



PAHO interactive influenza data: [http://ais.paho.org/phis/viz/ed\\_flu.asp](http://ais.paho.org/phis/viz/ed_flu.asp)

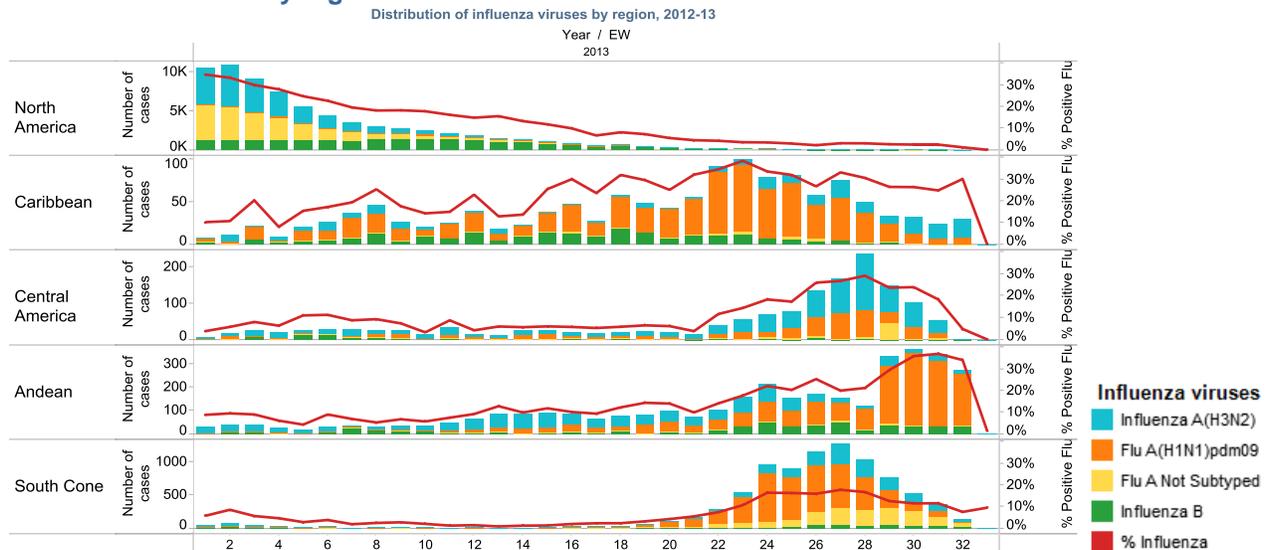
Influenza Regional Reports: [www.paho.org/reportesinfluenza](http://www.paho.org/reportesinfluenza)

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**

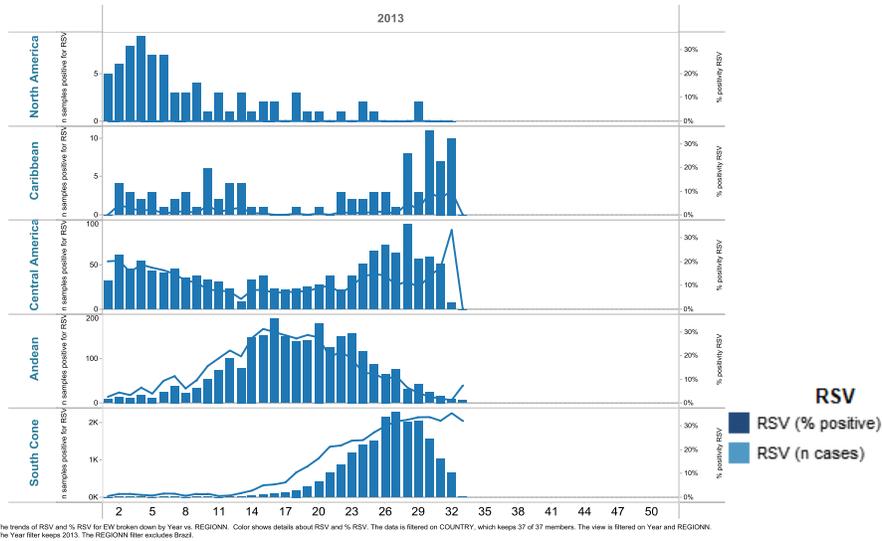
- **North America:** most influenza activity indicators were low and within expected levels for this time of year. In the United States, there have been 16 cases of influenza A(H3N2v) reported this summer, including one hospitalization and no deaths. These infections have mostly been associated with prolonged exposure to pigs.
- **The Caribbean and Central America:** acute respiratory virus infections continued their decreasing trend in this region. Co-circulation of influenza A(H1N1)pmd09 (in Cuba, Dominican Republic and Nicaragua) and influenza A(H3N2) (in Cuba, Nicaragua and Panama) were reported. Among other respiratory viruses, RSV continued to predominate in Cuba, El Salvador and Panama.
- **South America – Andean Countries:** acute respiratory virus infections increased in Peru, Ecuador and Bolivia (La Paz and Santa Cruz), with an increased circulation of influenza A(H1N1)pmd09. Meanwhile Venezuela and Colombia continued to see a decline in activity.
- **South America - South Cone and Brazil:** acute respiratory virus infections were within the expected level for this time of year and all countries showed decreasing trends. RSV predominated in most countries with co-circulation of influenza A(H1N1)pmd09 in Argentina, Southern and Southeastern Brazil and Uruguay; and with influenza A(H3N2) in Paraguay and Southern Brazil.

**Influenza circulation by region. 2012-2013**



## Respiratory syncytial virus (RSV) circulation by region. 2012-2013

Positive samples for RSV in the Mexico, Caribbean, Central America, Andean countries and South Cone by EW. 2010-12

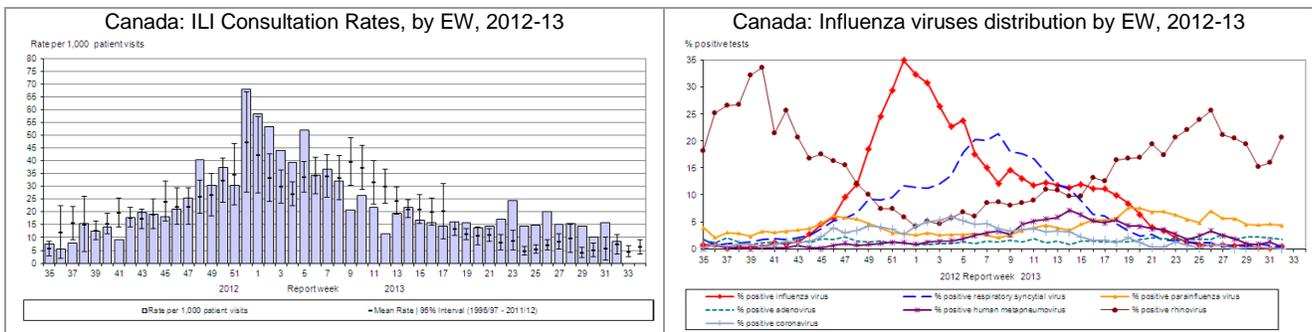


## EPIDEMIOLOGIC AND VIROLOGIC UPDATE OF INFLUENZA & OTHER RESPIRATORY VIRUSES BY COUNTRY

### North America:

In Canada<sup>1</sup>, during EWs 31 and 32, influenza activity remained low, with no regions reporting localized activity. Nationally, the influenza-like-illness (ILI) consultation rate decreased to 8.5 per 1,000 patient visits in EW 32. The ILI rates observed during EWs 18-31 were above the expected range, with the highest rate observed among children under 5 years of age. The percentage of positive influenza tests was low and stable (0.1% in EW 31 and 0.4% in EW 32). Of all positive influenza samples this season, 85.1% were influenza A (34.8% A(H3), 4.7% A(H1N1)pdm09, and 60.5% A, unsubtype), and 14.9% were influenza B viruses. Among other respiratory viruses, rhinovirus predominated (16.0% in EW 31 and 20.7% in EW 32), followed by parainfluenza (4.5%), human metapneumovirus (0.4%), RSV (0.2%), and adenovirus (1.8%). No pediatric deaths were reported during EW 31-32. During the 2012-13 season, 1,507 influenza viruses were antigenically characterized: 100% of influenza A(H3N2) and A(H1N1)pdm09 were antigenically similar to the vaccine strain. Among the influenza B viruses, 77% (n=464) were antigenically similar to the B/Wisconsin/01/2010 (Yamagata lineage) vaccine strain and 23% (n=138) were similar to the B/Brisbane/60/2008 (Victoria lineage) component of the 2011-12 seasonal influenza vaccine. During the 2012-13 season, 1,508 influenza viruses were tested for oseltamivir resistance and 1,505 for zanamivir resistance; among these, one A(H3N2) virus was resistant to oseltamivir and zanamivir, one A(H1N1)pdm09 virus was resistant to oseltamivir, and three influenza B virus samples were resistant to both oseltamivir and zanamivir.

### Canada



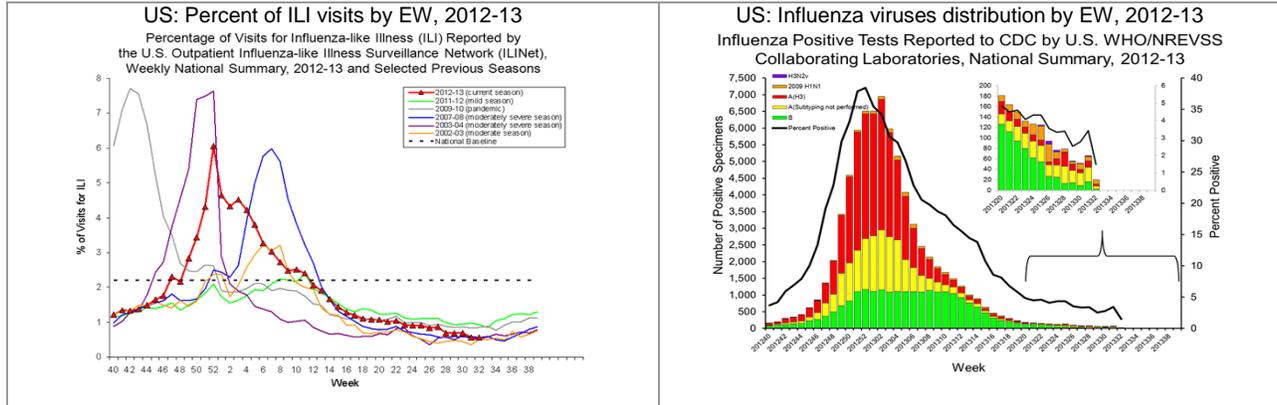
In the United States<sup>2</sup> during EW 32, influenza activity remained low with 0.6% of outpatient visits associated with ILI (below the national baseline of 2.2%) and 5.6% of deaths associated with pneumonia and influenza (below the epidemic threshold of 6.2% for this time of year). No influenza-associated pediatric deaths were

<sup>1</sup> Canada: FluWatch Report. EW 31-32. Available at <http://www.phac-aspc.gc.ca/fluwatch/>

<sup>2</sup> USA: CDC FluView report. EW 32. Available at: <http://www.cdc.gov/flu/weekly/>

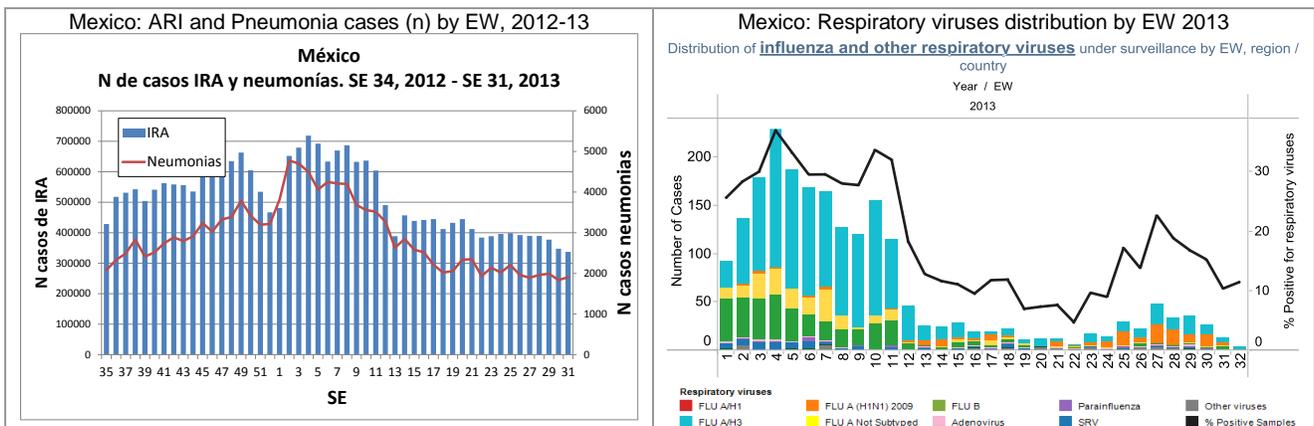
reported during this time. Based on laboratory data for EW 32, 1,345 samples were tested of which 1.5% were positive for influenza, a decrease from the previous week. Among the positive samples (n=20), 90% were influenza A (of which 44.4% were A(H1N1)pmd09) and 10% were influenza B. During EW 32, no new human infections with an influenza A(H3N2) variant (H3N2v) were reported. The total number of H3N2v cases reported this summer is 16 (Illinois: 1, Indiana: 14, Ohio: 1). There has been one hospitalization associated with the H3N2v infection, but no deaths have occurred. All cases have reported close contact with swine in the week prior to illness onset, and no ongoing human-to-human transmission has been identified. Public health and agriculture officials are investigating the disease among humans and swine, and more cases may be identified as the investigation continues.

### United States



In Mexico<sup>3</sup>, nationally during EW 31 the number of reported ARI cases decreased by 3.0%, while the number of pneumonia cases increased by 3.9% compared to the previous EW. However, both are showing decreasing trends since their peaks in 2013 (EW 4 for ARI and EW 2 for pneumonia). The highest ARI rates were reported in Aguascalientes, Yucatan, and Campeche (634, 565 and 555 per 100,000 inhabitants, respectively), and the highest pneumonia rates were in Jalisco, Yucatan and Aguascalientes (3.9, 3.3, and 3.2 per 100,000 inhabitants, respectively). According to laboratory data from EWs 29-32, 463 samples were tested and 12.6% were positive for influenza. Among the positive influenza samples, 91.2% were influenza A (of which 40.3% were A(H1N1)pdm09 and 58.1% were H3N2) and 8.8% were influenza B.

### Mexico



### Caribbean

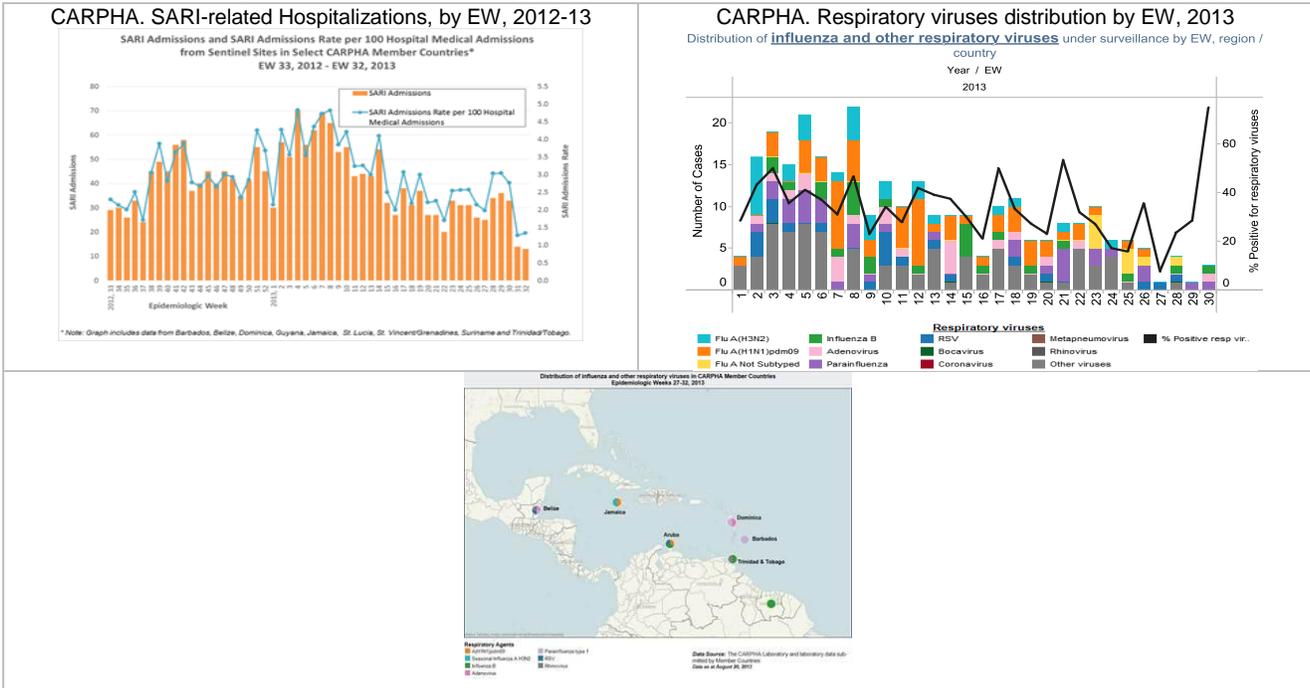
CARPHA<sup>4</sup> received weekly SARI/ARI data from five countries for EW 32, 2013: Barbados, Dominica, Jamaica, St. Vincent & the Grenadines, and Trinidad & Tobago. During EW 32, the proportion of SARI-associated hospitalizations was 1.3%, with the highest rate among those 5-14 years of age (4.6%). Barbados reported two SARI-associated deaths during EW 31, however no deaths were reported by the region during EW 32. For cases with dates of onset between EW 25 and 32, 2013, the following viruses were laboratory

<sup>3</sup> México. Dirección General de Epidemiología. Información epidemiológica. SE 32.

<sup>4</sup> Caribbean Public Health Agency (CARPHA) EW 32

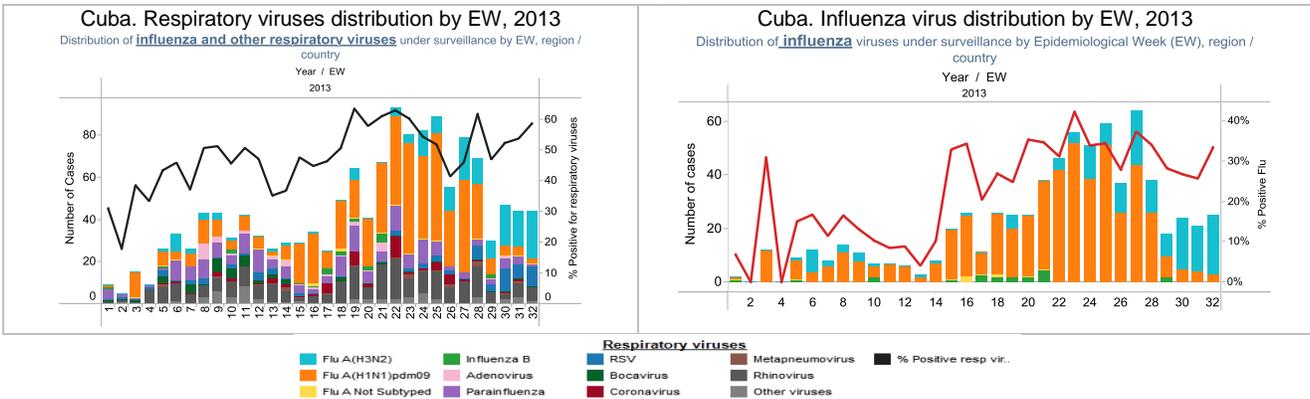
confirmed in member countries: influenza A(H1N1)pdm09 (Aruba, Jamaica); influenza A(H3N2) (Jamaica), influenza B (Aruba, Suriname, Trinidad & Tobago); adenovirus (Belize, Dominica); parainfluenza 1 (Barbados, Belize, Dominica); parainfluenza 3 (Barbados); rhinovirus (Belize, Trinidad & Tobago); RSV (Belize, Aruba). According to CARPHA laboratory data from EW 1-32, 239 samples were analyzed, of which 31.6% were positive for at least one respiratory virus, and 9.2% (n=22) had multiple viruses isolated.

**CARPHA**



In Cuba, based on laboratory data from EW 29-32, 311 samples were analyzed, of which 53.1% were positive for a respiratory virus and 28.3% were positive for influenza. Among the influenza positive samples, 97.7% were influenza A (76.7% were A(H3N2) and 23.3% were A(H1N1)pdm09), and 2.3% were influenza B. Among the samples positive for other respiratory viruses, RSV (18.8%) and rhinovirus (13.9%) predominated.

**Cuba**

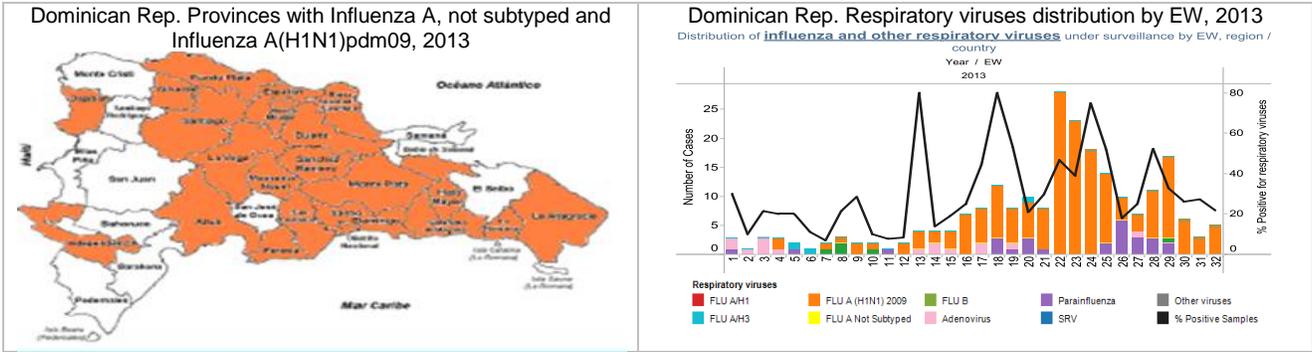


In the Dominican Republic<sup>5</sup>, from EWs 1-31 a total of 1,446,868 ILI cases were reported (rate: 840 per 10,000 inhabitants). This is 14% less than what was reported for the same period in 2012 (983 per 10,000 inhabitants). Between EWs 1-31, 986 SARI cases were reported through sentinel surveillance, primarily in Santo Domingo, Santiago and San Cristobal provinces. Based on laboratory data from EWs 30-33 and according to the 75 samples analyzed, influenza A(H1N1)pdm09 was circulating in Espailat, San Pedro de Macoris, Azua y Santiago and influenza B was circulating in Santo Domingo. One death occurred in EW 30.

<sup>5</sup> República Dominicana. Dirección Nacional de Vigilancia Epidemiológica. Boletín Semanal SE 32.

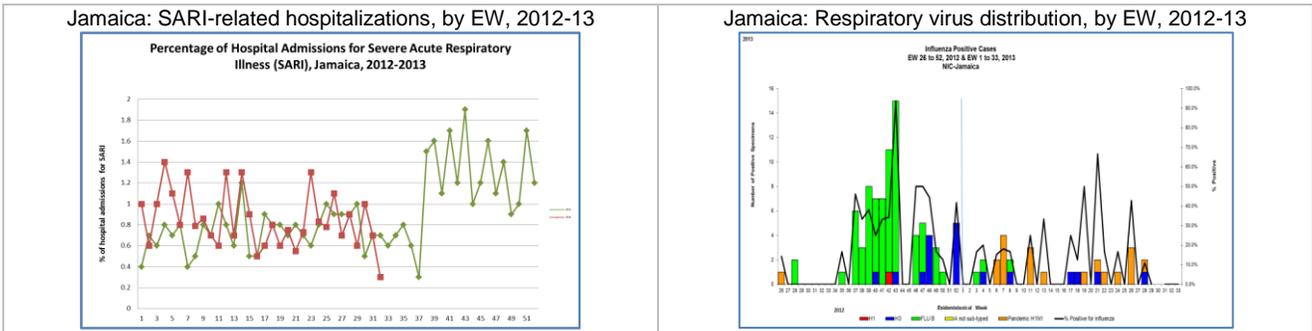
This brings the total number of SARI-associated deaths for the year to 18 (compared to 5 deaths reported for this period in 2012), of which 16 were associated with influenza A(H1N1)pdm09.

### Dominican Republic



In Jamaica, sentinel surveillance data showed that for EW 32 the proportion of ARI-associated consultations was 2.2%, a decrease of 0.1% from the previous EW. The proportion of SARI-associated hospitalizations was less than 1% and remained stable compared to the previous week. During EW 32, there were no SARI-associated deaths reported and, according to laboratory data, influenza viruses were not detected in the analyzed (n=2).

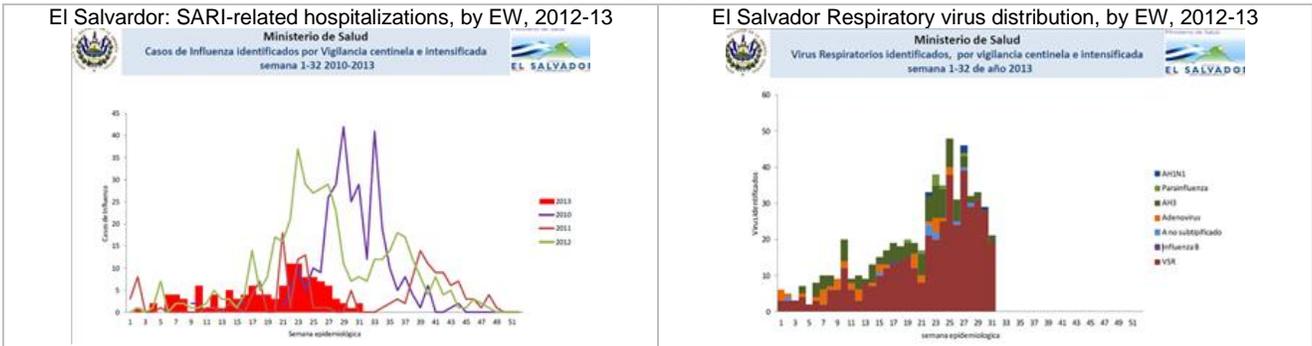
### Jamaica



### Central America

In El Salvador<sup>6</sup>, based on sentinel and intensified surveillance data, the number influenza cases has shown a decreasing trend since EW 23 and is lower than previous years. According to laboratory data, among positive samples, RSV predominates.

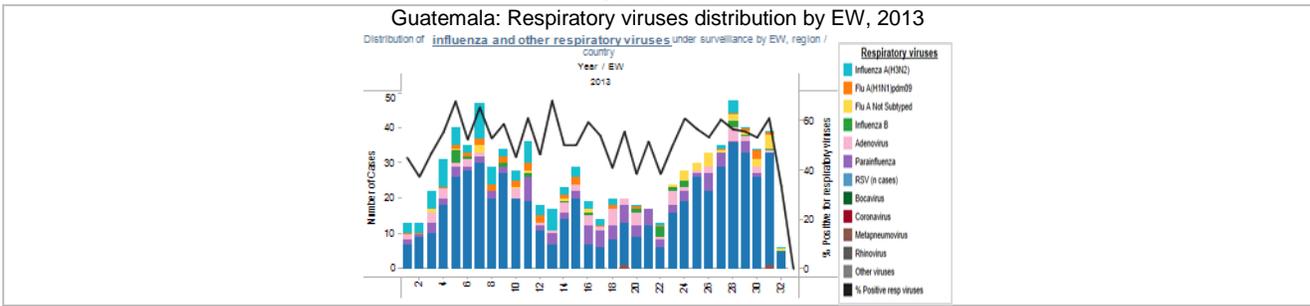
### El Salvador



In Guatemala, based on national laboratory data from EW 29-32, 218 samples were analyzed of which 54.6% were positive for a respiratory virus and 6.0% were positive for influenza. Among respiratory viruses, RSV (44.0%), adenovirus (2.3%) and parainfluenza (1.8%) predominated. Among samples positive for influenza, 100% were influenza A (of which 61.5% were influenza A, unsubtype and 38.5% were influenza A(H1N1)pdm09).

<sup>6</sup> El Salvador. Boletín epidemiológico SE 32.

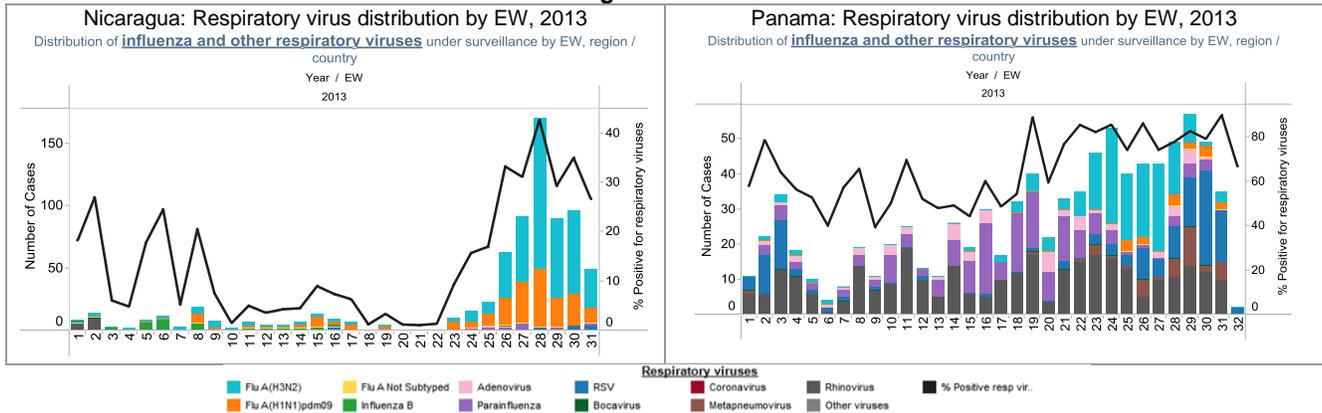
## Guatemala



In Nicaragua, based on laboratory data from EW 28-31, of the total samples analyzed (n=1,166), the percentage of samples positive for a respiratory virus decreased from its peak in EW 28 (41.8%) to 23.4% in EW 31. Among positive influenza samples, influenza A(H3N2) (72.8%) predominated, followed by influenza A (H1N1)pdm09 (27.2%).

In Panama, based on national laboratory data from EW 28-31, 233 samples were analyzed of which 81.5% were positive for a respiratory virus and 15.9% were positive for influenza. The percentage of positive samples increased from 77.8% in EW 28 to 89.7% in EW 31. Among positive influenza samples, 100% were influenza A (73% were influenza A(H3N2) and 27% were A(H1N1)pdm09). Among samples positive for other respiratory viruses, RSV (27.9%), rhinovirus (20.2%) and metapneumovirus (9.9%) predominated.

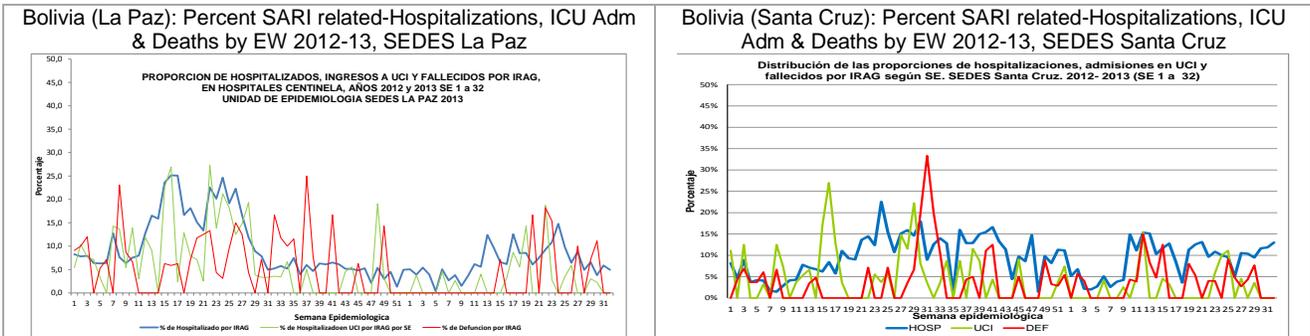
## Nicaragua and Panama

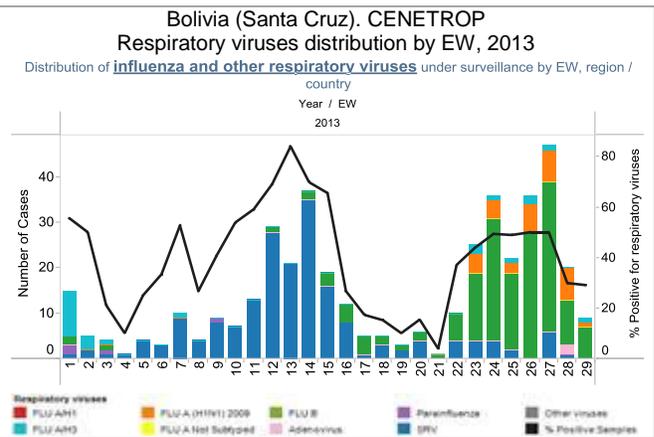
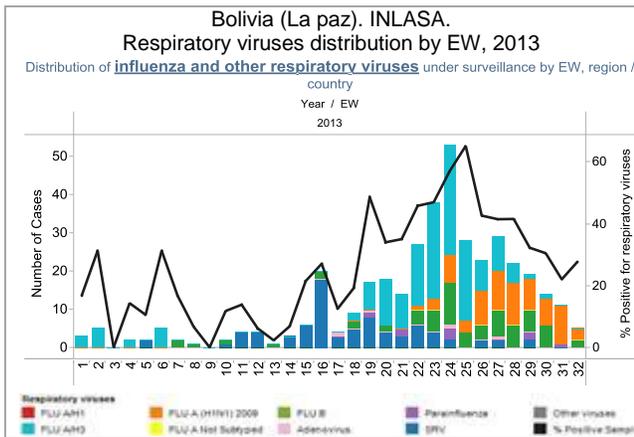


## South America – Andean countries

In Bolivia, according to data from Santa Cruz, during EW 32 the proportion of SARI hospitalizations (13%) was slightly higher than what was observed during the previous week. Based on laboratory data from CENETROP (Santa Cruz) from EW 31-32, 114 samples were analyzed of which 24% were positive for a respiratory virus and 23% were positive for influenza, both showing declining positivity. Among positive samples, influenza A(H1N1)pdm09 (18/27) and influenza B (7/27) predominated. According to data from La Paz, during EW 32 the proportion of SARI-associated hospitalizations (4.19%) has shown a decreasing trend since EW 24. Based on laboratory data from INLASA (La Paz) from EW 30-31, 96 samples were analyzed of which 26% were positive for a respiratory virus and 25% were positive for influenza. Among positive samples, influenza A(H1N1)pdm09 (68%) predominated.

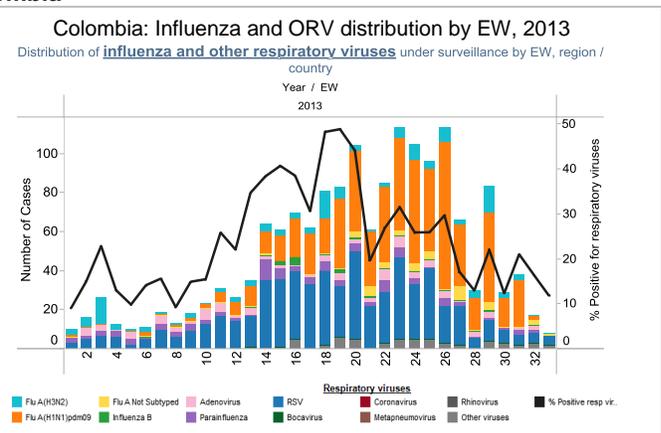
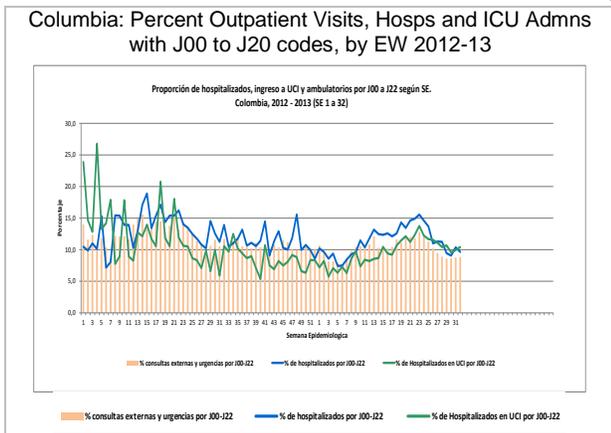
## Bolivia





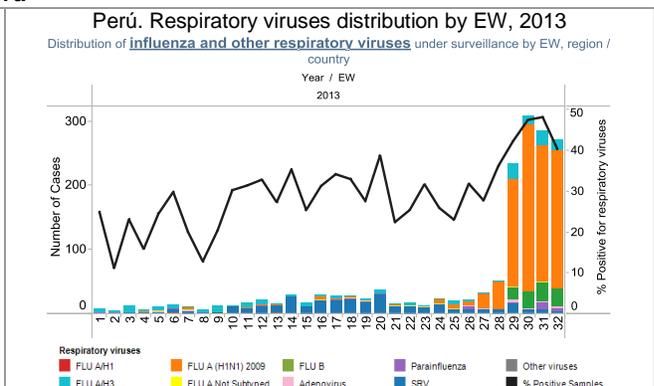
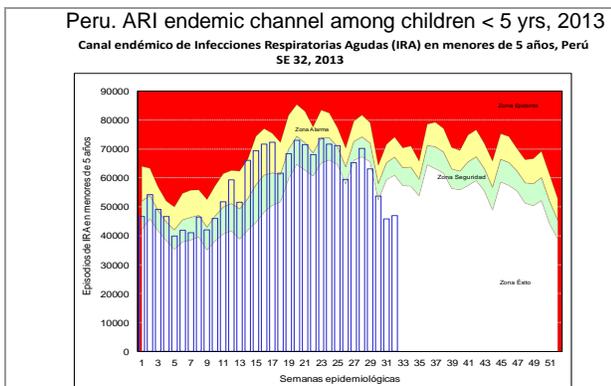
In Colombia, nationally during EW 32, the proportions of outpatient visits (8.8%), hospitalizations (9.6%), and ICU admissions (10.4%) with ARI-associated ICD-10 codes (J00 to J22) did change significantly from the previous EW. Based on INS national laboratory data from EW 31-32, 285 samples were analyzed, of which 19% were positive for a respiratory virus and 11% were positive for influenza. Among the positive samples, influenza A(H1N1)pdm09 (47%) predominated.

### Colombia



In Peru<sup>7</sup>, nationally for the previous weeks ARI and pneumonia reports in children less than 5 years of age have not changed significantly and remain within the success zone of the endemic channel. Based on national laboratory data from EW 32, 673 samples were analyzed, of which 40% were positive for a respiratory virus and 38% were positive for influenza. Among the positive samples, influenza A(H1N1)pdm09 (79%) predominated.

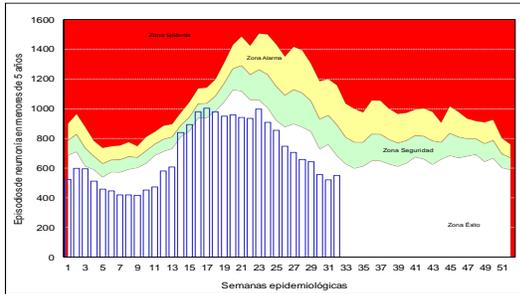
### Peru



<sup>7</sup> Perú. Sala de Situación de Salud. EW 32, 2013. Ministerio de Salud. Dirección General de Epidemiología

Peru. Pneumonia endemic channel among children <5yrs, 2013

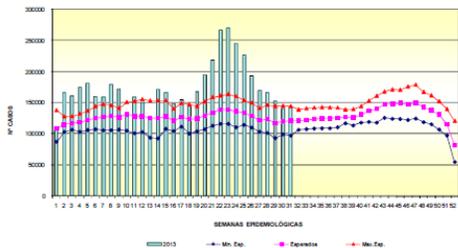
Canal endémico de neumonías en menores de 5 años, Perú SE 32, 2013



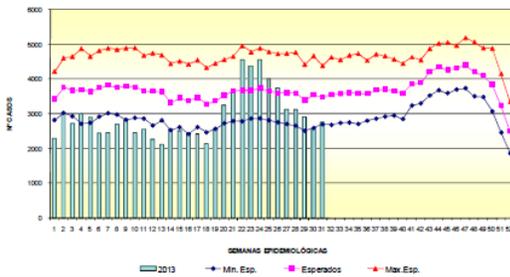
In Venezuela<sup>8</sup>, ARI activity has not shown any significant changes for the last three EWs (29-31) and is still near the upper limit of expected activity for this time of year. Pneumonia notification levels have remained stable and are also within expected levels for this time of year. Based on virologic surveillance data, the decrease in samples processed for respiratory viruses observed since EW 21 continues.

Venezuela

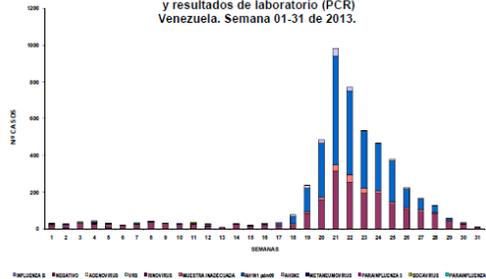
Venezuela: ARI endemic channel  
Infecciones respiratorias agudas  
Canal endémico 2005 - 2013  
Venezuela, 2013



Venezuela: Pneumonia endemic channel  
Neumonías  
Canal endémico 2005 - 2013  
Venezuela, 2013



Venezuela: Respiratory viruses by EW, 2013  
Influenza: Casos sospechosos investigados distribuidos por semanas epidemiológicas según fecha de inicio de síntomas y resultados de laboratorio (PCR)  
Venezuela. Semana 01-31 de 2013.

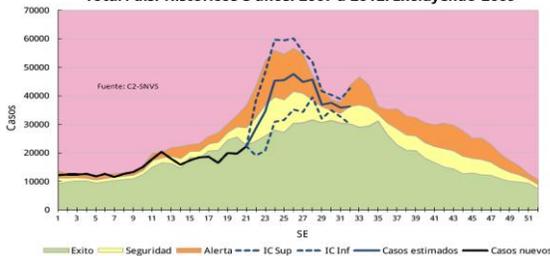


South America – Southern Cone and Brazil

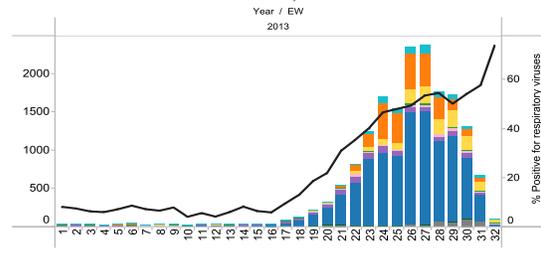
In Argentina<sup>9</sup>, at the national level, according to reports and calculated estimations, the number of ILI reports is within the expected level and is showing a decreasing trend. Based on laboratory data from EW 31-32, 1,301 samples were analyzed, of which 59% were positive for a respiratory virus and 20% were positive for influenza. Among the positive samples, RSV (50%), and influenza A, not subtyped (21%) predominated.

Argentina

Argentina. ILI cases. Endemic Channel, 2013  
Corredor endémico semanal de ETI - 2013  
Total País. Históricos 5 años: 2007 a 2012. Excluyendo 2009

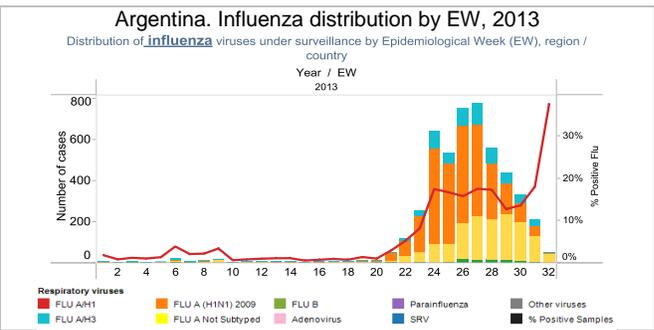
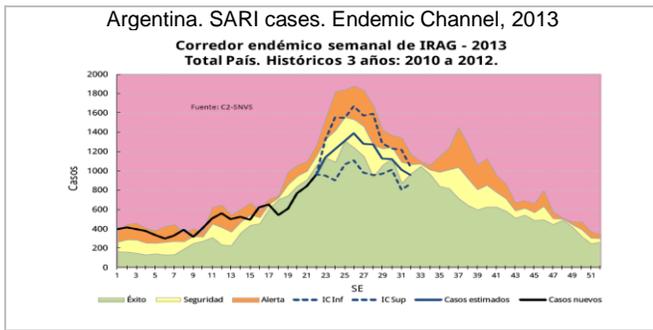


Argentina. Respiratory viruses distribution by EW, 2013  
Distribution of influenza and other respiratory viruses under surveillance by EW, region / country



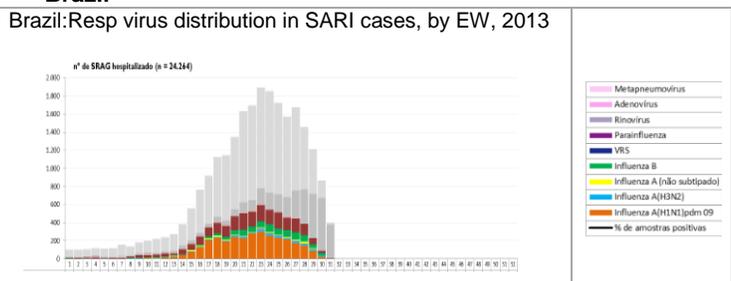
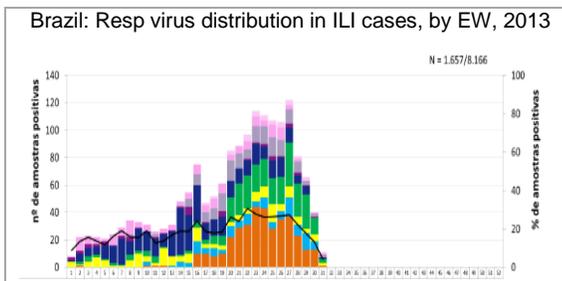
<sup>8</sup> Venezuela. Boletín epidemiológico, EW 32, 2013.

<sup>9</sup> Argentina. Boletín integrado de vigilancia. SE 32.



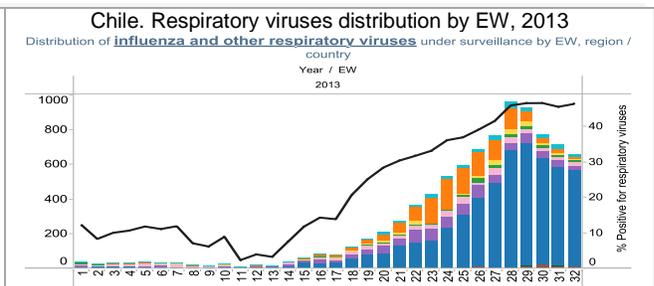
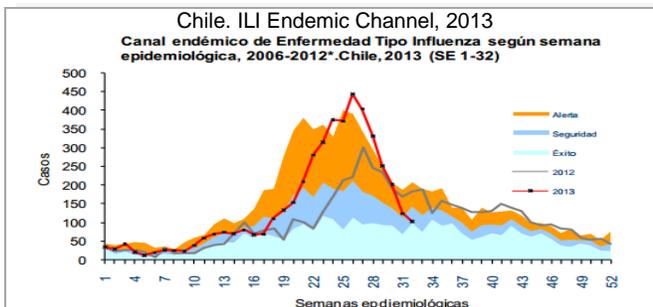
In Brazil<sup>10</sup>, according to sentinel surveillance data through EW 31, 8,166 samples were analyzed, of which 20.3% were positive for a respiratory virus. Among positive samples, RSV has predominated since the beginning of the year, and influenza A(H1N1)pdm09 and influenza B have had increased circulation since EW 16 and EW 20, respectively. This pattern is being observed in the south and southeast regions. Based on universal SARI surveillance data during this same period, 24,264 cases were reported, of which 18.4% were positive for influenza. Since EW 12, there has been increased detection of influenza A(H1N1)pdm09. Additionally, through EW 31, 2,529 deaths were reported with 27.9% positive for influenza, and of these, 85.8% were associated with influenza A(H1N1)pdm09.

### Brazil

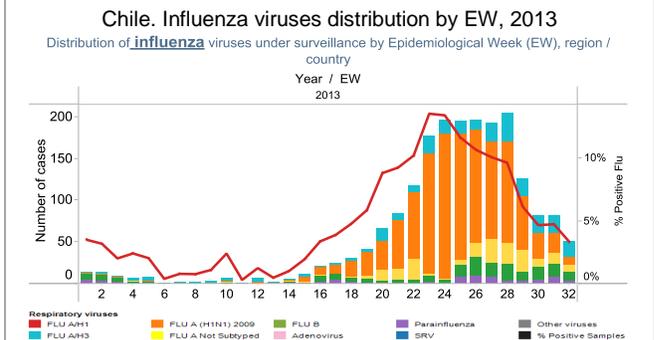
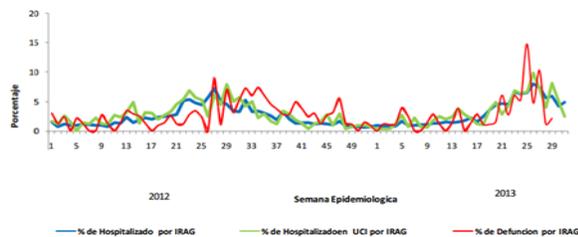


In Chile<sup>11</sup>, during EW 32, ILI activity (rate: 6.5 per 100,000 inhabitants) decreased compared to the previous EW and entered the safety zone of the endemic channel. The proportion of SARI-associated hospitalizations (4.6%) did not change significantly from the previous week and continued a downward trend. Based on laboratory data from EW 32, 1,425 samples were analyzed, of which 46% were positive for a respiratory virus and 3% were positive for influenza. Among the positive samples, RSV predominated (84%).

### Chile



Chile: % SARI-related Hosps, ICU Adms & Deaths, by EW 2013  
Porcentaje de hospitalizados, ingreso a UCI y fallecidos por IRAG según SE.  
Chile, Hospitales Centinela. 2012 y SE 1-31 de 2013.

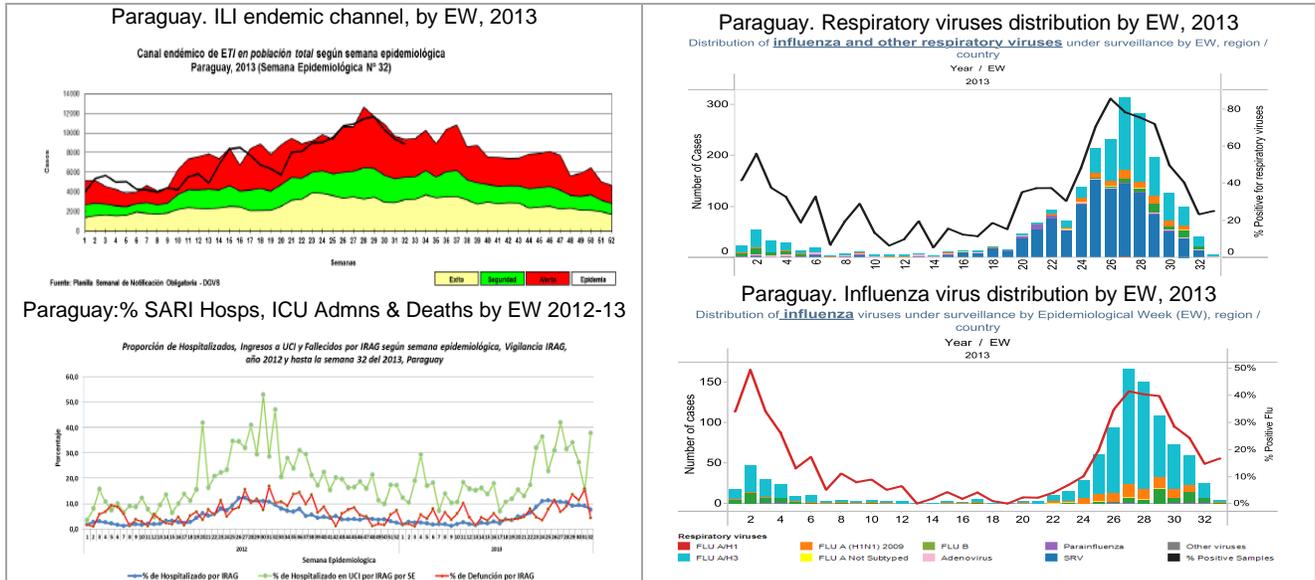


<sup>10</sup> Brasil. Boletim informativo. Secretaria de Vigilância em Saúde. SE 32, 2013.

<sup>11</sup> Chile. Informe de situación. EW 32. Disponible en: [www.pandemia.cl](http://www.pandemia.cl)

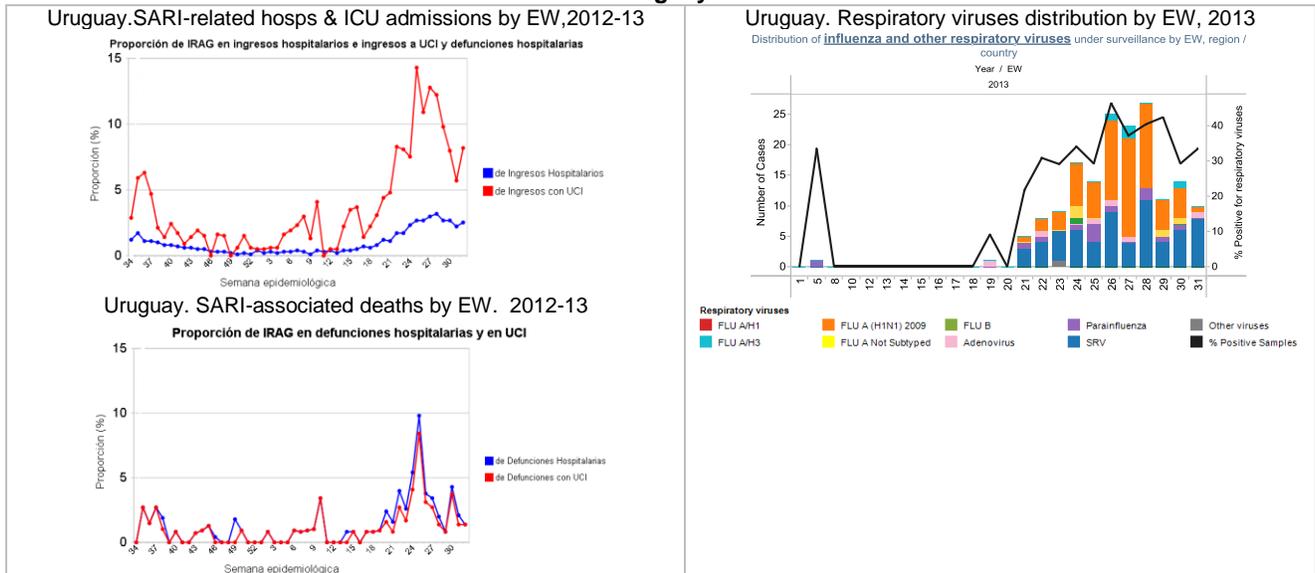
In Paraguay<sup>12</sup>, during EW 32, ILI activity (rate: 133 per 100,000 inhabitants) continued the decrease observed during the last four weeks and remained within the alert zone of the endemic channel. The proportion of SARI hospitalizations (7.6%) did not change significantly compared to the last EW and is similar to what was observed during this period last year. Based on reference laboratory data from EW 32, 177 samples were analyzed, of which 23% were positive for a respiratory virus and 15% were positive for influenza, a decrease from EW 26. Among the positive samples, influenza A(H3N2) (44%) and RSV (36%) predominated.

### Paraguay



In Uruguay<sup>13</sup>, nationally during EW 32 the proportion of SARI-associated hospitalizations did not change significantly from the previous EW. Based on laboratory data from EW 31-32, 62 SARI samples were analyzed, of which 34% were positive for a respiratory virus and 6% were positive for influenza. Among the positive samples, RSV (15/21) and influenza A(H1N1)pdm09 (4/21) predominated.

### Uruguay



<sup>12</sup> Paraguay. Informe de situación. Vigilancia de ETI e IRAG. SE 32, 2013

<sup>13</sup> Uruguay. Generador de gráficos de la división de epidemiología, Dirección General de Salud – Ministerio de Salud Pública