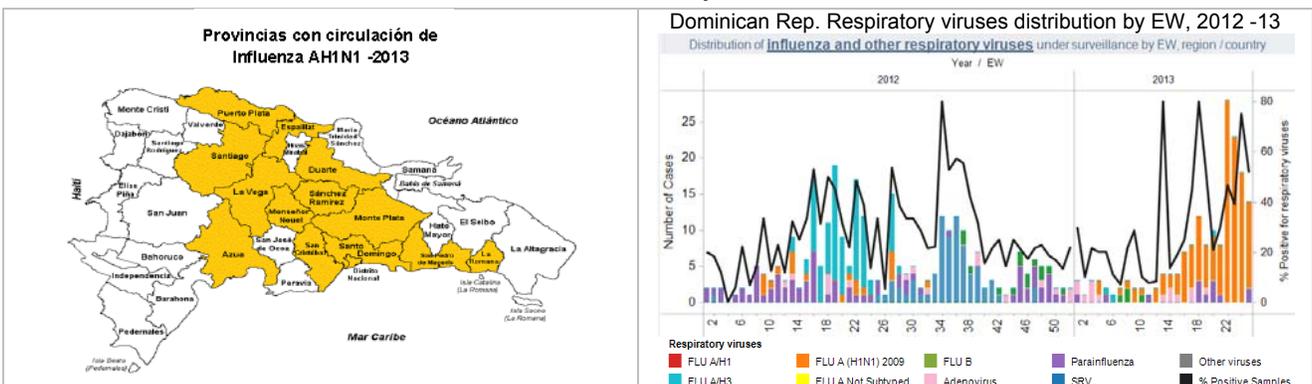
In Cuba, according to national laboratory data, among all samples analyzed (n=542) between EW 21 to 24, the average percent positivity for respiratory viruses was 59,6% and 35,4% for influenza viruses. Of the total positive samples for influenza A, 97,4% were influenza A(H1N1)pdm09 followed by influenza A(H3N2). Also, rhinovirus (11% of positivity) and parainfluenza (6,6% of positivity) were circulating. Of the total of positive samples in EW 24, 55% were from ILI cases and 26,8% were SARI cases. Among the SARI cases, 199 samples were analyzed between EW 21 to 24, with influenza A(H1N1)pdm09 as the predominant virus, with co-circulation of A(H3N2) which increased in EWs 23-24. The age groups most affected by SARI were those between 15 to 59 years followed by ≥ 60 years age group. In 2013, among 27 samples tested from SARI deaths, 59% were positive for a respiratory virus. In EW 24, one death associated with A(H1N1)pdm09 was reported.

Cuba



In the Dominican Republic⁵, from the EW 01 to 23, 2013, a total of 1,010,436 ILI cases were reported, with a rate of 435.7 by 10,000 inhab, 22% less to what was reported for the same period in 2012 (557.51 by 10,000 inhab). In EWs 01-23, through sentinel surveillance, 646 SARI cases (10% less than the same period in 2012) and 14 SARI deaths (higher than the number observed in 2012 (n=5)) were reported. In 2013, 9 deaths have been confirmed to influenza A(H1N1)pdm09 (1 between January-March and 8 between April-June). Among the eight deaths that occurred between April and June 2013, four were pregnant. According to laboratory data, from EW 21 to 25, among samples analyzed (n=170), the average percent positivity for respiratory viruses was 51,3% for influenza viruses. Influenza A(H1N1)pdm09 was the predominant virus detected.

Dominican Republic

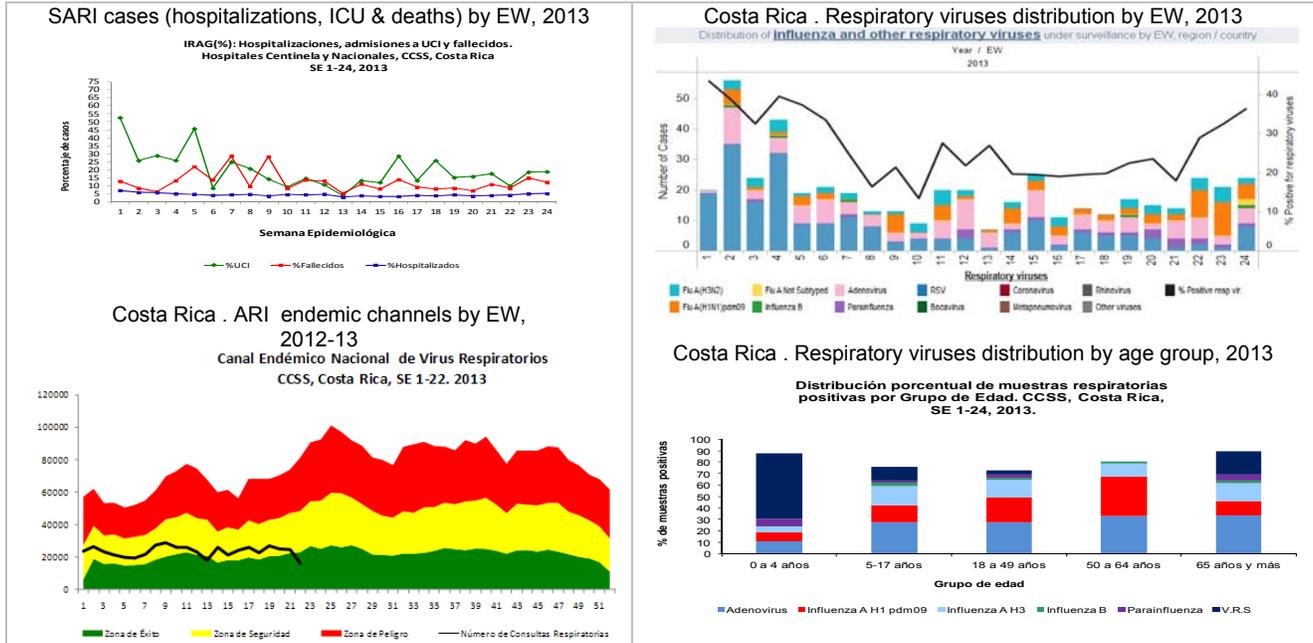


⁵ Republica Dominicana. Dirección Nacional de Vigilancia Epidemiológica. Boletín Semanal SE 24.

Central America

In Costa Rica⁶, in EW 24, influenza activity remained steady. Nationally, the proportion of SARI hospitalizations was 5.2%. Among SARI cases, 18.8% required ICU admission. Among the total of deaths, 12.3% were SARI-related deaths. Up to EW 24, the most affected age groups were, the 0-4 years old (with RSV) and 50-64 years old group (with A(H1N1)pdm09). ARI activity was within the expected level for this time of year. According to laboratory data between EW 21-24, among all samples tested (n =292), the percent positivity for respiratory viruses was 28.9% and for influenza viruses was 15.1%, showing an increasing trend. During the period between EW 21-24, among influenza viruses, influenza A predominated (98%) (64% of influenza A(H1N1)pdm09, 31% A(H3N2) and 5% A unsubtyped).

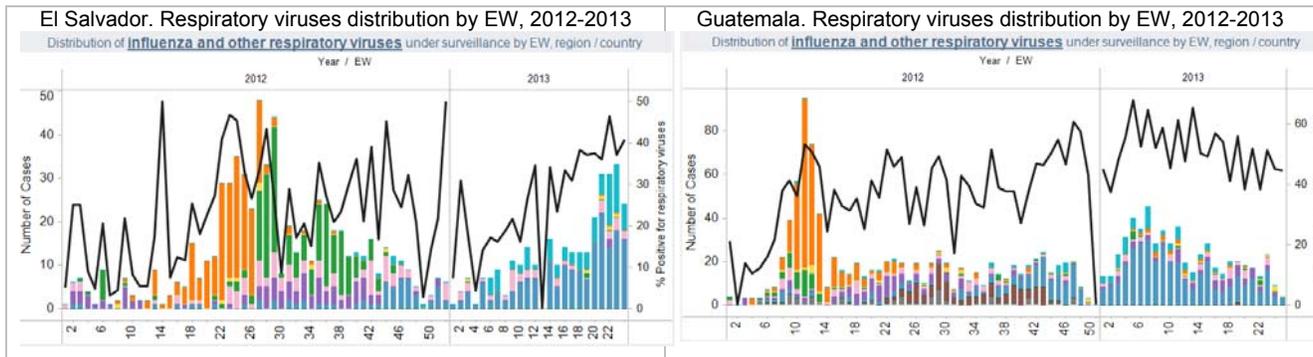
Costa Rica



In El Salvador, according to national laboratory data from EWs 21-24, of all samples tested (n =301), 40% were positive for respiratory viruses and 12.5% for influenza viruses. Among the positive influenza cases, 100% were influenza A (mainly A(H3N2), which has been circulating since EW 06. Regarding other respiratory viruses, among the total samples tested in EWs 21-24, RSV was the predominant virus (23.3% of positivity) followed by adenovirus (3.3% of positivity).

In Guatemala, according to national laboratory data from EWs 22-25, of all samples tested (n =108), 44.7% were positive for respiratory viruses and 10% for influenza viruses. Among influenza viruses, influenza A not subtyped was the prevalent virus. Regarding other respiratory viruses, among the total samples tested, RSV was the predominant virus (26.9% of positivity) followed by parainfluenza (5.6% of positivity).

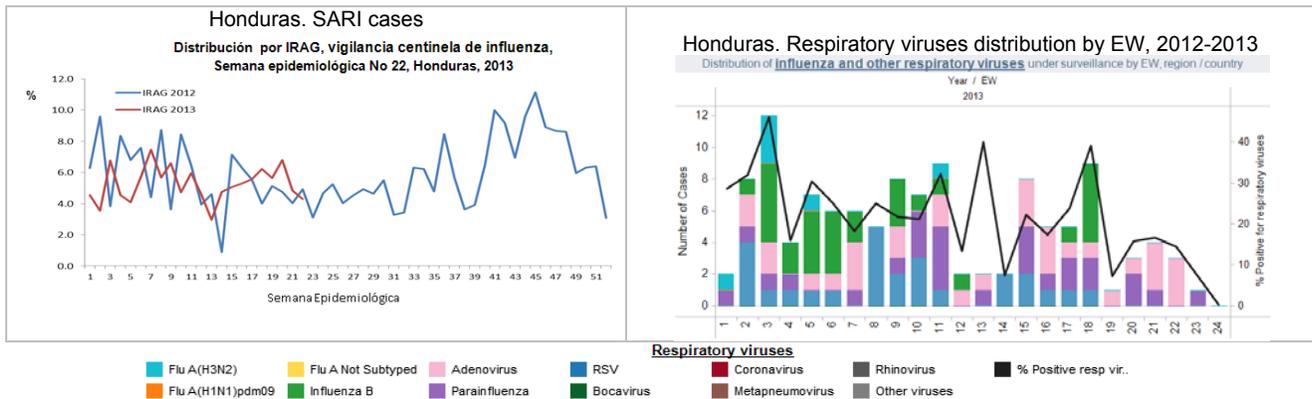
El Salvador and Guatemala



⁶ Costa Rica. Caja Costarricense de Seguro Social, INCIENSA. Influenza y otras virosis respiratorias. SE 24.

In Honduras, in EW 22, the proportions of ILI cases (5,6%) and SARI cases (4,3%) were similar in the last week to the values observed last year. According to national laboratory data from EWs 21-24, of all samples tested (n =67), 9.5% were positive for respiratory viruses with no influenza viruses detected. Adenovirus was the prevalent virus detected.

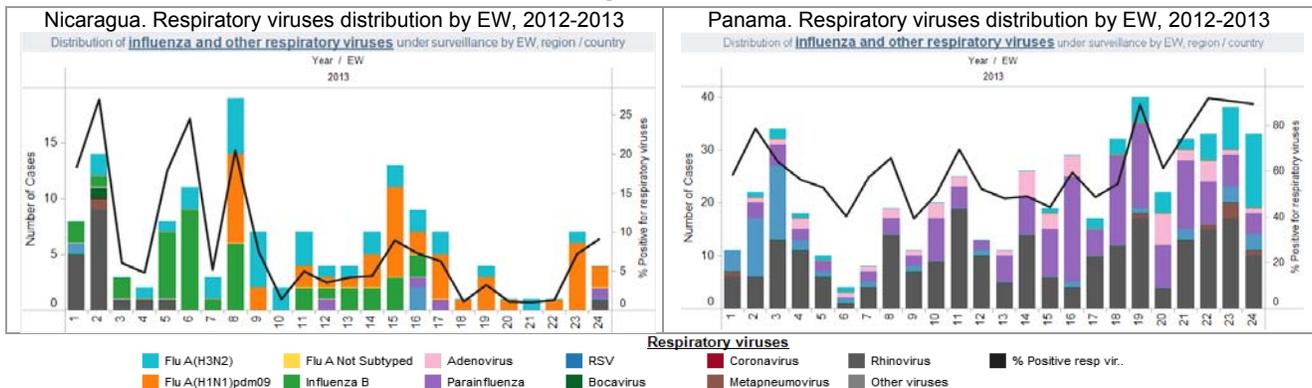
Honduras



In Nicaragua, according to national laboratory data from EWs 21-24, of all samples tested (n =320), 4.6% were positive for respiratory viruses and 3.5% were positive for influenza viruses. Influenza A(H1N1)pdm09 was the predominant respiratory virus detected.

In Panama, according to national laboratory data from EWs 21-24, of all samples tested (n =157), 86.9% were positive for respiratory viruses and 18.9% were positive for influenza viruses. Among the total samples tested, in EWs 21-24, rhinovirus (35% of positivity) and parainfluenza (19.7% of positivity) were the predominant viruses. Among the positive influenza viruses, influenza A(H3N2) was the only virus detected.

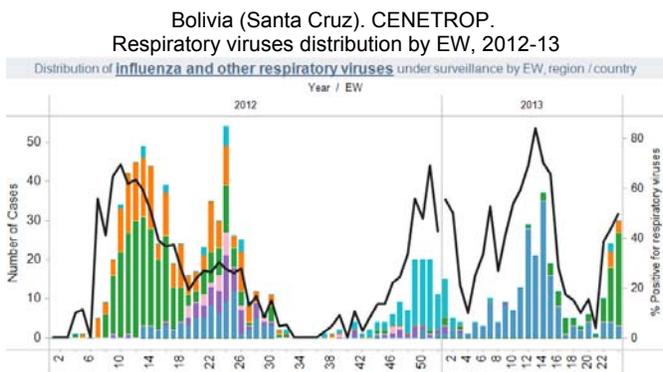
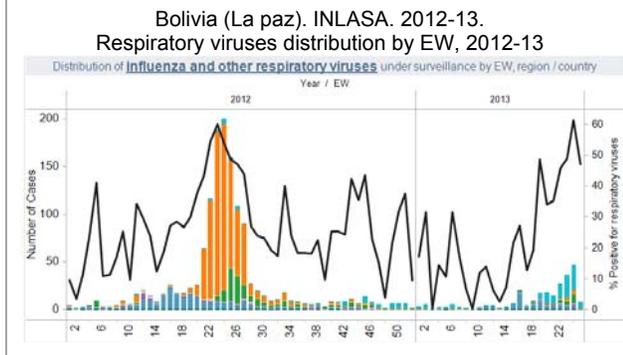
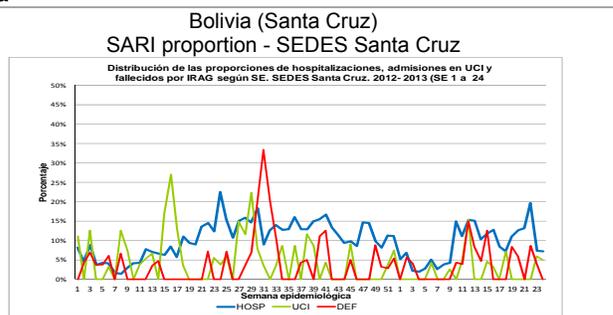
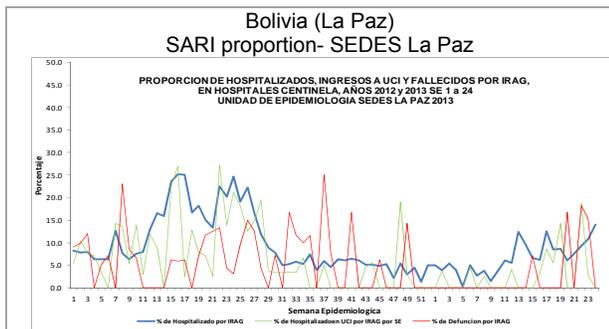
Nicaragua and Panama



South America – Andean countries

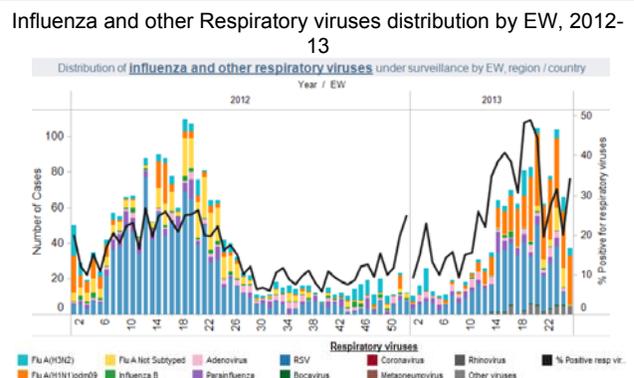
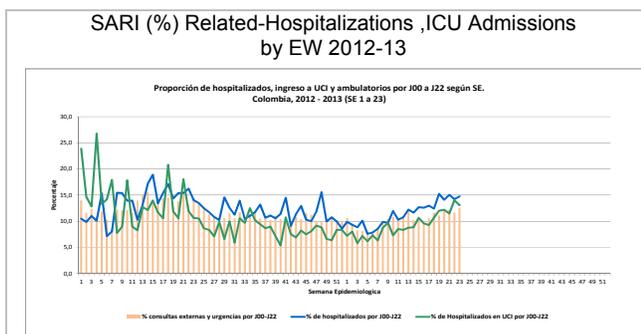
In Bolivia, according to data from Santa Cruz, during EW 24 the proportion of SARI hospitalizations (7%) remained similar to the previous week. According to laboratory data from CENETROP (Santa Cruz), among 115 samples analyzed between EWs 23-24 of 2013, the percent positivity for all respiratory viruses was 47% and for influenza viruses was 41%. Influenza B (80% of the positives) continued to be the most prevalent respiratory virus. In La Paz, in EW 24, the proportion of SARI hospitalizations (14%) continued to in the last 4 weeks. According to laboratory data from INLASA (La Paz), among 155 samples processed in EWs 23-24 of 2013, the percent positivity for all respiratory viruses was 55%, and for influenza viruses was 48%. Among the positives samples, influenza A(H3N2) (61%) and influenza B (18%) were the predominant respiratory viruses identified.

Bolivia

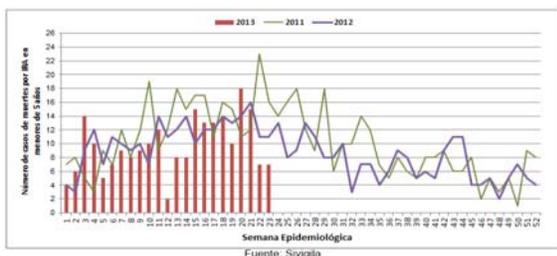


In Colombia⁷, nationally, in EW 23, the proportions of ARI outpatients-J codes (12.5%), SARI hospitalizations (14.7%) and SARI ICU admissions (13.1%) continued to show an upward trend. In 2013, through EW 23, 224 ARI deaths have been reported in children <5 years old, which is less than the number of deaths observed in 2012 and 2011. According to the national laboratory data (INS), among samples viruses analyzed (n=660) in EW 23-24, the positivity was 26% for all respiratory viruses and 16% for influenza viruses, with predominance of influenza A(H1N1)pdm09 (42% among the positives), followed by RSV (24% among the positives).

Colombia



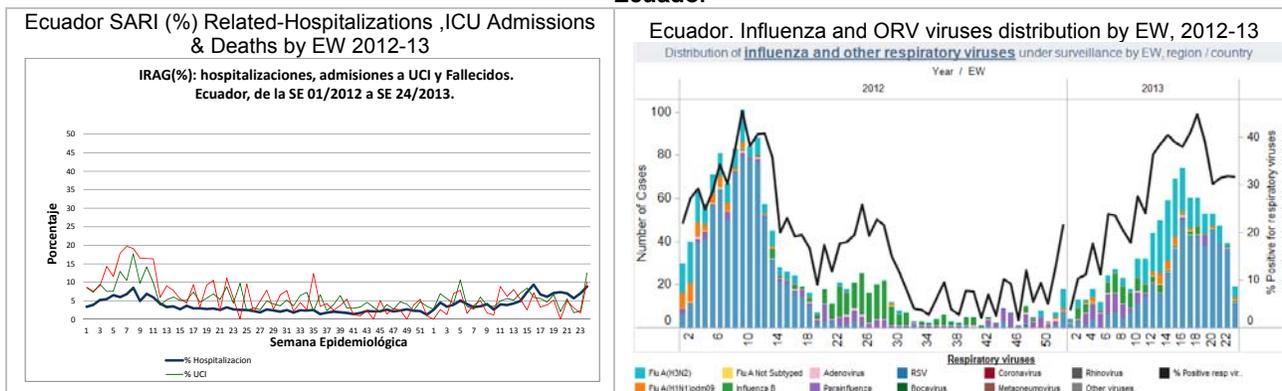
ARI deaths in children <5 years old
Figura 5. Comportamiento notificación casos de mortalidad por IRA en menores de 5 años ajustado a semana de defunción. Colombia 2011 2012 y 2013 SE 23.



⁷ Colombia. INS. Boletín epidemiológico SE 24, 2013.

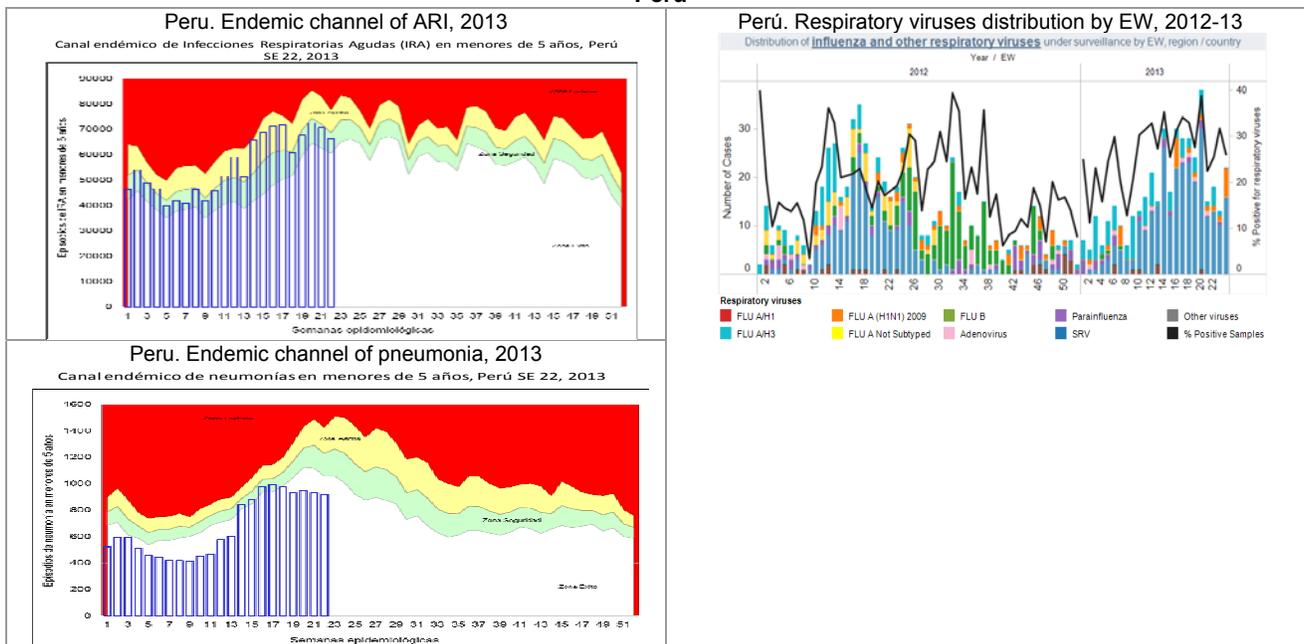
In Ecuador, during EW 24, the proportion of SARI hospitalizations (9%), SARI ICU admissions (13%) and SARI deaths (10%) increased as compared to the previous week. According to national laboratory data, among 135 samples tested from SARI cases, between EWs 23-24, the percent positivity was 34% for respiratory viruses and 12% for influenza viruses. Among all the positive samples, RSV (61%) and influenza A(H3N2) (19%) were the predominant viruses, followed by A(H1N1)pdm09 (17%).

Ecuador



In Peru⁸, nationally, in EW 22, the number of ARI and pneumonia cases in children less than 5 years of age remained within the expected level for this time of year. According to national laboratory data, during EWs 23-24, among the 126 samples analyzed, the percentage positivity was 28% for all respiratory viruses and 6% for influenza viruses. Among all the positive viruses, RSV (74%) was the predominant virus.

Peru

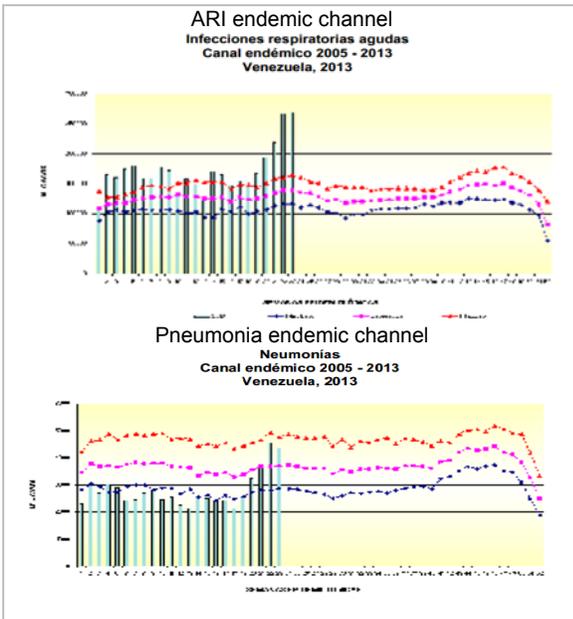


In Venezuela⁹, according to data published through EW 23, the endemic channel of ARI showed ARI activity above the epidemic threshold for this time of the year with an increasing trend. The pneumonia endemic channel showed activity within what is expected for this time of the year, but with an increasing trend in the last 5 EWs. The highest incidences for ARI and pneumonia cases were reported in children less than 7 years. Regionally, the highest numbers of pneumonia cases were reported in Zulia, Miranda, Bolivar, Aragua and Lara. In virological surveillance, thus far this year through EW 23, predominance of influenza A(H1N1)pdm09 (89.8% of the total number of positive samples) was reported, followed by influenza A(H3N2) (8.2% of the total number of positive samples).

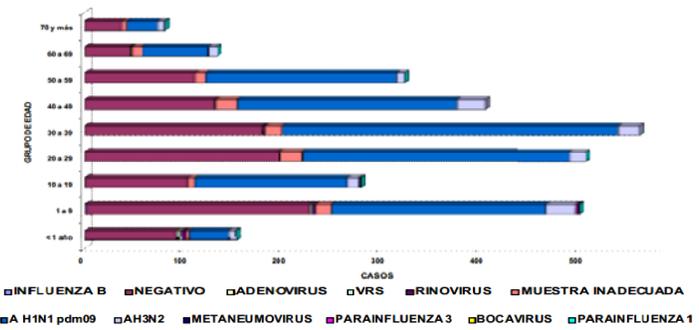
⁸ Perú. Sala de Situación de Salud. EW 23, 2013. Ministerio de Salud. Dirección General de Epidemiología

⁹ Venezuela. Boletín epidemiológico, SE 23, 2013.

Venezuela



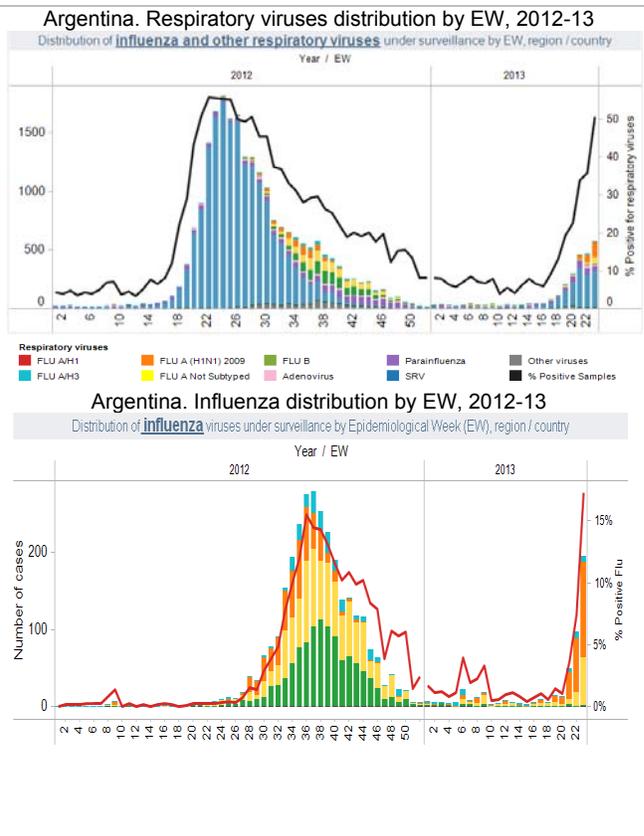
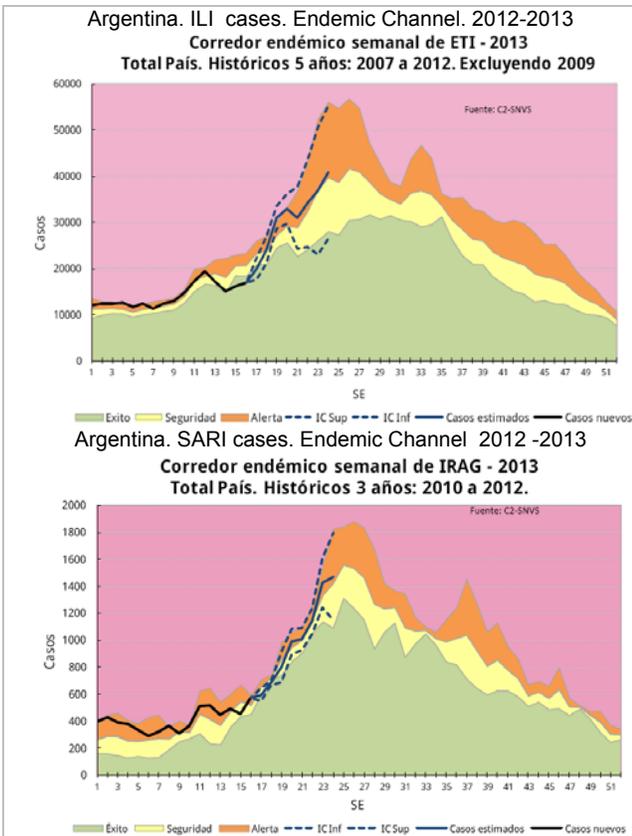
Casos de infección respiratoria y tipificación viral según grupos de edad. Semana 23. Venezuela año 2013



South America – Southern Cone

In Argentina¹⁰, according to national estimates, the activity of ILI and SARI during EW 24 was within the expected level for this time of year, with increasing trends. Regionally, the regions of Northwest and Cuyo, showed SARI rates higher than what was observed last year. According to national laboratory data, 2,445 samples were processed between EWs 22-23, of which 43% were positive for all respiratory viruses and 20% for influenza viruses. Among the positive samples, 57% were RSV (the predominant virus) and 18% were A(H1N1)pdm09.

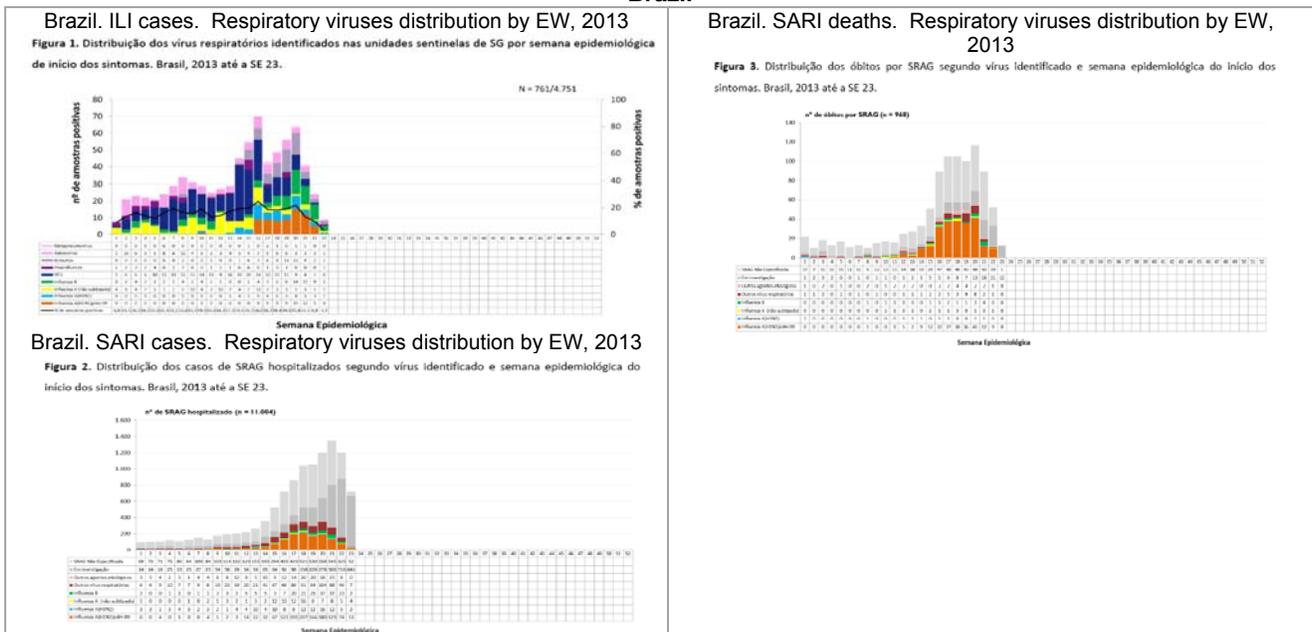
Argentina



¹⁰ Argentina. Boletín integrado de vigilancia. SE 23.

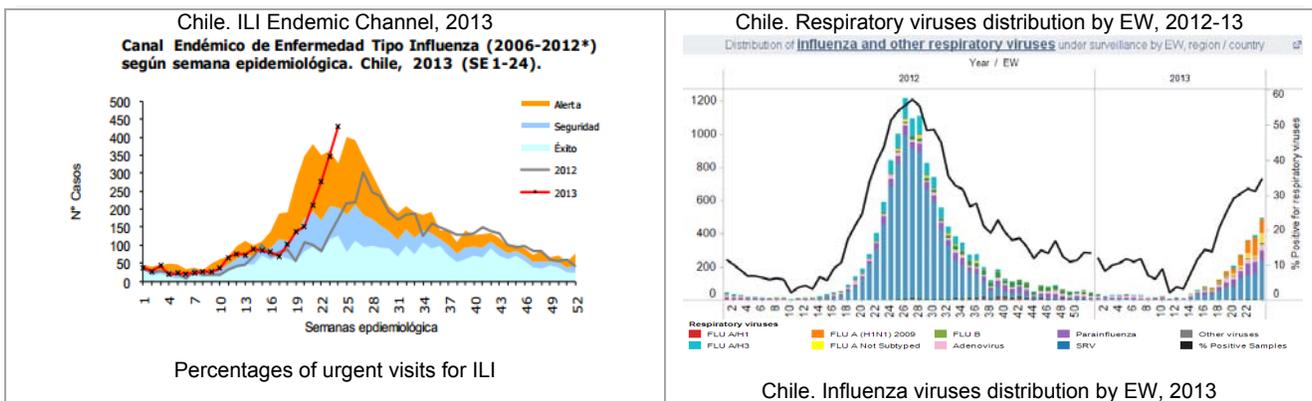
In Brazil¹¹, the proportion of ILI cases (sentinel surveillance system) increased from EW 16 to EW 23; however, it remained within expected levels. Regionally, the southeast region reported ILI activity above the expected level for this time of year, associated with circulation of influenza A(H1N1)pdm09 and influenza B in the last 2 weeks. In the last weeks, the number of SARI cases and SARI deaths showed an increasing trend, with predominance of influenza A(H1N1)pdm09, mainly in the southeast region.

Brazil



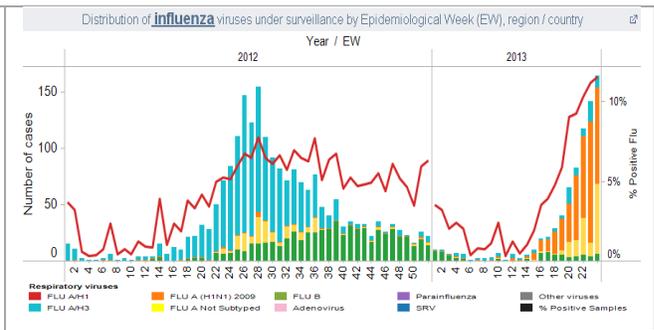
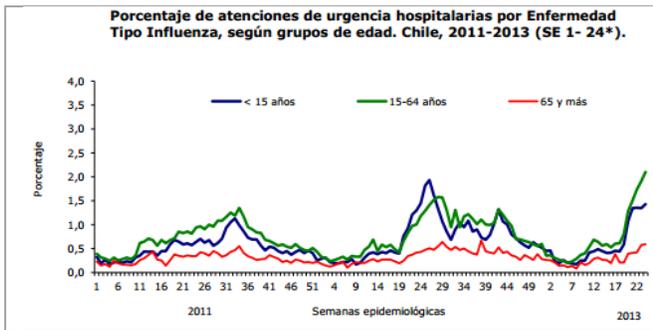
In Chile¹², nationally, in EW 24, ILI activity (rate: 27/ 100,000 pop.) continued increasing and was above the epidemic level of the endemic channel. Regionally, the northern and southern regions of Tarapacá, Coquimbo, Los Ríos, Los Lagos and Magallanes, reported the highest ILI increases. The percentages of urgent visits for ILI also continued increasing and were above the expected levels, mainly in the age group 15 - 64 years old. According to national laboratory data, in EWs 23-24, 2,704 samples were analyzed, of which 33% were positive for respiratory viruses and 11% for influenza viruses. Among the positive samples, 44% were RSV, which was the most prevalent virus, followed by influenza A(H1N1)pdm09 (22%) and parainfluenza (18%), (15%). The proportion of SARI hospitalizations and SARI deaths also increased. Among the 212 samples tested from SARI cases, influenza A(H1N1)pdm09 (37% among positives) and RSV (34% among positives) were the prevalent viruses.

Chile



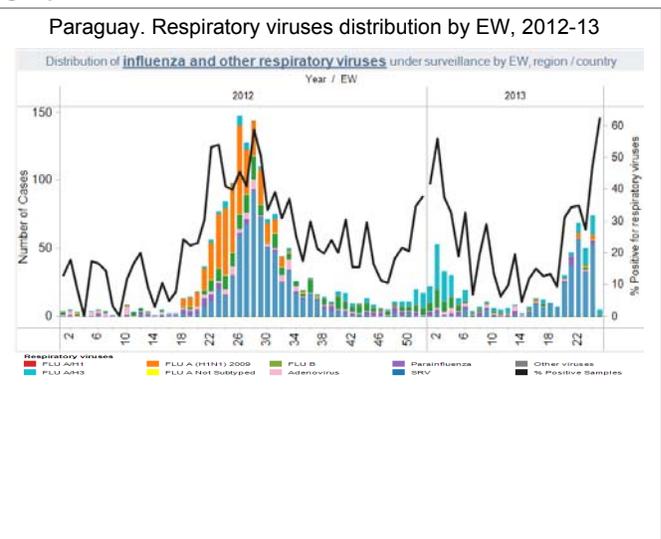
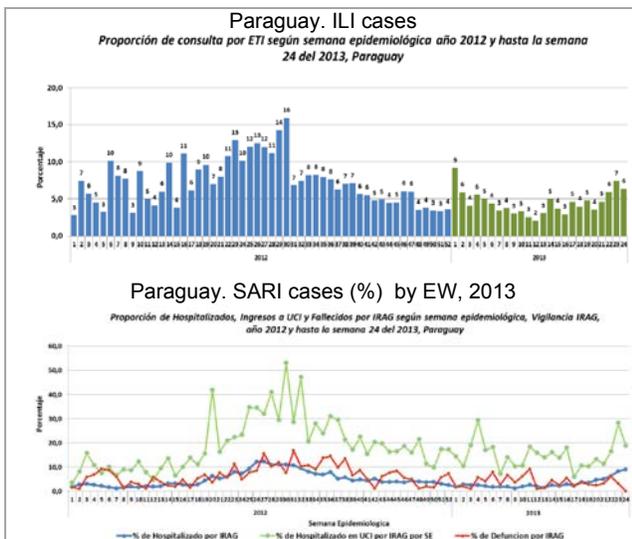
¹¹ Brasil. Boletim informativo. Secretaria de Vigilância em Saúde. SE 23, 2013.

¹² Chile. Informe de situación. EW 24. Disponible en: www.pandemia.cl



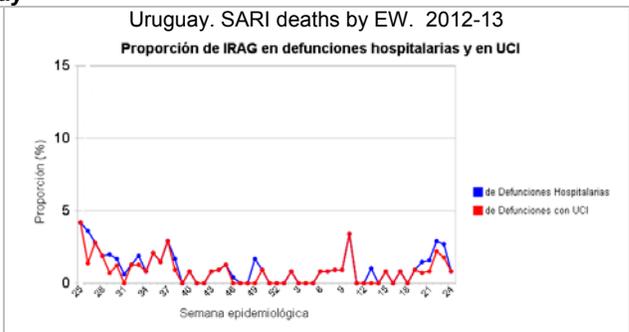
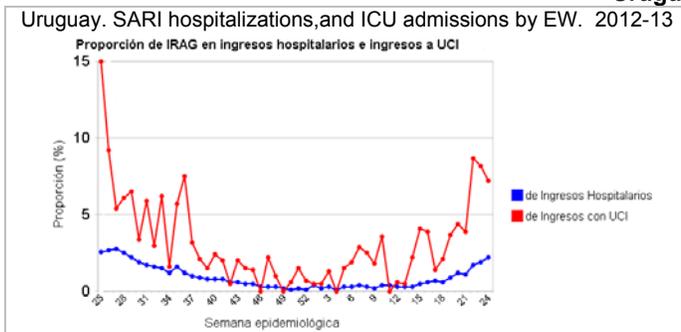
In Paraguay¹³, nationally in EW 24, the ILI consultation rate (135/100,000 hab), the ILI proportion (6.4%) and the proportion of SARI-related hospitalizations (8.9%) remained similar to the previous week. According to data from the national laboratory, among 340 samples processed between EWs 23-24, 34% were positive for respiratory viruses and 10% for influenza viruses. Among the positive samples, RSV (68%) and influenza A(H3N2) (21%) were the most predominant viruses followed by influenza A(H1N1)pdm09. Among the 169 samples from SARI cases, RSV also predominated.

Paraguay



In Uruguay¹⁴, at the national level, the proportions of SARI hospitalizations in EW 24, increased as compared to the previous week; however, the SARI-related ICU admissions and SARI deaths decreased in the last 2 weeks. According to data from the national laboratory, among 67 samples processed between EWs 23-24, 31% were positive for respiratory viruses and 13% for influenza viruses. RSV (10/21) and influenza A(H1N1)pdm09 (6/21) were the most predominant viruses.

Uruguay



¹³ Paraguay. Informe de situación. Vigilancia de ETI e IRAG. SE 24, 2013

¹⁴ Uruguay. Generador de gráficos de la división de epidemiología, Dirección General de Salud – Ministerio de Salud Pública

Special Topics:

Novel coronavirus infection

http://new.paho.org/hq/index.php?option=com_content&view=article&id=8665&Itemid=39987+&lang=en

Avian influenza A(H7N9) virus

http://new.paho.org/hq/index.php?option=com_content&view=article&id=8575&Itemid=39968&lang=en