



# Regional Update EW 34, 2013

## Influenza and other respiratory viruses

(September 3, 2013)

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

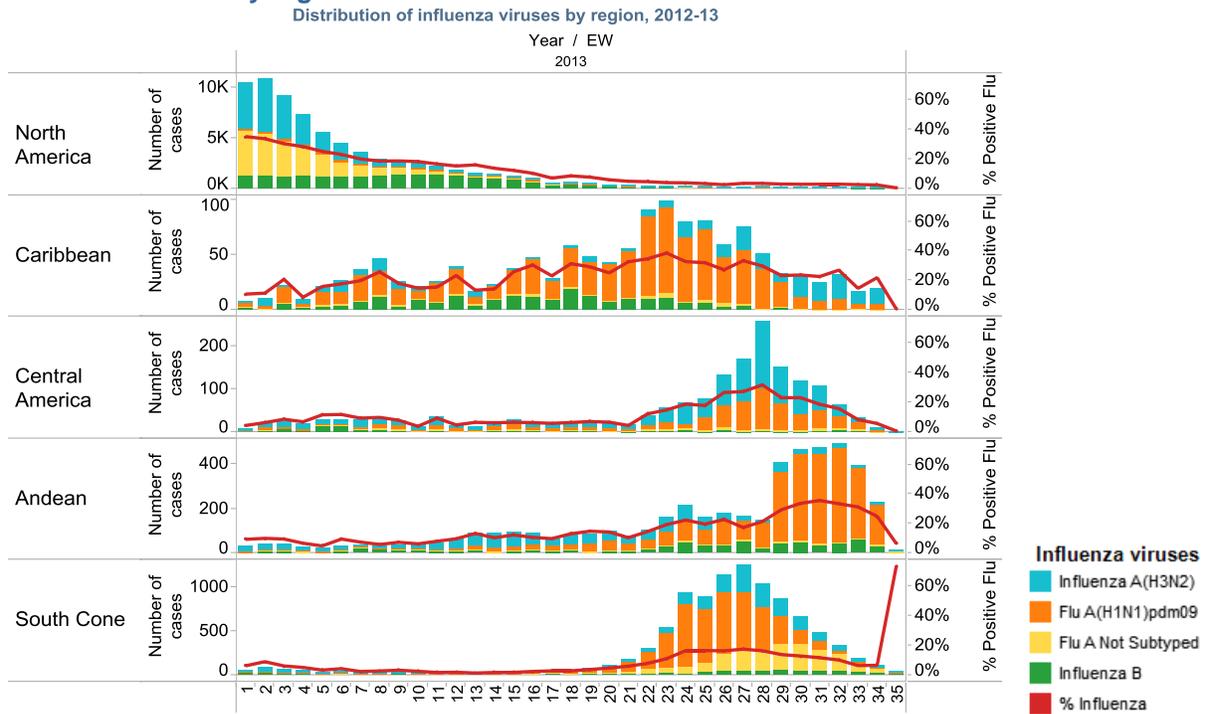
Influenza Regional Reports: [www.paho.org/reportesinfluenza](http://www.paho.org/reportesinfluenza)

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.

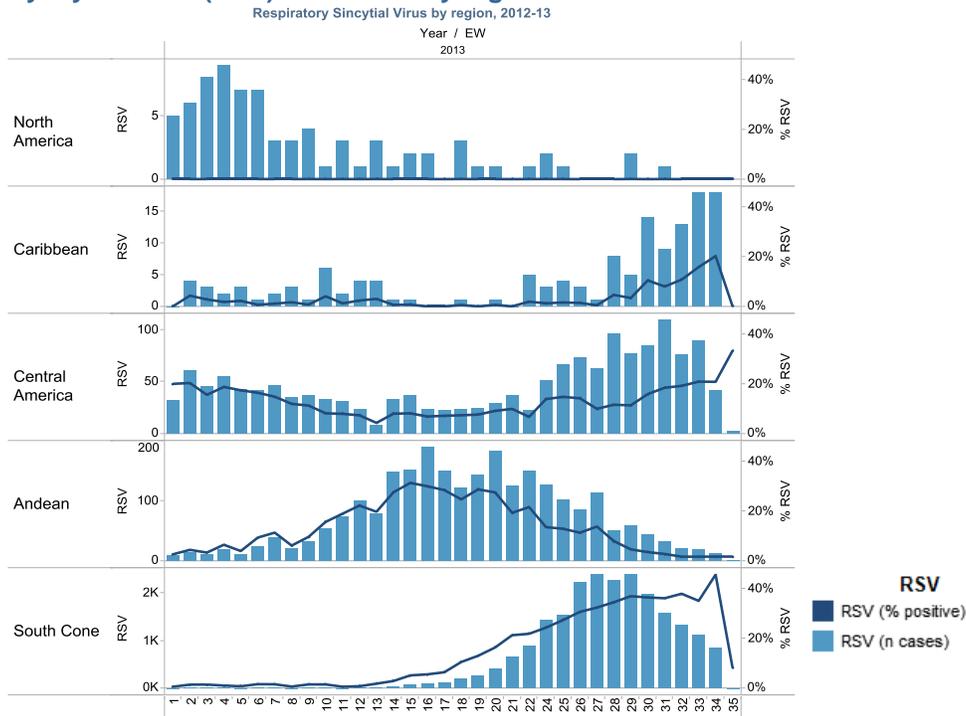
### WEEKLY SUMMARY

- **North America:** most influenza activity indicators were low and within expected levels for this time of year. In the United States, one new case of influenza A(H3N2v) was reported, bringing the total to 17 cases 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. Circulation of influenza A(H3N2) predominated in Cuba and El Salvador, and influenza B in Honduras. Among other respiratory viruses, RSV continued to predominate in Guatemala and El Salvador, and adenovirus predominated in Honduras.
- **South America – Andean Countries:** acute respiratory virus activity remained elevated with a predominance of influenza A(H1N1)pdm09. However, activity in Peru and Ecuador decreased. In Bolivia, there was increased activity, primarily in Santa Cruz, while in Colombia activity continued to decrease and in Venezuela no respiratory viruses were detected in the samples processed during the last two weeks.
- **South America - South Cone and Brazil:** acute respiratory virus activity was within the expected level for this time of year in all countries except Paraguay where ILI activity was increasing. RSV predominated in most countries with co-circulation of influenza B and A(H3N2) in Paraguay. In Southern and Southeastern Brazil circulation of influenza A(H1N1)pdm09 and influenza B decreased.

### Influenza circulation by region. 2012-2013



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

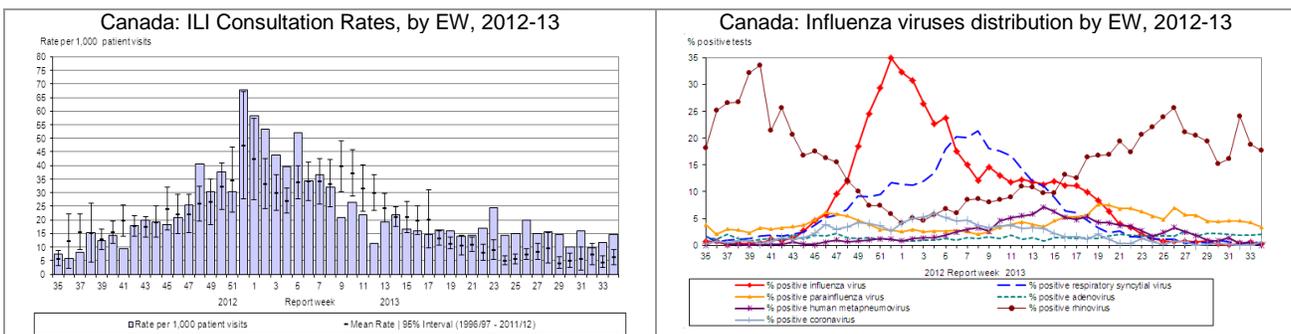


## EPIDEMIOLOGIC AND VIROLOGIC UPDATE OF INFLUENZA & OTHER RESPIRATORY VIRUSES BY COUNTRY

### North America:

In Canada<sup>1</sup>, during EW 33 and 34, influenza activity remained low. During EW 34, the national influenza-like-illness (ILI) consultation rate was 14.5 per 1,000 patient visits. Although above the average range, there has been a gradual downward trend for the last several EWs. One influenza-associated pediatric death was reported in EW and was associated with influenza A. Based on laboratory data for the 2012-13 season, among positive flu samples, 85.1% were influenza A (34.8% A(H3N2), 4.7% A(H1N1)pdm09, and 60.5% A, not subtyped), and 14.9% were influenza B. During EW 34, among other respiratory viruses, rhinovirus predominated (17.7%), followed by parainfluenza (3.4%), adenovirus (2.1%), coronavirus (0.5%), and RSV (0.5%). During the 2012-13 season, 1,514 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.

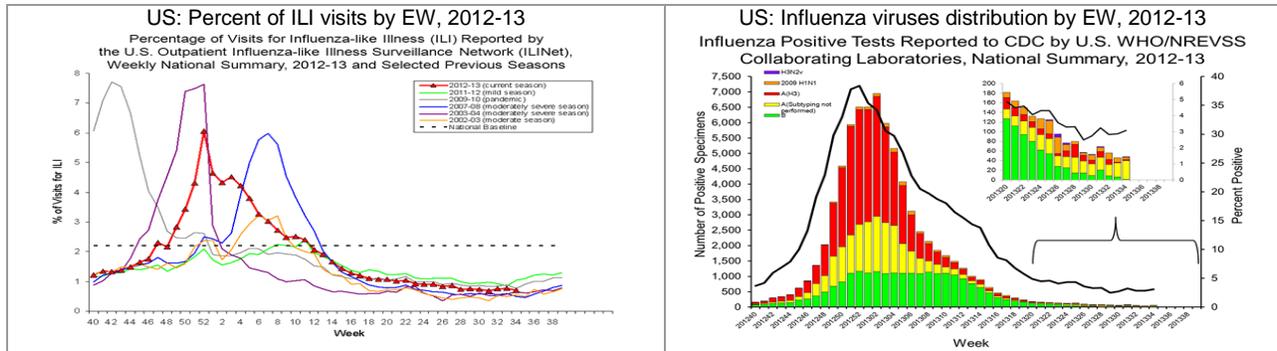
### Canada



<sup>1</sup> Canada: FluWatch Report. EW 33-34. Available at <http://www.phac-aspc.gc.ca/fluwatch/>

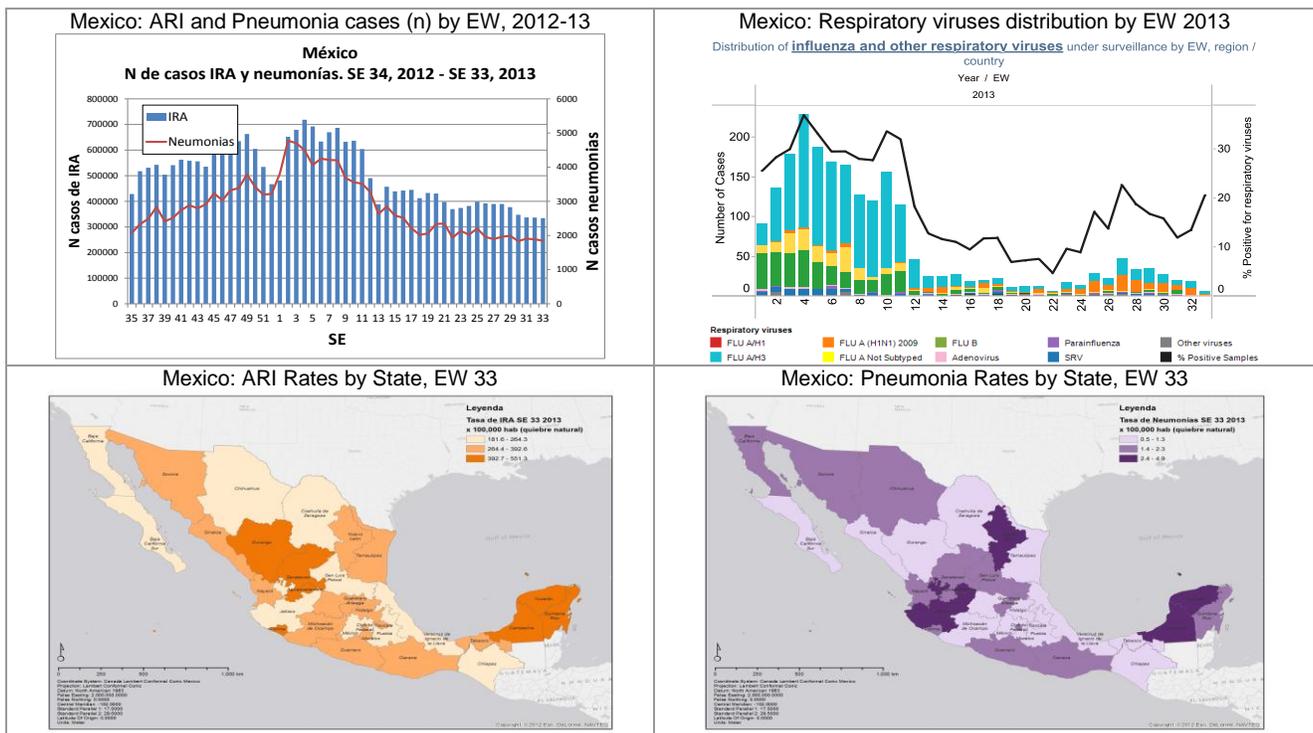
In the United States<sup>2</sup> during EW 34, influenza activity remained low with 0.7% of outpatient visits associated with ILI and 5.8% of deaths associated with pneumonia and influenza. Two influenza-associated pediatric deaths were reported during EW 34. One death occurred during EW 33 and was associated with influenza A (not subtyped), and one death occurred during EW 4 and was associated with both influenza A(H3) and A(H1N1(pdm09)). Based on laboratory data for EW 34, 1,556 samples were tested of which 3.1% were positive for influenza, an increase from the previous week. Among the positive samples (n=47), 97.9% were influenza A (of which 84.7% were not subtyped and 10.9% were A(H1N1)pdm09) and 2.1% were influenza B. One new human infection with an influenza A(H3N2) variant (H3N2v) was reported during EW 34. The total number of H3N2v cases reported this summer is 17 (Illinois: 1, Indiana: 14, Michigan: 1, 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 34 the ARI cases increased by 3.3% and pneumonia cases decreased by 1.9% 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). According to laboratory data from EW 32-33, 175 samples were tested, of which 14.9% were positive for a respiratory virus and 14.3% were positive for influenza. Among the positive influenza samples, 92.0% were influenza A (of which 56.5% were H3N2 and 43.5% were A(H1N1)pdm09) and 8.0% were influenza B.

### Mexico



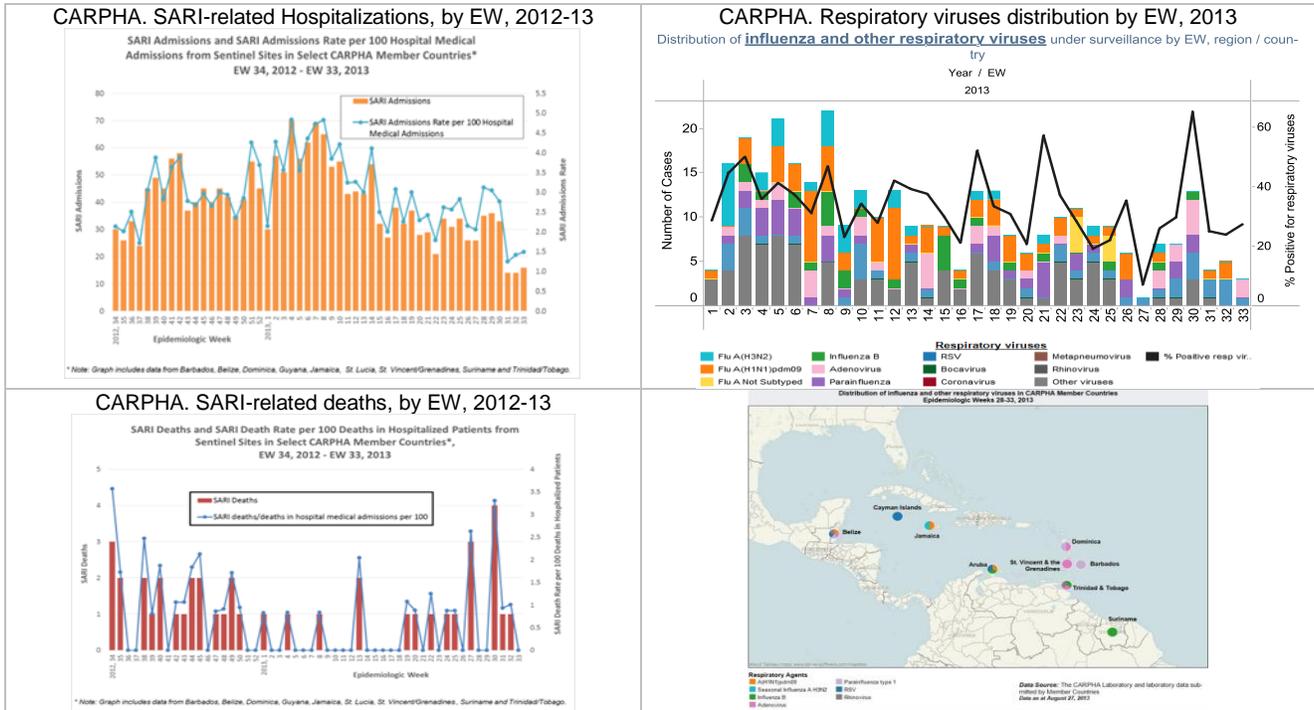
<sup>2</sup> USA: CDC FluView report. EW 34. Available at: <http://www.cdc.gov/flu/weekly/>

<sup>3</sup> México. Dirección General de Epidemiología. Información epidemiológica. SE 34.

**Caribbean**

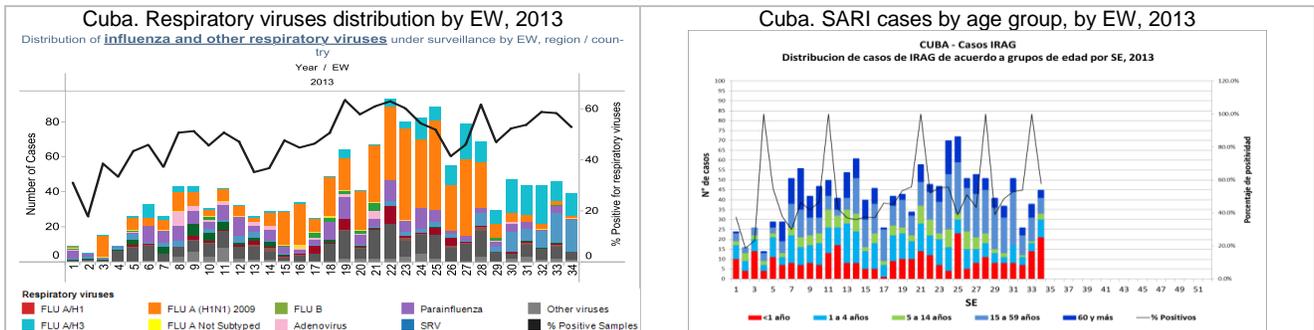
CARPHA<sup>4</sup> received weekly SARI/ARI data from six countries for EW 33, 2013: Barbados, Dominica, Jamaica, St. Lucia, St. Vincent and the Grenadines, and Trinidad & Tobago. During EW 33, the proportion of SARI-associated hospitalizations was 1.5%, with the highest rate among children 6 months to 4 years of age (9.1%). No SARI deaths were reported during EW 33. For cases with dates of onset between EW 28 and 33, the following viruses were laboratory confirmed in member countries: influenza A(H1N1)pdm09 (Aruba, Belize, Jamaica); influenza A(H3N2) (Jamaica), influenza B (Aruba, Suriname, Trinidad and Tobago); adenovirus (Belize, Dominica, St. Vincent and the Grenadines, Trinidad and Tobago); parainfluenza 1 (Barbados, Belize, Dominica); rhinovirus (Belize, Trinidad and Tobago); RSV (Aruba, Belize, Cayman Islands). According to CARPHA laboratory data to date, 259 cases tested positive for at least one respiratory virus, corresponding to a percent positivity of 32.5%.

**CARPHA**



In Cuba, SARI-associated hospitalizations have been decreasing for the last two weeks and children less than one year of age have been the most affected age group. No SARI-associated deaths were reported during this period. According to national laboratory data for EW 31-34, 310 samples were analyzed, of which 55.8% were positive for a respiratory virus and 23.9% were positive for influenza. Of the total positive samples, 33% were from ILI cases and 66% were from SARI cases. Among all samples positive for influenza A, A(H3N2) predominated (86.6%), with a higher than average positivity in the previous weeks, followed by influenza A(H1N1)pdm09 (23.6%). RSV, rhinovirus and parainfluenza were also circulating. Similarly, among the samples analyzed from SARI-patients during EW 31-34 (n=147), RSV, parainfluenza, rhinovirus, influenza A(H3N2) and influenza A(H1N1)pdm09 were detected.

**Cuba**

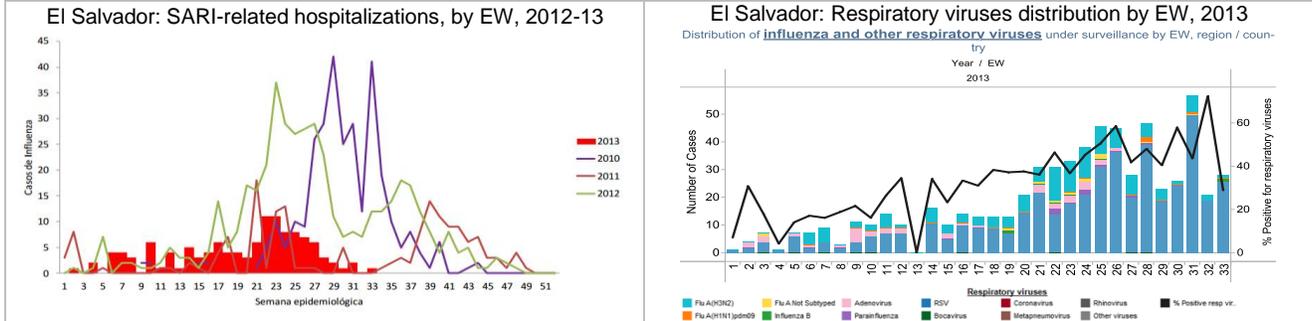


<sup>4</sup> Caribbean Public Health Agency (CARPHA) EW 33

## Central America

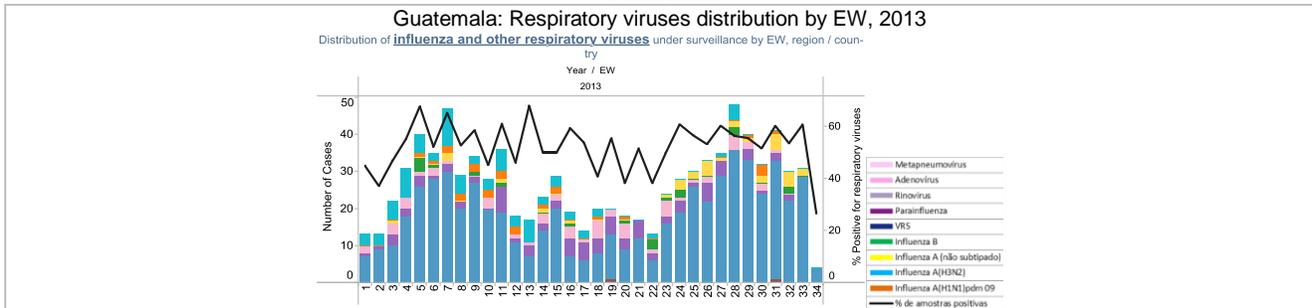
In El Salvador<sup>5</sup>, based on intensified sentinel surveillance data through EW 34, the number of influenza cases has shown a decreasing trend since EW 23 and is lower than in previous years. Based on national laboratory data from EW 30-33, 302 samples were analyzed, of which 43.7% were positive for a respiratory virus and 4.0% were positive for influenza. Among samples positive for a respiratory virus, RSV predominated (39.7%). Among samples positive for influenza, 91.7% were influenza A (of which 90.9% were A(H3N2) and 9.1% A(H1N1)pdm09) and 8.3% were influenza B.

### El Salvador



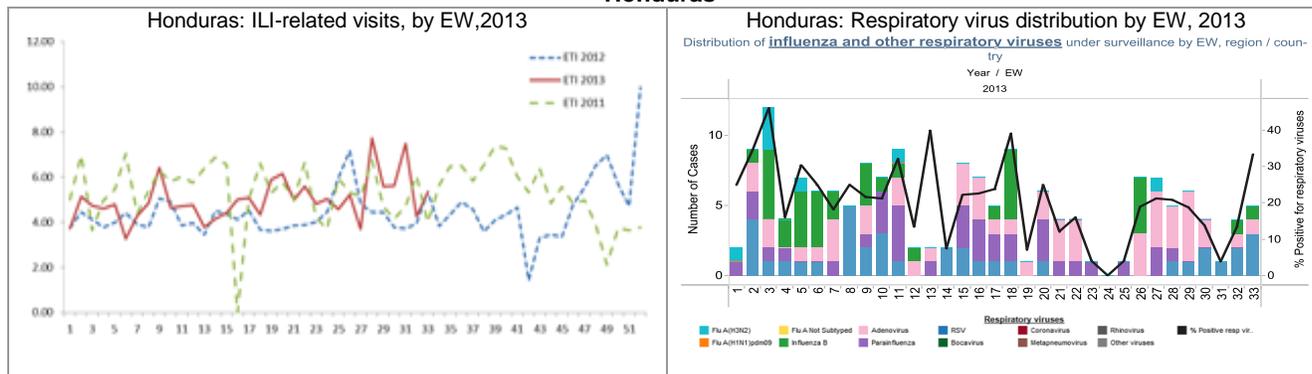
In Guatemala, based on laboratory data from EW 31-34, 190 samples were analyzed of which 55.8% were positive for a respiratory virus and 6.8% were positive for influenza. Among the samples positive for other respiratory viruses, RSV (45.8%) and parainfluenza (2.1%) predominated. Among samples positive for influenza, 84.6% were influenza A (of which 90.9% were influenza A, not subtyped and 9.1% were influenza A(H1N1)pdm09) and 15.4% were influenza B.

### Guatemala



In Honduras<sup>6</sup>, based on sentinel surveillance during EW 33, ILI accounted for 5.3% of outpatient visits, an increase compared to the previous EW (4.3% in EW 32). The proportion of SARI-associated hospitalizations was 9.0%, also an increase compared to the previous EW (6.8%). Among all deaths during EW 33, 3.9% were SARI-associated (3/78). Based on national laboratory data for EW 31-34, 100 samples were analyzed, of which 14.0% were positive for respiratory viruses and 2.0% were positive for influenza. Among the samples positive for a respiratory virus, RSV (8.0%) and adenovirus (4.0%) predominated. Among samples positive for influenza, 100% were influenza B.

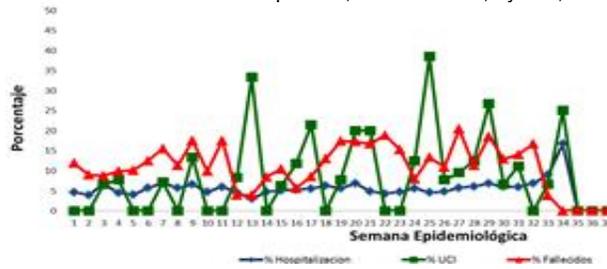
### Honduras



<sup>5</sup> El Salvador. Epidemiology Bulletin, EW 34

<sup>6</sup> Honduras. Influenza Bulletin, EW 33

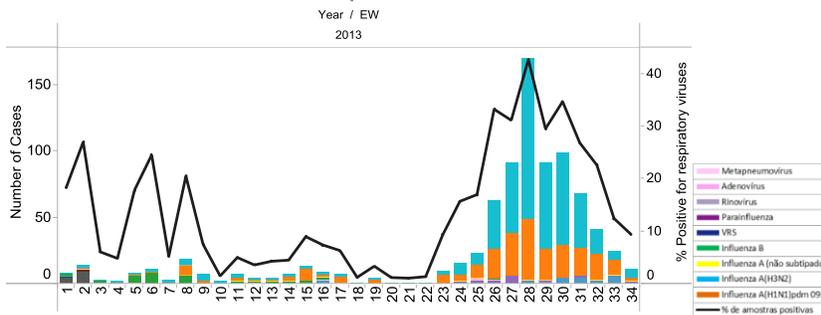
Honduras: SARI-related hosp adms, ICU & deaths, by EW, 2013



In Nicaragua, according to intensified sentinel surveillance data from EW 34, the decrease in SARI cases observed since the peak in EW 28 continued. Based on national laboratory data from EW 31-34, 748 samples were analyzed, of which 19.3% were positive for a respiratory virus and 16.8% were positive for influenza. Among samples positive for influenza, 100% were influenza A, of which 57.1% were A(H3N2) and 42.9% were A(H1N1)pdm09.

**Nicaragua**

Distribution of influenza and other respiratory viruses under surveillance by EW, region / country

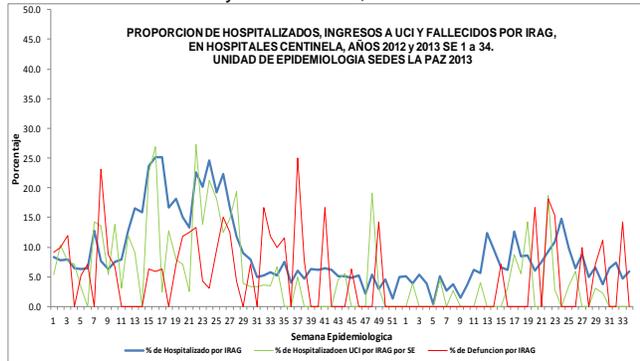


**South America – Andean countries**

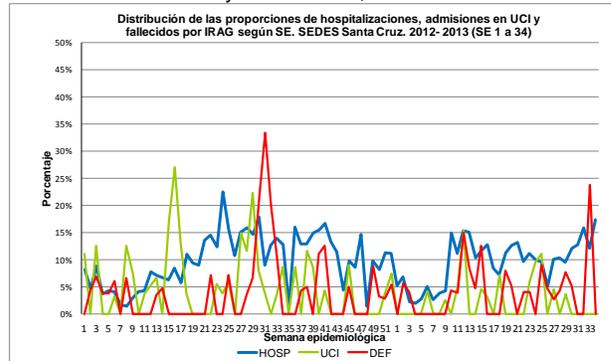
In Bolivia, according to data from Santa Cruz, during EW 34 the proportion of SARI hospitalizations (17%) was higher than what was observed during the previous week and has show an increasing trend in the previous EWs. Based on laboratory data from CENETROP (Santa Cruz) during EW 32-33, 181 samples were analyzed of which 29.3% were positive for a respiratory virus and 28.7% were positive for influenza. Among positive samples, influenza A(H1N1)pdm09 (87%) predominated. According to data from La Paz, the proportion of SARI-associated hospitalizations (5.9% in EW 34) has remained stable since EW 28. Based on laboratory data from INLASA (La Paz) from EW 33-34, 111 samples were analyzed of which 31.5% were positive for influenza. Among positive samples, influenza A(H1N1)pdm09 (48%) and influenza B (37%) predominated.

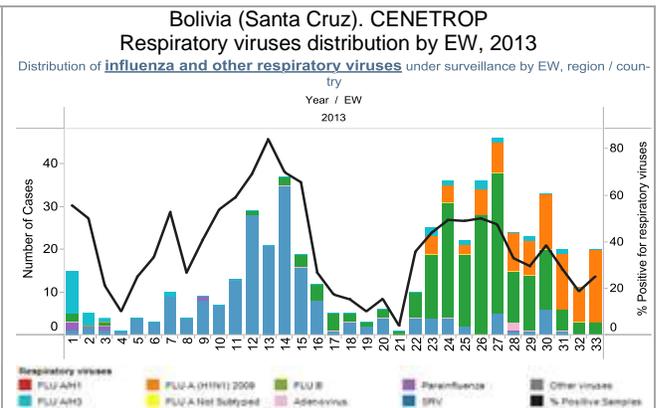
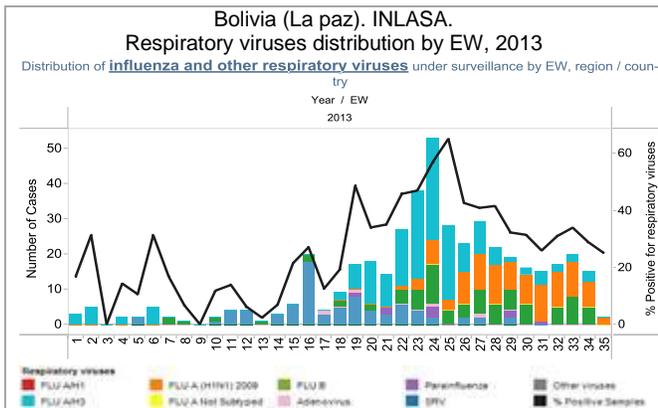
**Bolivia**

Bolivia (La Paz): Percent SARI related-Hospitalizations, ICU Adm & Deaths by EW 2012-13, SEDES La Paz



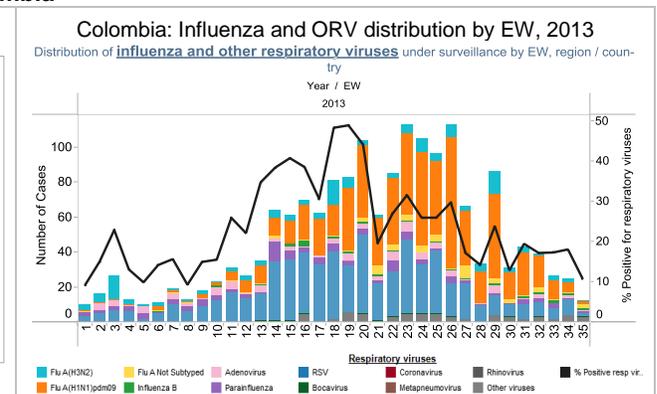
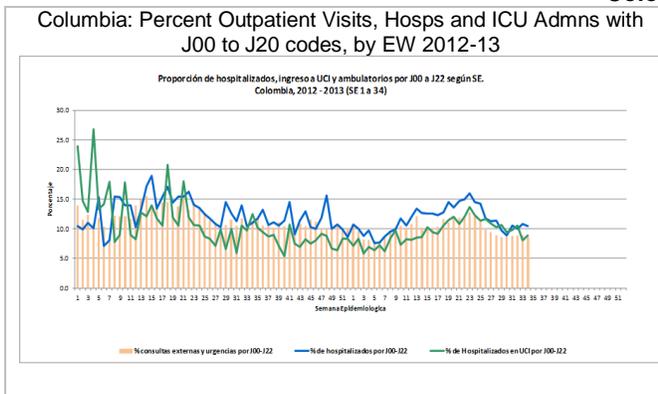
Bolivia (Santa Cruz): Percent SARI related-Hospitalizations, ICU Adm & Deaths by EW 2012-13, SEDES Santa Cruz





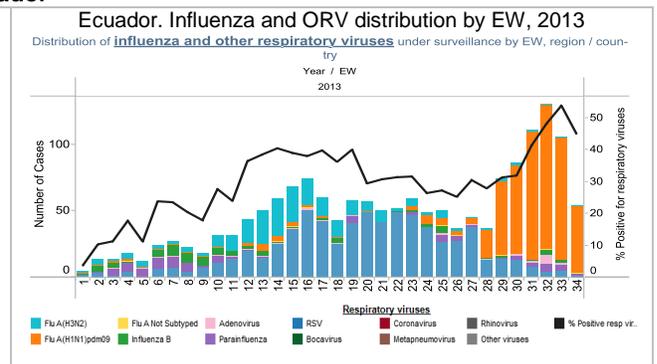
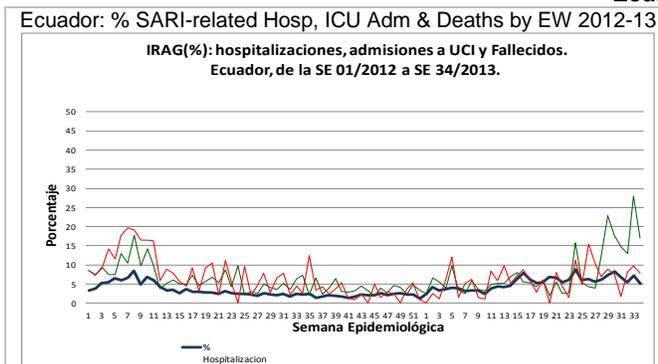
In Colombia, nationally during EW 34, the proportions of outpatient visits (8.6%), hospitalizations (10.5%), and ICU admissions (8.9%) with ARI-associated ICD-10 codes (J00 to J22) did change significantly from the previous EW. Based on INS national laboratory data from EW 33-34, 290 samples were analyzed, of which 17.6% were positive for a respiratory virus and 8.6% were positive for influenza. Among the positive samples, influenza A(H1N1)pdm09 (33%) and RSV (29%) predominated.

**Colombia**



In Ecuador, according to sentinel surveillance data from EW 34, the proportion of SARI hospitalizations (5%) decreased compared to the previous EW and has not significantly changed since EW 25. Conversely, the proportion of ICU admissions has been increasing during this same period. Based on national reference laboratory data from EW 33-34, 256 SARI samples were analyzed, of which 37% were positive for a respiratory virus and 33% were positive for influenza. Among the positive samples, influenza A(H1N1)pdm09 (86%) predominated.

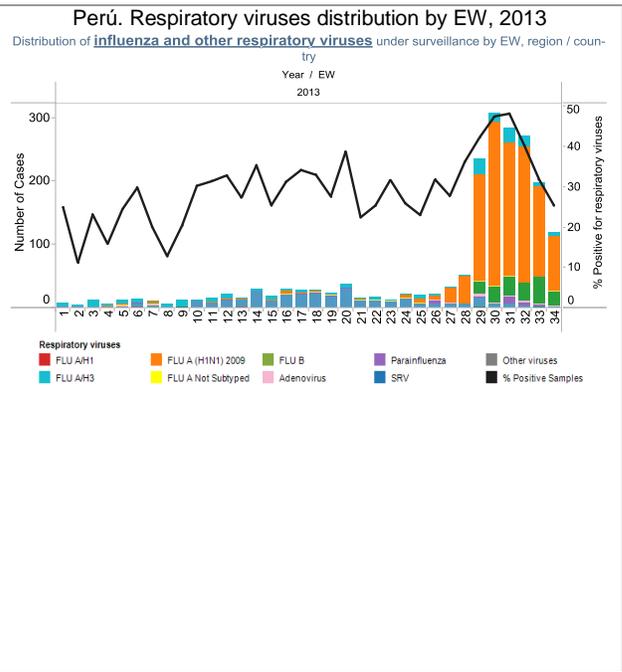
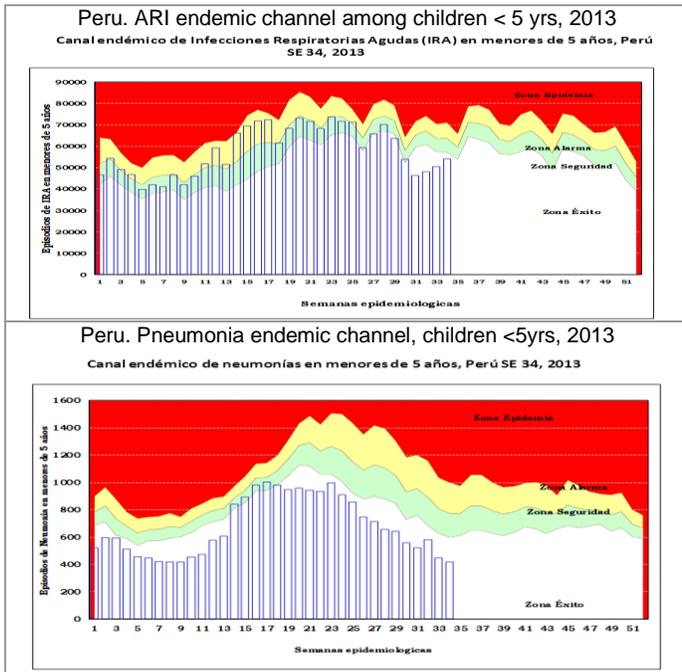
**Ecuador**



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 34, 470 samples were analyzed, of which 25.3% were positive for a respiratory virus and 24.5% were positive for influenza. Among the positive samples, influenza A(H1N1)pdm09 (74%) and influenza B (18%) predominated.

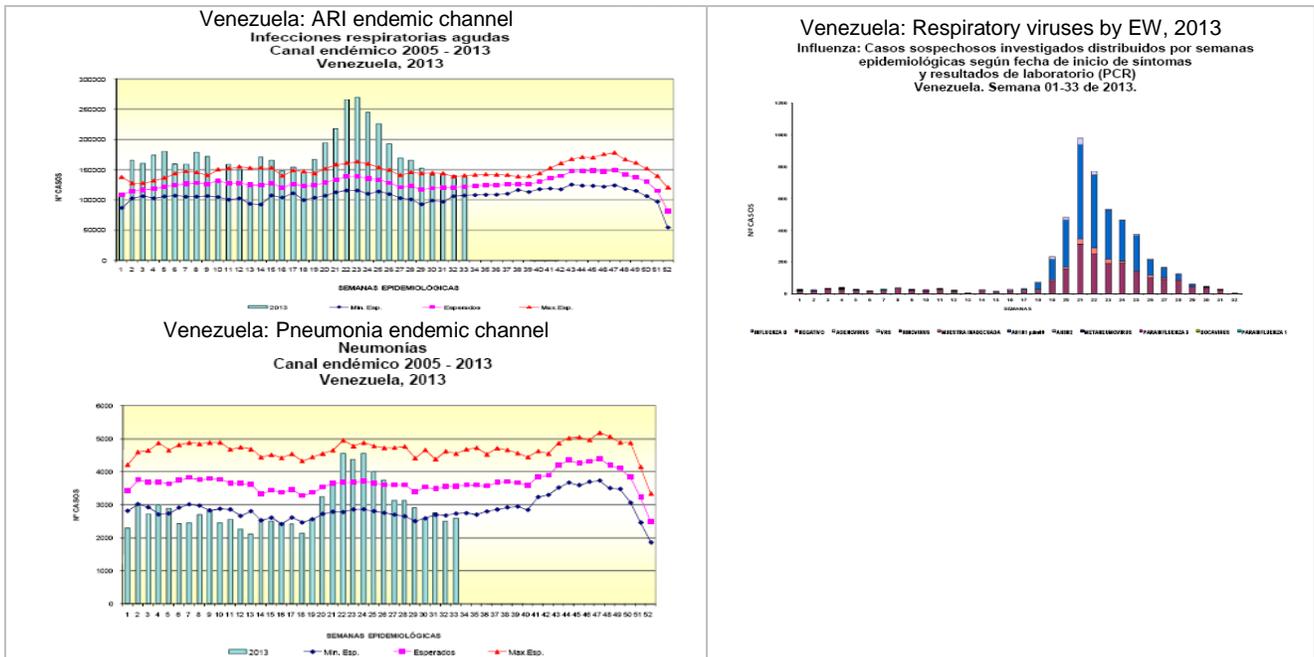
<sup>7</sup> Perú. Sala de Situación de Salud. EW 34, 2013. Ministerio de Salud. Dirección General de Epidemiología

Peru



In Venezuela<sup>8</sup>, ARI activity has not shown any significant changes for the last five EWs (29-33) and remains near the upper limit of expected activity for this time of year. Pneumonia notification levels are below the lower limit of expected activity for this time of year. Based on virologic surveillance data between EWs 1-33, 5,067 samples were analyzed, of which 54.57% were positive for a respiratory virus. The decrease in samples processed for respiratory viruses observed since EW 21 continues. During the last two EWs, all samples analyzed were negative for the tested viruses.

Venezuela



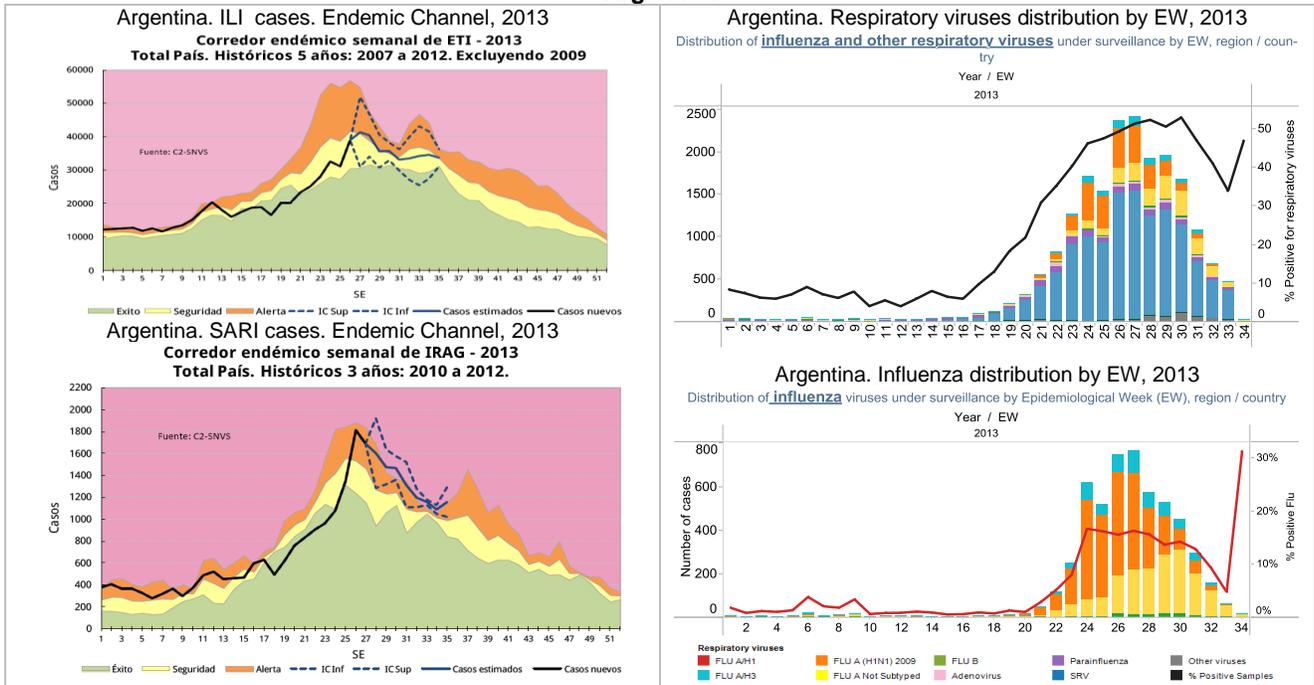
South America – Southern Cone and Brazil

In Argentina<sup>9</sup>, according to reports and calculated estimations, national ILI activity is within the security zone of the endemic channel and has been stable for the previous weeks. The proportion of SARI-associated hospitalizations is between the boundaries of the alert and epidemic zones of the endemic channel. Based

<sup>8</sup> Venezuela. Boletín epidemiológico, EW 34, 2013.  
<sup>9</sup> Argentina. Boletín integrado de vigilancia. SE 34.

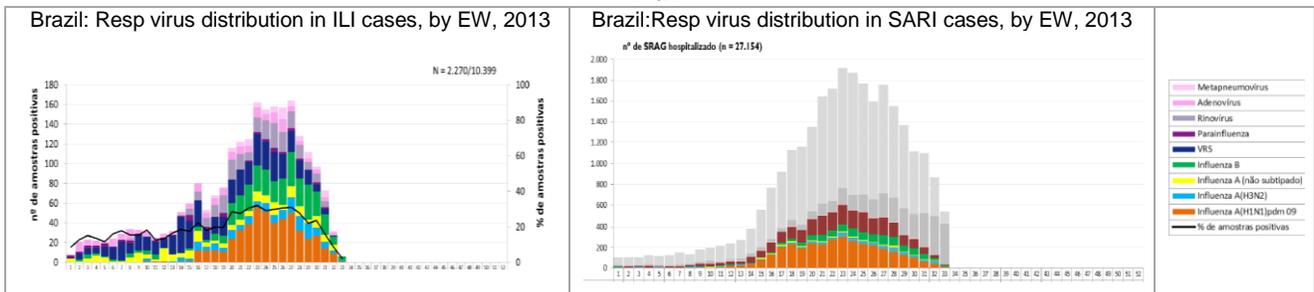
on laboratory data from EW 33, 1,405 samples were analyzed, of which 34% were positive for a respiratory virus and 5% were positive for influenza. Among the positive samples, RSV (71%), and influenza A, not subtyped (11%) predominated.

### Argentina



In Brazil<sup>10</sup>, according to sentinel surveillance data through EW 33, 10,399 samples were analyzed, of which 21.8% 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. However, since EW 27, a decrease in positivity has been observed. Based on universal SARI surveillance data during this same period, 27,154 cases were reported, of which 18.5% were positive for influenza. There has also been a decrease in SARI-associated hospitalizations and influenza positivity. Through EW 33, 2,967 SARI-associated deaths were reported with 27.3% positive for influenza, and of these, 84.1% were associated with influenza A(H1N1)pdm09.

### Brazil

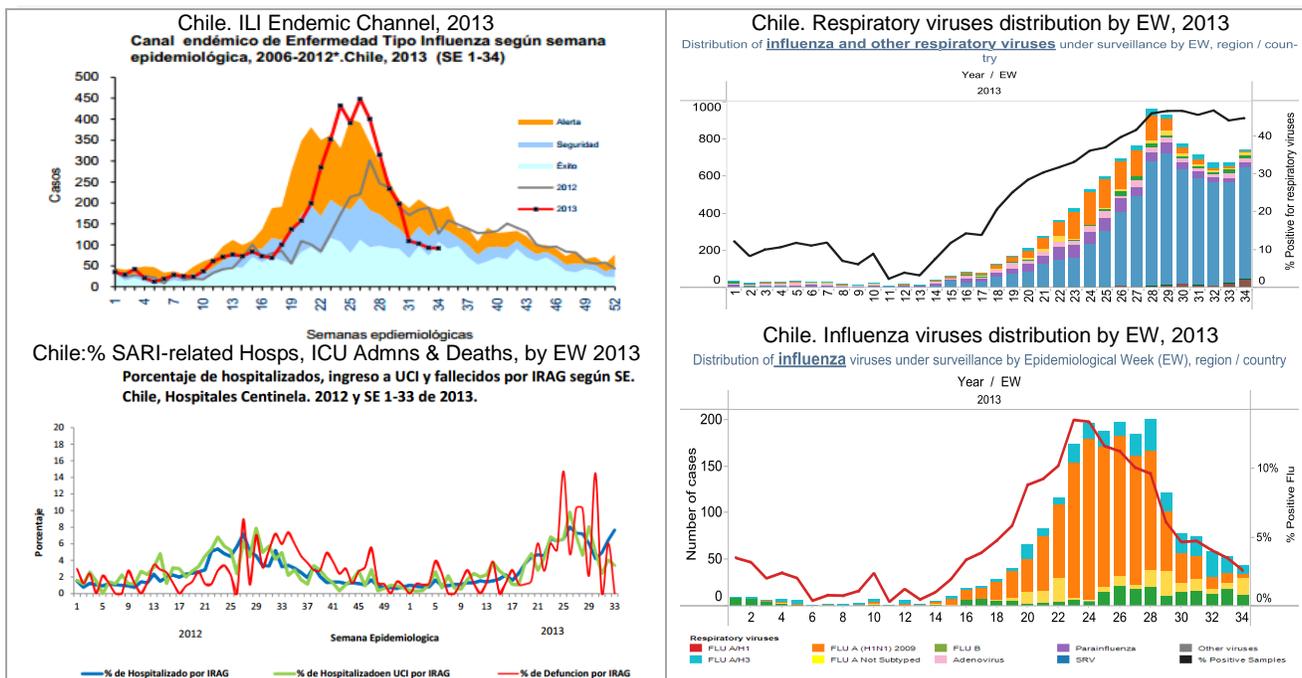


In Chile<sup>11</sup>, during EW 33, ILI activity (rate: 5.8 per 100,000 inhabitants) did not change significantly during the last four EWs and is at the boundary of the security and success zones of the endemic channel. Conversely, the proportion of SARI-associated hospitalizations (7.7%) during EW 22 is higher than what was observed last week and during this period last year. Based on laboratory data from EW 34, 1,663 samples were analyzed, of which 44.7% were positive for a respiratory virus and 2.6% were positive for influenza. Among the positive samples, RSV predominated (81%). Additionally, among SARI cases there has been an increase in RSV positivity since EW 30.

<sup>10</sup> Brasil. Boletim informativo. Secretaria de Vigilância em Saúde. SE 33, 2013.

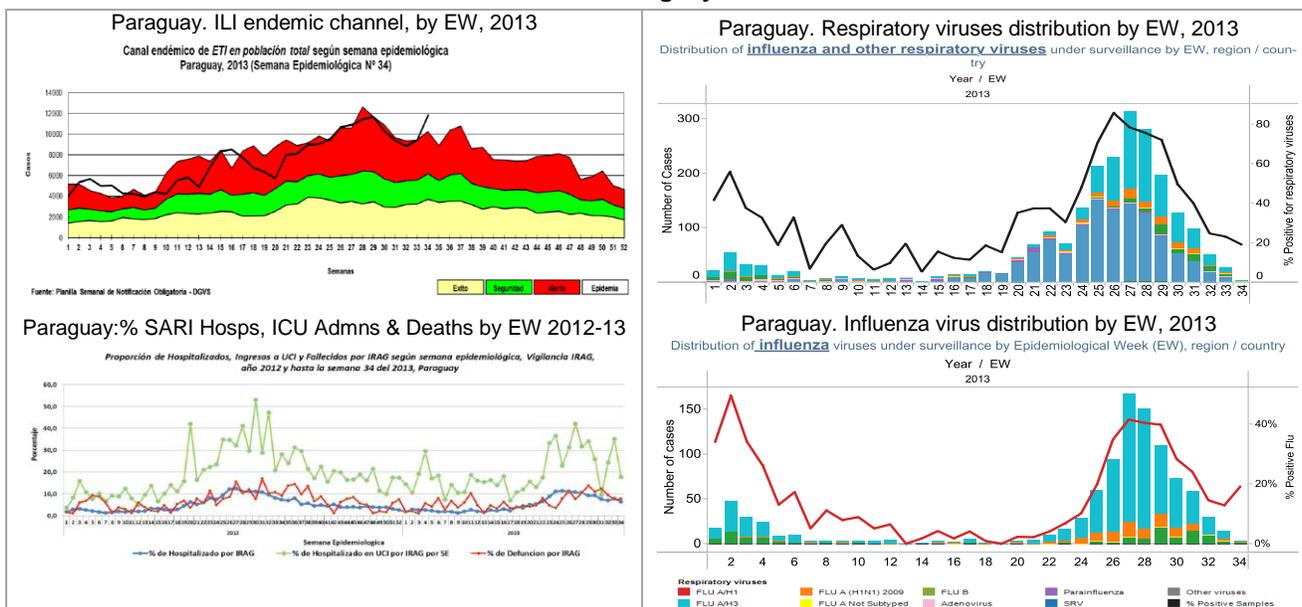
<sup>11</sup> Chile. Informe de situación. EW 34. Disponible en: [www.pandemia.cl](http://www.pandemia.cl)

## Chile



In Paraguay<sup>12</sup>, during EW 34, ILI activity (rate: 178 per 100,000 inhabitants) increased compared to the previous week, and entered the epidemic zone of the endemic channel. However, the proportion of ILI consultations (6.0%) and SARI hospitalizations (6.3%) did not change significantly compared to the last EW and are similar to what was observed during this period last year. Based on reference laboratory data from EW 33-34, 340 samples were analyzed, of which 21% were positive for a respiratory virus and 14% were positive for influenza. Among the positive samples, influenza B (33%, increasing), RSV (33%) and influenza A(H3N2) (24%, decreasing) predominated.

## Paraguay



In Uruguay<sup>13</sup>, nationally during EW 34 the proportion of SARI-associated hospitalizations, ICU admissions and SARI-associated deaths increased compared to the previous EW. Based on laboratory data from EW 32-33, 49 SARI samples were analyzed, of which 30.6% were positive for a respiratory virus and 8.2% were

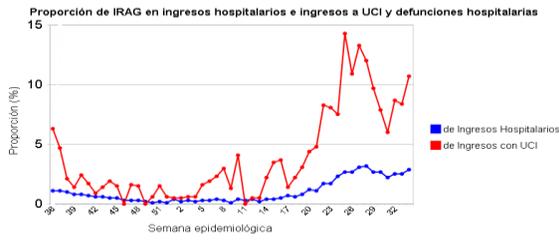
<sup>12</sup> Paraguay. Informe de situación. Vigilancia de ETI e IRAG. SE 34, 2013

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

positive for influenza. Among the positive samples, RSV (10/15) and influenza A(H1N1)pdm09 (4/15) predominated.

### Uruguay

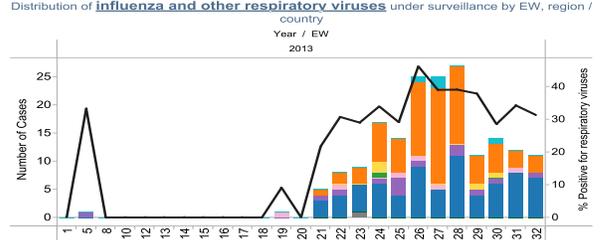
Uruguay.SARI-related hospas & ICU admissions by EW,2012-13



Uruguay. SARI-associated deaths by EW. 2012-13



Uruguay. Respiratory viruses distribution by EW, 2013



Uruguay. Influenza virus distribution by EW, 2013

