

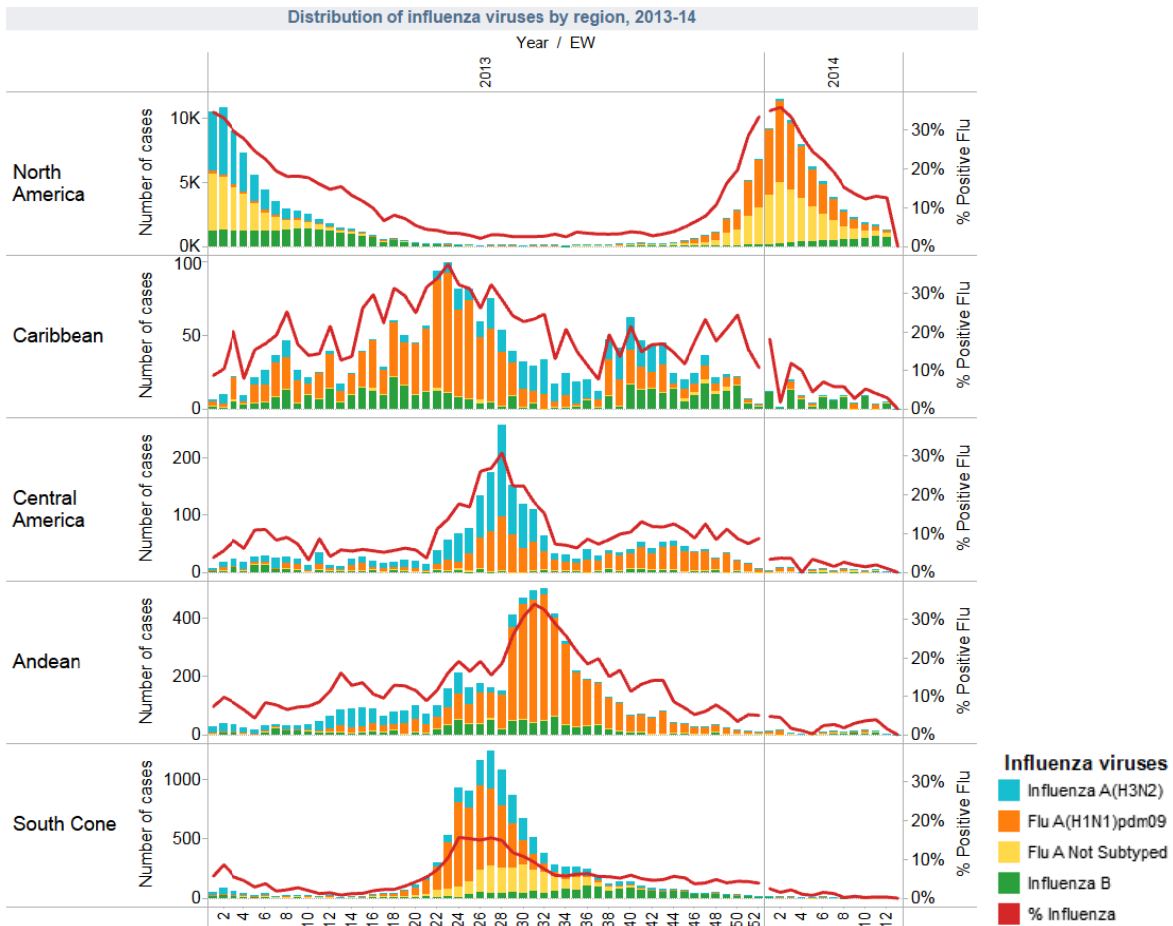
PAHO interactive influenza data: [http://ais.paho.org/phis/viz/ed\\_flu.asp](http://ais.paho.org/phis/viz/ed_flu.asp)  
Influenza Regional Reports: [www.paho.org/reportesinfluenza](http://www.paho.org/reportesinfluenza)

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.

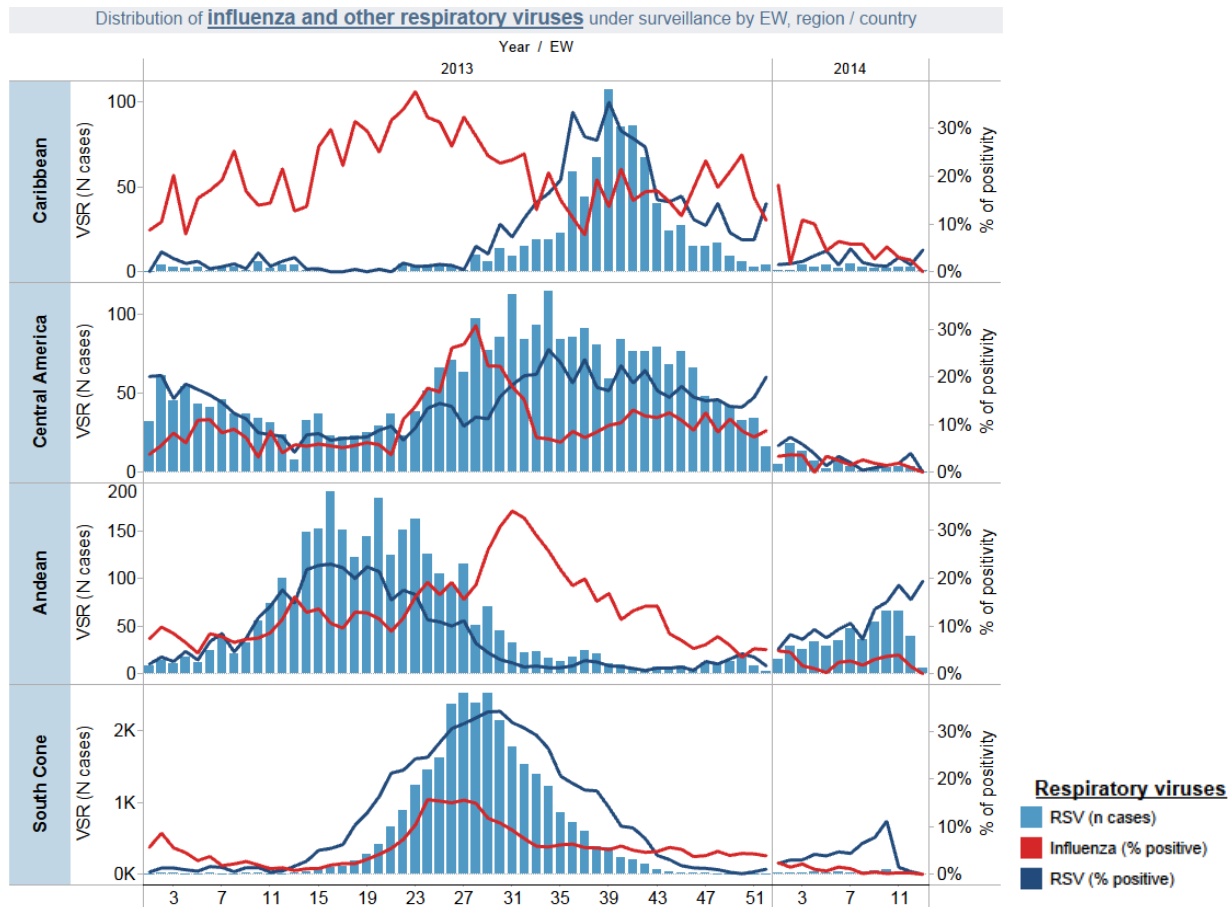
**WEEKLY SUMMARY**

- North America: Influenza activity continued to decrease in this sub-region. In the United States and Mexico, influenza A(H1N1)pdm09 remained predominant but circulation of influenza B continued to increase. In Canada, there was an increase circulation of influenza B, where it is already the predominant influenza virus circulating. Among other respiratory viruses, RSV circulation remained high in Canada and the United States.
- The Caribbean and Central America: Influenza and other respiratory virus activity remained low in the sub-region except in Guyana and Guadeloupe where influenza activity was above expected levels.
- South America – Andean Countries: Acute respiratory illness activity and influenza activity remained low in the sub-region. However, RSV circulation continued to increase in Colombia and slightly in Ecuador.
- South America - South Cone and Brazil: Acute respiratory illness activity as well as influenza and other respiratory virus activity was low and within the expected level for this time of year in all countries of the region. Slight increase of RSV circulation was observed in Argentina.

**Influenza circulation by region. 2013-14**



## Respiratory syncytial virus (RSV) circulation by region. 2013-14



### ACRONYMS

<b>ARI</b>	Acute respiratory infection
<b>CARPHA</b>	Caribbean Public Health Agency
<b>CENETROP</b>	Centro de Enfermedades Tropicales (Santa Cruz, Bolivia)
<b>EW</b>	Epidemiological Week
<b>ILI</b>	Influenza-like illness
<b>INLASA</b>	Instituto Nacional de Laboratorios de Salud (La Paz, Bolivia)
<b>INS</b>	Instituto Nacional de Salud
<b>ORV</b>	Other respiratory viruses
<b>SARI</b>	Severe acute respiratory infection
<b>SEDES</b>	Servicio Departamental de Salud (Bolivia)
<b>ICU</b>	Intensive Care Unit
<b>RSV</b>	Respiratory Syncytial Virus

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

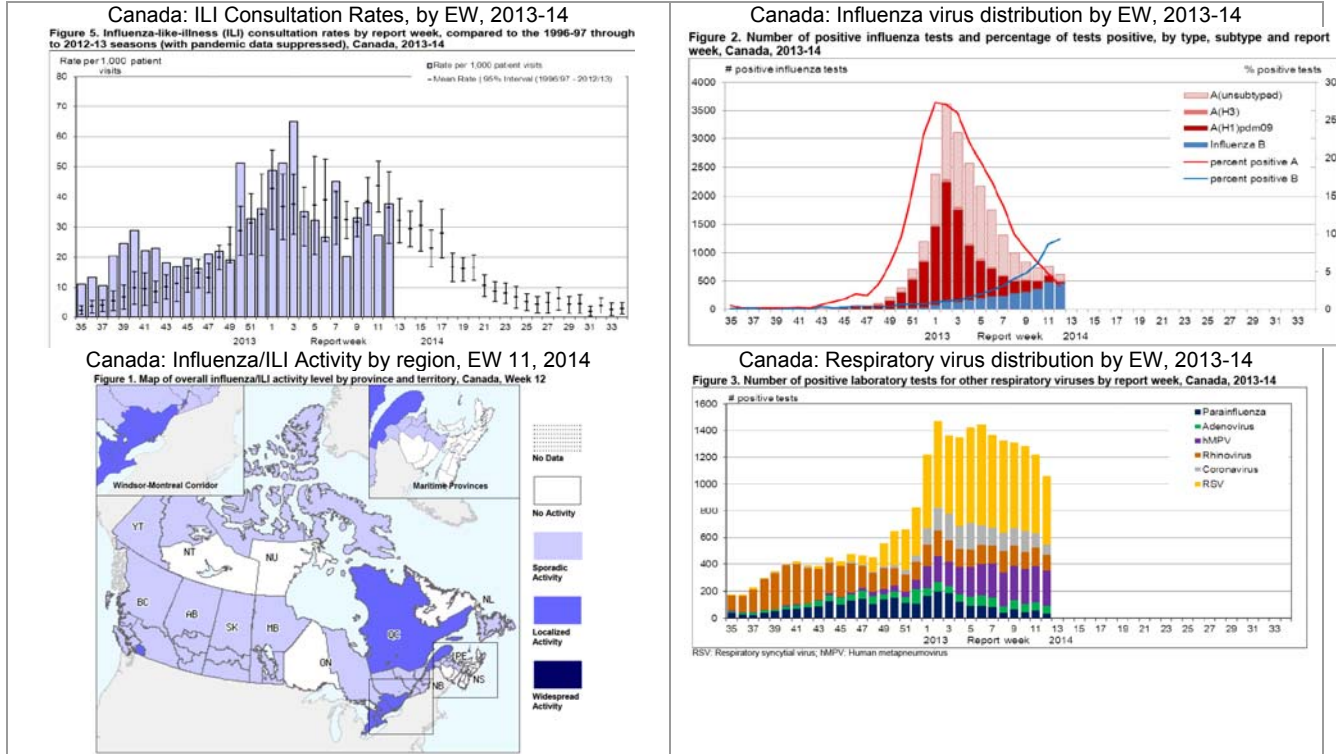
#### North America:

In Canada<sup>1</sup> during EW 12, influenza activity continued to decrease slowly and was within expected levels for this time of year. The national influenza-like illness (ILI) consultation rate was 37.7 per 1,000 patient visits, an increase compared to the previous week, but within expected levels. Since the beginning of the 2013-14 influenza season, 3,700 influenza-associated hospitalizations have been reported in the participating regions, of which 91.4% were associated with influenza A(H1N1)pdm09, which is similar to what has been observed in previous seasons. While the influenza A(H1N1)pdm09 virus has mostly affected adults 20-64 years of age this season, influenza B is having a greater impact on adults 65 years of age and older, as well as young people 5 to 19 years of age. There have been 326 ICU admissions reported and of these, 66.8%

<sup>1</sup> Canada: FluWatch Report. EW 12. Available at <http://www.phac-aspc.gc.ca/fluwatch/>

were among adults 20-64 years of age. To date this season, 204 deaths have been reported (compared to 271 during the same period of the 2012-13 season) the majority of which were associated with influenza A. The highest proportion of these deaths (49.5%) occurred among adults 20-64 years of age, followed by adults  $\geq 65$  years (41.1%). Based on laboratory data for EW 12, the overall percentage of positive influenza tests was 12.4% (N=619), a slight decrease compared to the previous week. Among the positive samples, 25.4% were influenza A (of which 26.1% were identified as influenza A(H1N1)pdm09, 8.3% as A(H3N2) and 65.6% as influenza A not subtyped) and 74.6% were identified as influenza B. Among other circulating respiratory viruses, RSV continued to predominate.

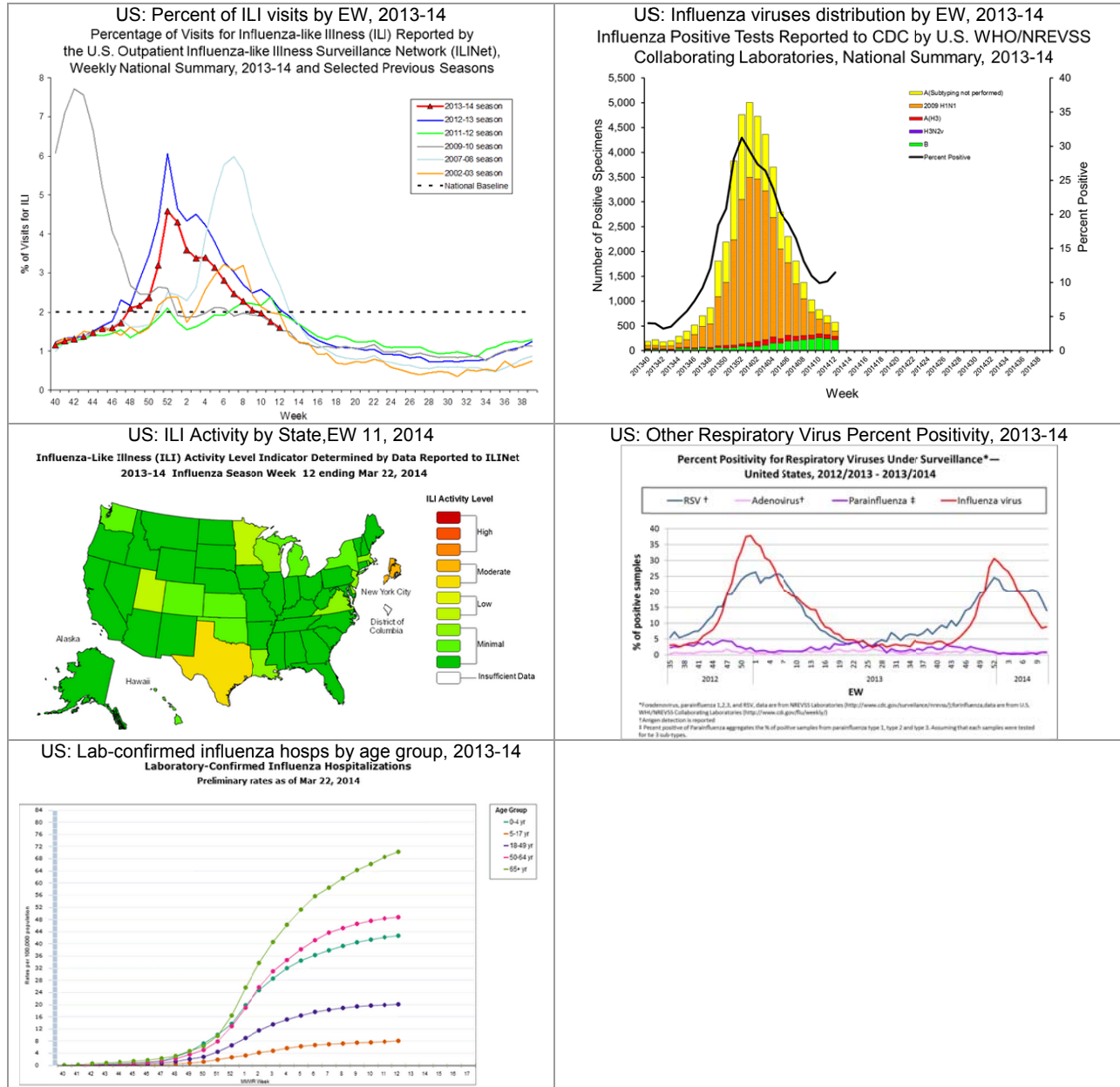
### Canada



In the United States<sup>2</sup> during EW 12, influenza activity continued to decrease. The national proportion of outpatient visits for influenza-like illness (ILI) was 1.6%, a decrease compared to the previous week and below the national baseline. Four of the 10 regions reported ILI activity above their region-specific baseline levels. The proportion of deaths attributed to pneumonia and influenza for EW 12 (7.2%) decreased slightly from the previous EW and was below the epidemic threshold (7.3%). A total of 79 influenza-associated pediatric deaths have been reported this season, of which four were reported during EW 12. Since October 1, 2013, 8,405 laboratory confirmed influenza-associated hospitalizations have been reported (rate: 31.1 per 100,000 population) and the majority (93%) have been associated with influenza A. The highest hospitalization rates were among adults  $\geq 65$  years followed by adults 50-64 years and children 0-4 years. However, adults aged 18-64 years comprised more than 60% of the reported hospitalizations. According to laboratory data for EW 12, 4,977 samples were analyzed, of which 11.5% were positive for influenza. Among the positive samples, 60.9% were influenza A (29% A(H1N1)pdm09, 19.5% A(H3) and 51.4% not subtyped) and 39.1% were influenza B. Based on antiviral resistance testing, 1.2% (54/4,624) of the influenza A(H1N1)pdm09 samples tested were oseltamivir-resistant. Among other circulating respiratory viruses, RSV activity was high with percent positivity of 14.0%.

<sup>2</sup> USA: CDC FluView report. EW 12. Available at: <http://www.cdc.gov/flu/weekly/>

## United States

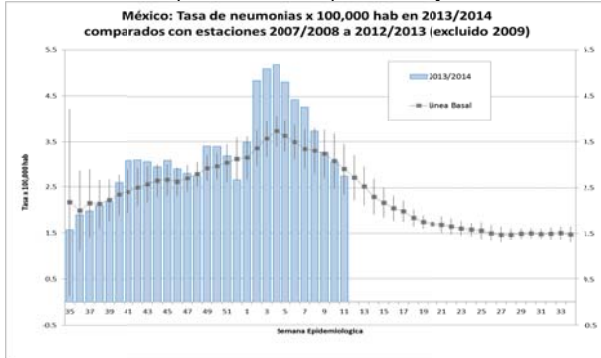


In Mexico<sup>3</sup> during EW 12, influenza activity continued to decrease. The pneumonia rate has been decreasing since EW 6 and was within the expected level for this time of year. ARI decreased from the previous week and was within the success zone of the endemic channel. The highest levels of ARI activity were reported in Aguascalientes, Zacatecas and Durango, and the highest levels of pneumonia activity were reported in Chihuahua, Nayarit and Sonora. Nationally through March 27, 2014, the proportion of ILI/SARI-associated medical visits was 1.0%, a decrease compared to the previous EW. The entities with the highest proportion of ILI/SARI-consultations in sentinel sites were Oaxaca (2.8%), Nuevo León (2.7%), Tlaxcala (2.3%), Morelos (2.3%) and Veracruz (2.2%). During this same period, 704 influenza-associated deaths were reported, of which 91.1% were associated with influenza A(H1N1)pdm09. According to laboratory data during EW 11-12, 431 samples were analyzed, of which 19.6% were positive for influenza. Among the positive influenza samples, 76.2% were influenza A (47.5% A(H1N1)pdm09, 43.8% A(H3N2) and 8.8% A not subtyped) and 23.8% were influenza B.

<sup>3</sup> México. Dirección General de Epidemiología. Información epidemiológica. Informes Epidemiológicos Semanales 2014.

## Mexico

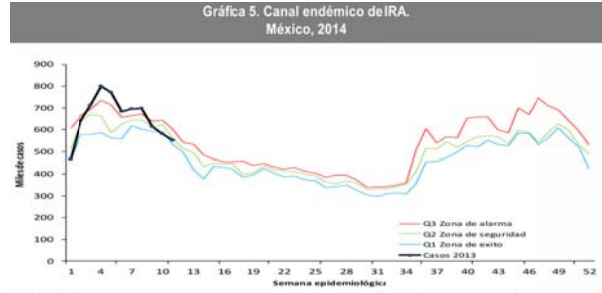
Mexico: National pneumonia rate per 100K by EW, 2013-2014



Mexico: Pneumonia Rates by State, EW 11



Mexico: ARI Endemic Channel, 2014



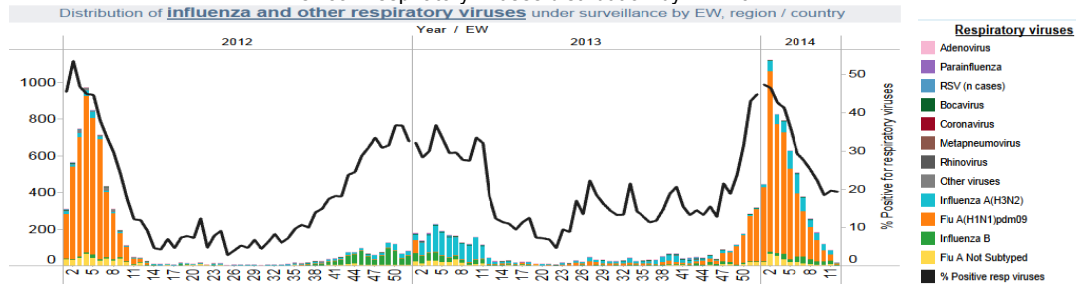
fuente: SINAVE/DGE/Sistema de Notificación Semanal de Casos Nuevos, acceso al 27/3/2014

Proportion of ILI/SARI in sentinel sites by state. 2014. EW 13  
Proporción de consultas por ETI/IRAG en USMI según entidad federativa, México, 2014

**1.0% consultas por ETI/IRAG en USMI**



Mexico: Respiratory viruses distribution by EW 2012-14

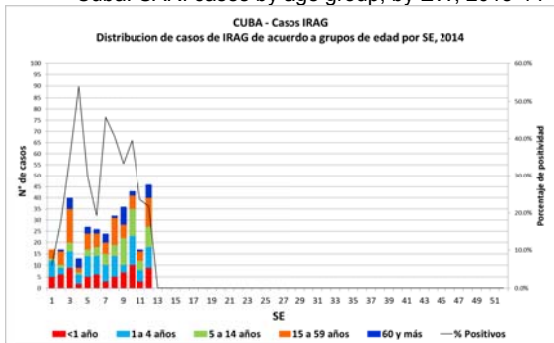


## Caribbean

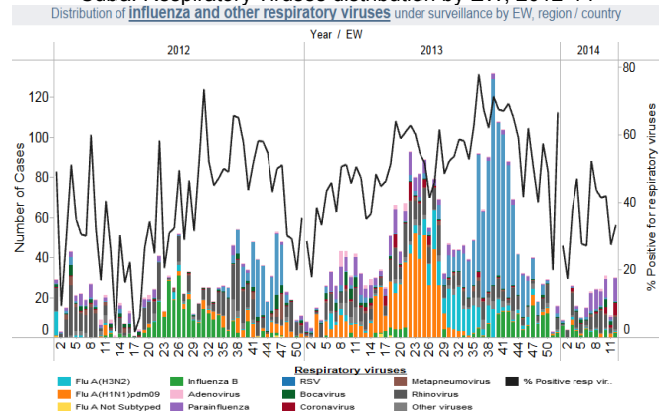
In Cuba during EW 12, the number of SARI-associated hospitalizations (n=46) increased compared to the previous week. The majority of cases were registered in the group aged 15-59 years of age. One SARI-associated deaths was reported during this period, but it tested negative for analyzed respiratory viruses. According to national laboratory data for EW 9-12, 262 samples were analyzed, of which 36.6% were positive for a respiratory virus and 4.2% were positive for influenza. Among the positive samples, parainfluenza (30.2%) and rhinovirus (27.1%) predominated.

## Cuba

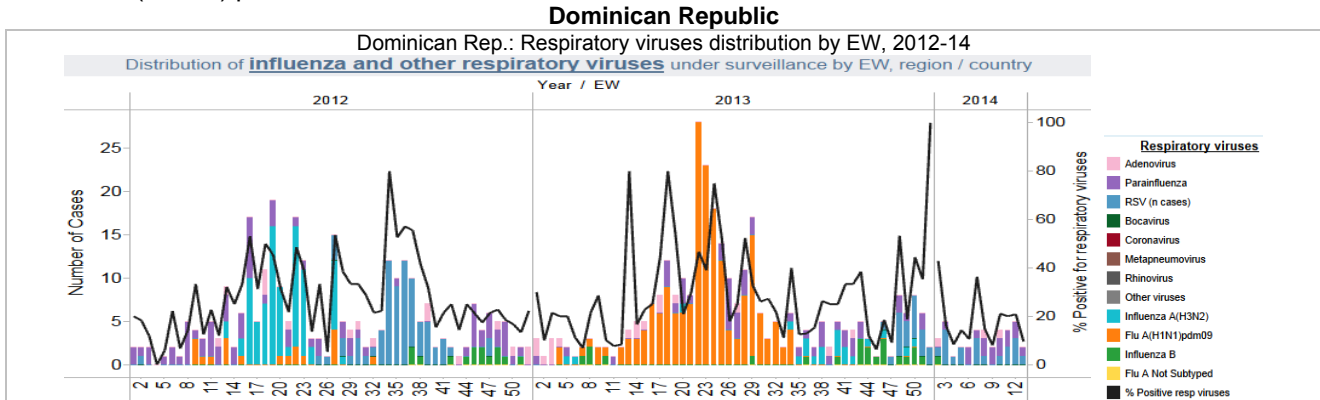
Cuba. SARI cases by age group, by EW, 2013-14



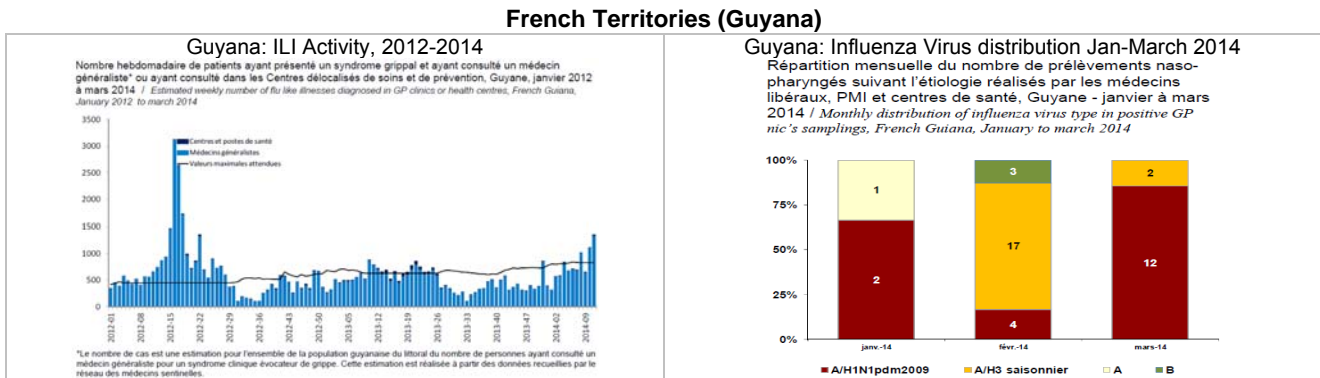
Cuba. Respiratory viruses distribution by EW, 2012-14



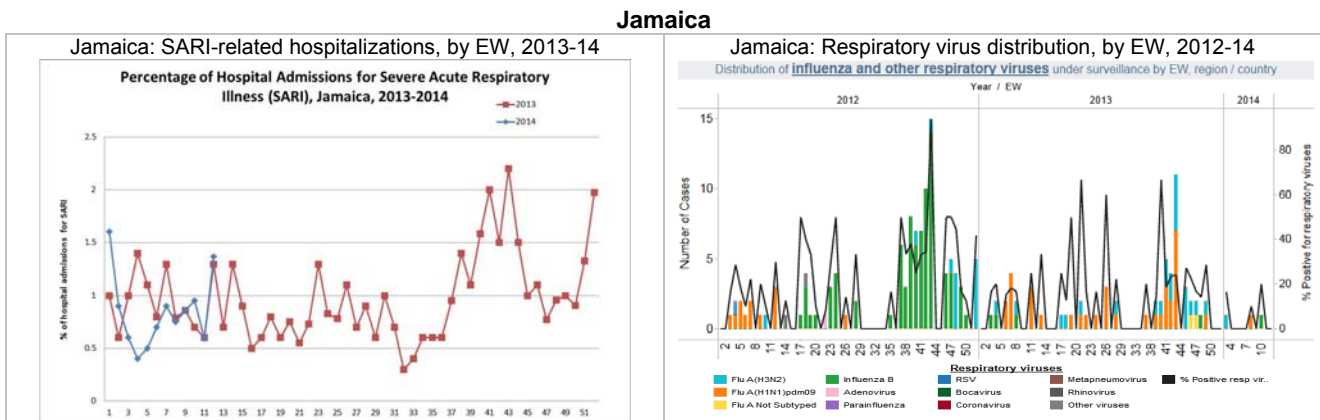
In the Dominican Republic<sup>4</sup>, during EW 10-13, 84 samples were analyzed, of which 17.9% were positive for a respiratory virus and none was positive for influenza. Among the positive samples, parainfluenza (46.7%) and RSV (46.7%) predominated.



Among the French territories<sup>4</sup>, ILI associated consultations in Guyana have been above expected levels since mid-February and indicate the start of the seasonal influenza epidemic. Although there was a decrease in ILI activity at the end of February, in recent weeks it has increased and is above expected levels. Since the beginning of 2014, there has been co-circulation of influenza A(H3N2), influenza A(H1N1)pdm09 and influenza B. Among the other French territories, Guadeloupe has also declared the start of their influenza season (EW 3). However, Martinique, St. Martin and St. Barthelemy have not reported influenza activity.



In Jamaica, based on sentinel surveillance data for EW 12, the proportions of ARI-associated consultations (4.1%) was similar to the previous week. The proportion of admissions due to SARI was 1.37%; a 0.78% increase when compared to the week before. No SARI-associated deaths were reported during EW 12. Based on laboratory data for EW 10-13, 7 samples were analyzed and one was positive for influenza B.

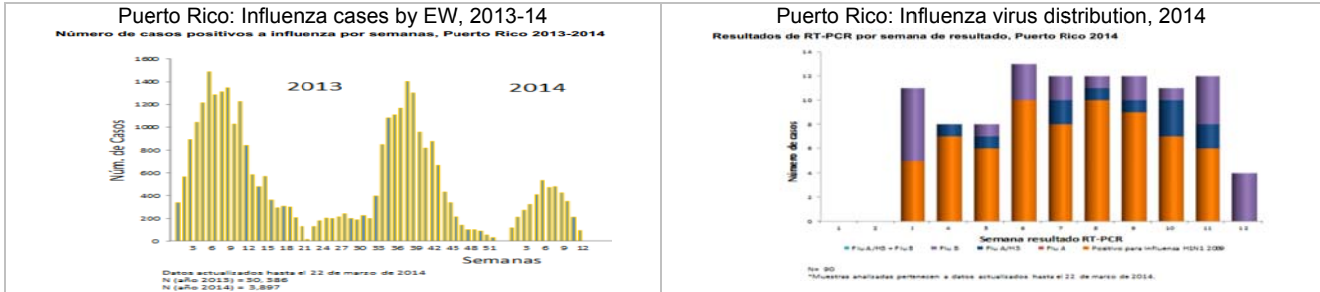


In Puerto Rico<sup>5</sup> during EW 12, the number of influenza cases (n=93) remained low. Of these, 64 cases were associated with influenza A and 29 with influenza B. Since the beginning of 2014, 3,897 influenza cases

<sup>4</sup> República Dominicana. Dirección Nacional de Vigilancia Epidemiológica. Boletín Semanal SE 9.

have been reported (65% influenza A and 35% influenza B), and persons aged 0-19 years accounted for 47% of those cases. During this same period, 209 influenza-associated hospitalizations and 3 influenza-associated deaths were reported.

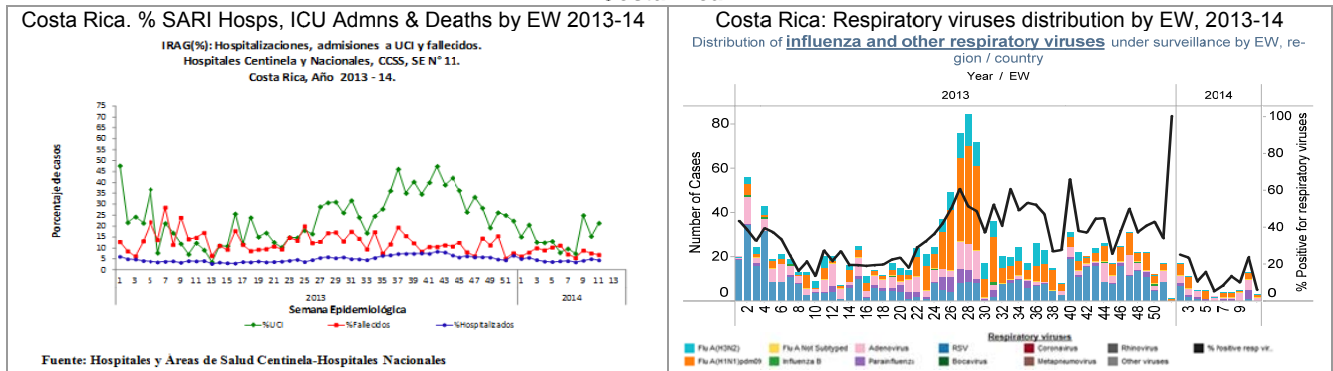
### Puerto Rico



### Central America

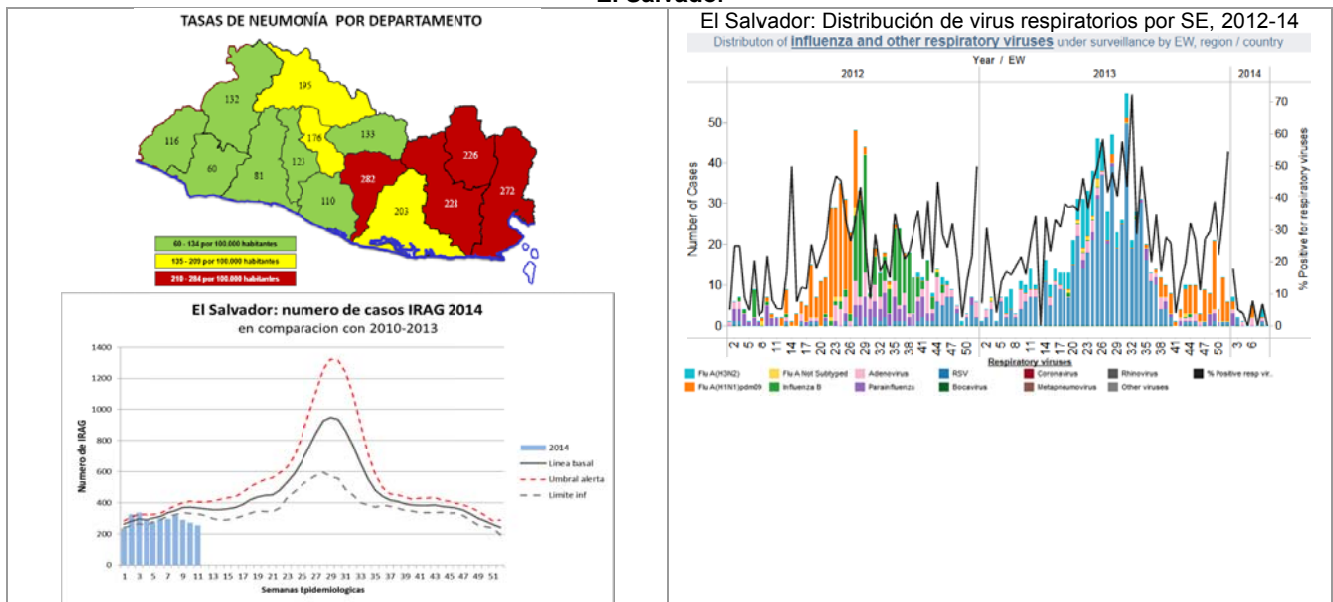
In Costa Rica, during EW 11, the proportions of SARI-associated hospitalizations (4.5%), SARI-associated ICU admissions (21.5%) and SARI-associated deaths (7.0%) were similar to the previous EW. Based on laboratory data from EW 8-11, 186 samples were analyzed, of which 13.4% were positive for a respiratory virus and 3.8% were positive for influenza. Among the positive influenza samples, 100% were influenza A(H1N1)pdm09. Among other respiratory viruses, adenovirus (48.0% of positive samples) and parainfluenza (20.0%) predominated.

### Costa Rica



In El Salvador, the number of ARI and pneumonia cases observed in 2014 through EW 12 was lower (3.4% and 2.2%, respectively) than that of 2013. The proportions of SARI-associated hospitalizations (5.3%), ICU admissions (7.1%) and deaths (4.5%) remained low and within the expected levels for this time of year.

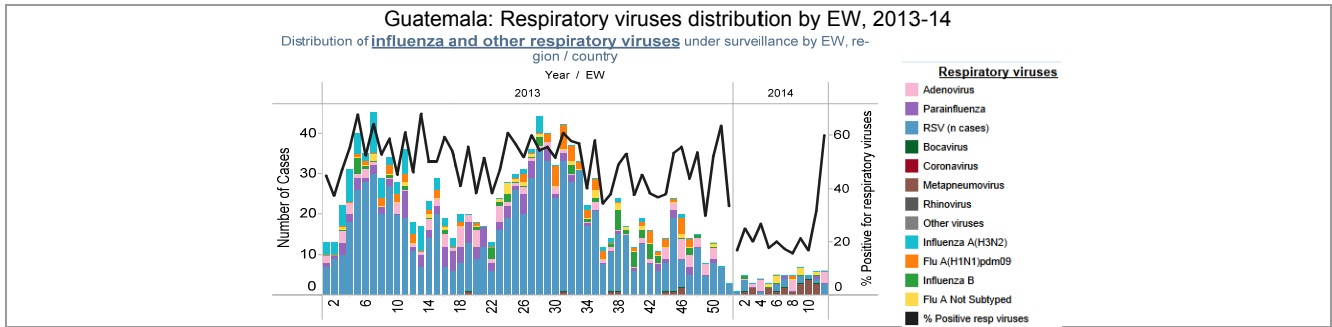
### El Salvador



<sup>5</sup> Puerto Rico. Departamento de Salud. Vigilancia de influenza de Puerto Rico SE 11

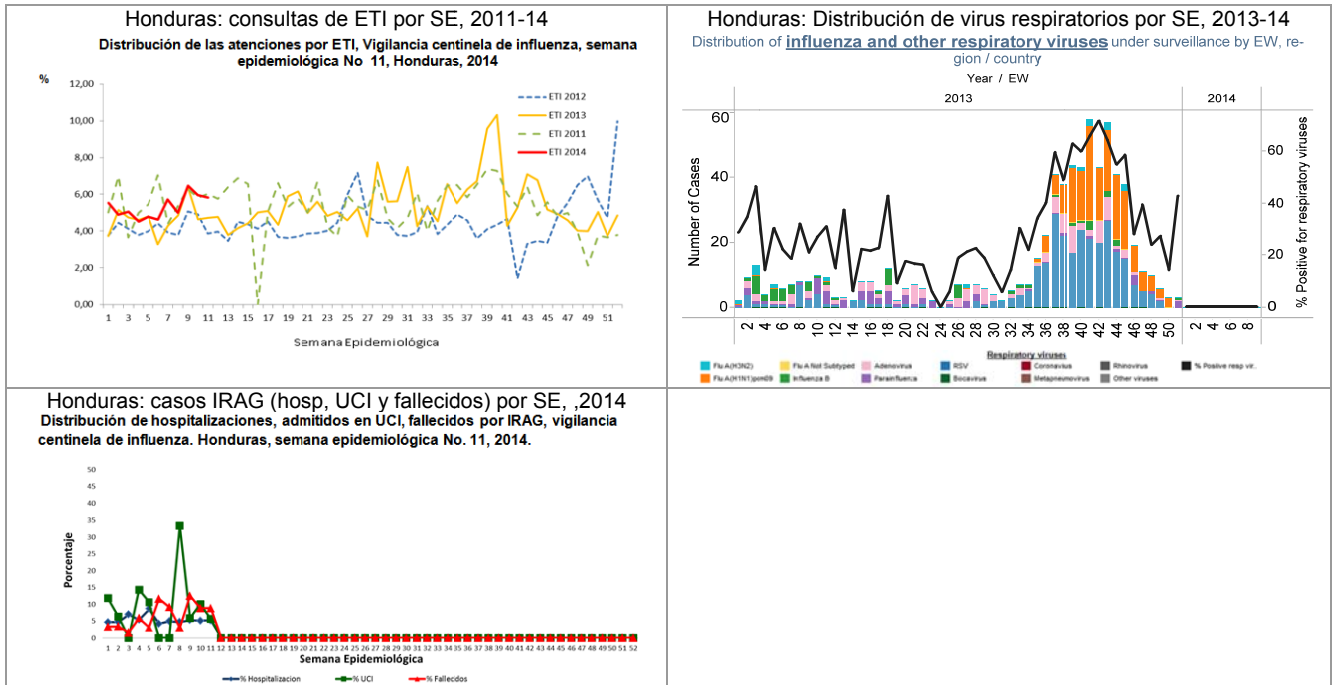
In Guatemala, based on laboratory data from EW 9-12, 92 samples were analyzed, of which 26.1% were positive for a respiratory virus and 3.3% were positive for influenza. Among the positive influenza samples, 100% were influenza A (not subtyped). Among other respiratory viruses, human metapneumovirus (47.1% of positive samples) and RSV (29.2%) predominated.

### Guatemala



In Honduras<sup>6</sup>, during EW 11 and according to sentinel surveillance data, the proportion of ILI consultancies (5.8%) of SARI-associated hospitalizations (5.21%) and of SARI-associated deaths (8.7%) remained low. According to national laboratory data from EW 9-11, 99 samples were analyzed, of which only 4% were positive for respiratory viruses (adenovirus and RSV) and 1% were positive for influenza (influenza B).

### Honduras



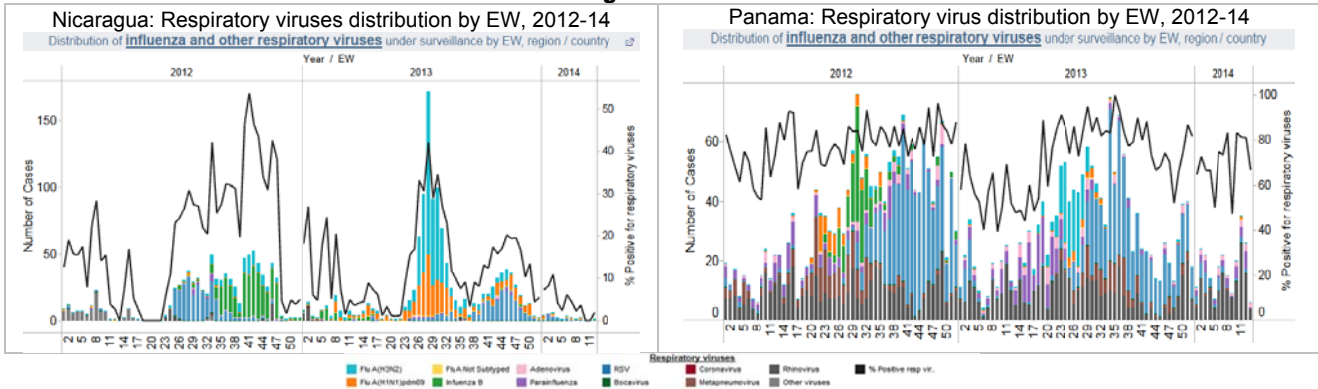
In Nicaragua, according to national laboratory data from EW 9-12, 241 samples were analyzed of which 1.2% were positive for a respiratory virus and 0.8% were positive for influenza. Among the positive samples, influenza A(H1N1)pdm09, influenza B and parainfluenza were detected.

In Panama, based on national laboratory data from EW 10-13, 108 samples were analyzed, of which 80.6% were positive for a respiratory virus and only 1% were positive for influenza. Among the positive samples, rhinovirus (67.8%) predominated.

<sup>6</sup> Honduras. Boletín de la vigilancia de influenza y otros virus respiratorios en Honduras. Secretaría de Salud. Dirección General de Vigilancia de la Salud. SE 11



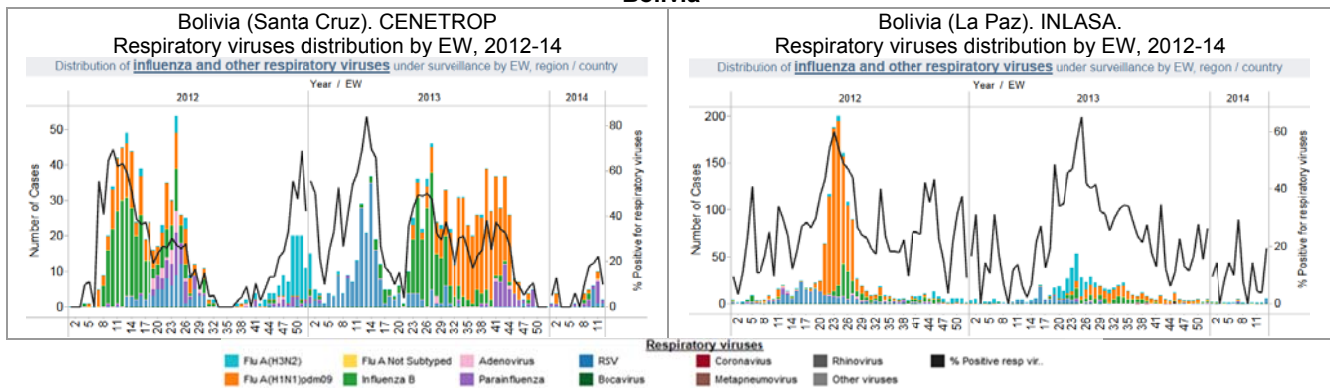
## Nicaragua and Panama



## South America – Andean countries

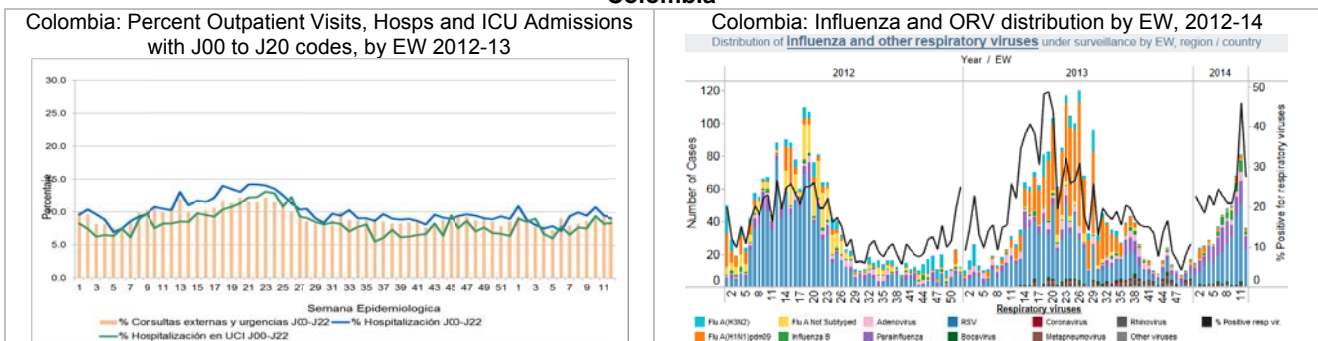
In Bolivia, according to laboratory data from CENETROP (Santa Cruz), 124 samples were analyzed between EW 9-12, of which 18.5% were positive to some respiratory virus and 4% were positive for influenza. Among the positive samples, parainfluenza (43.5%) and RSV (30.4%) predominated; and among those positive for influenza, a co-circulation of influenza A(H1N1)pdm09 and influenza B. According to the National Laboratory in La Paz (INLASA), 86 samples were analyzed between EW 10-13, of which 10.5% were positive for respiratory viruses and 1.2% were positive for influenza. Among the positive samples, VSR and influenza A(H1N1)pdm09 were detected.

## Bolivia



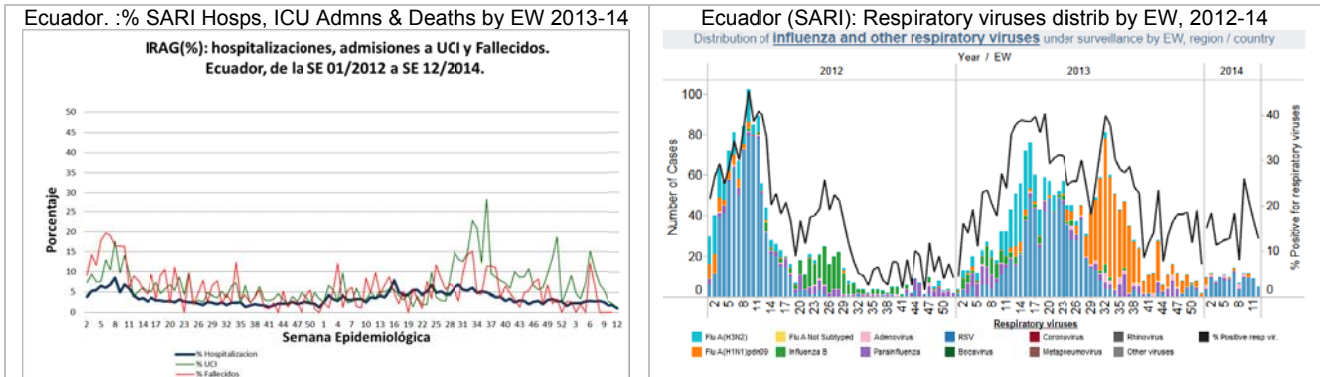
In Colombia, RSV activity continued to increase in the last weeks. During EW 12, the national proportions of hospitalizations (9.1%), ICU admissions (8.4%), and outpatient and urgent visits (9%) with SARI-associated ICD-10 codes (J00 to J22) were similar to the previous week. Based on INS national laboratory data from EW 9-12, 903 samples were analyzed, of which 27.4% were positive for a respiratory virus and 4.0% were positive for influenza. Among the positive influenza samples, 35.3% were influenza A (75% A(H1N1)pdm09, 16.7% A(H3N2) and 8.3% A not subtyped) and 64.7% were influenza B. Among other respiratory viruses, there has been increasing positivity with a predominance of RSV (57.4% of positive samples) and parainfluenza (4.7%).

## Colombia



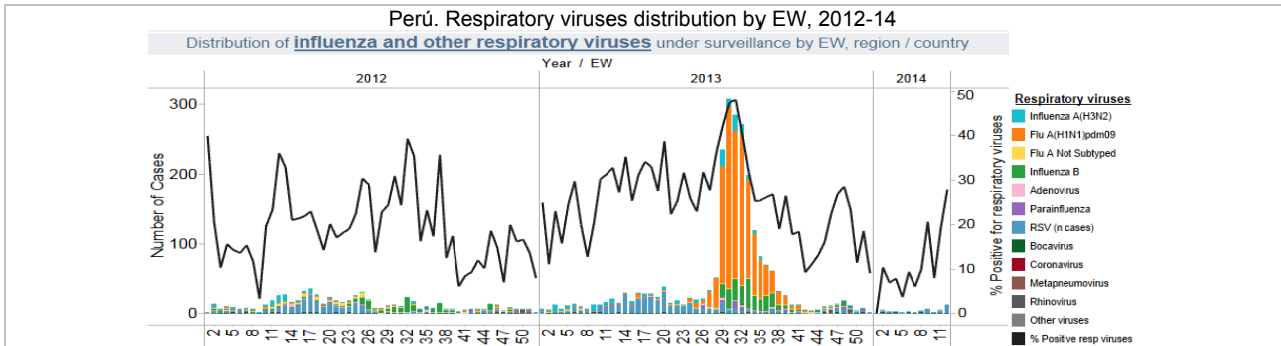
In Ecuador, respiratory virus activity remained low; nevertheless, a steady circulation of RSV has been observed during 2014. During EW 12, the proportions of SARI-associated hospitalizations (1.1%), ICU admissions (1.2%) and SARI-associated deaths (0.0%) were slightly lower than the previous EW. Based on laboratory data from EW 9-12, 196 SARI samples were analyzed, of which 19.4% were positive for a respiratory virus and 1.0% were positive for influenza. Among the positive samples, RSV predominated (86.8%).

**Ecuador**



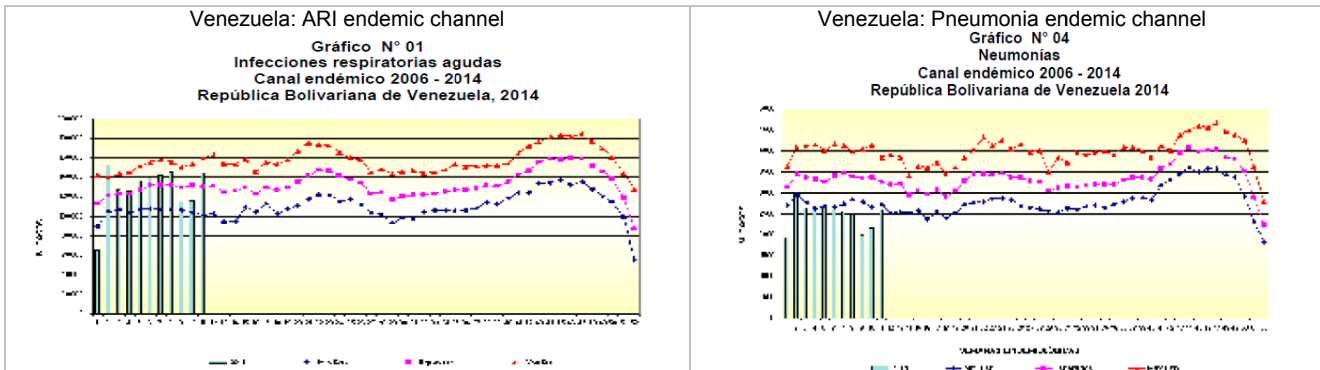
In Peru, based on national laboratory data from EW 9-12, 123 samples were analyzed, of which 20.3% were positive for a respiratory virus and 1.6% were positive for influenza. Among the positive samples, RSV (72.0%) predominated.

**Peru**



In Venezuela<sup>7</sup> during EW 11, the number of ARI and pneumonia cases increased by 25.1% and 20.6%, respectively, compared to the previous EW. Both were within the expected levels for this time of year. During EW 11, 82 SARI-associated hospitalizations were reported, with children ≤1 year of age comprising the largest proportion of cases. Based on virologic data from January 1, 2014, 100 samples were analyzed from suspected influenza cases and of these, 15.0% were positive for influenza. Among the positive samples, influenza A(H3N2) predominated (73.3%).

**Venezuela**

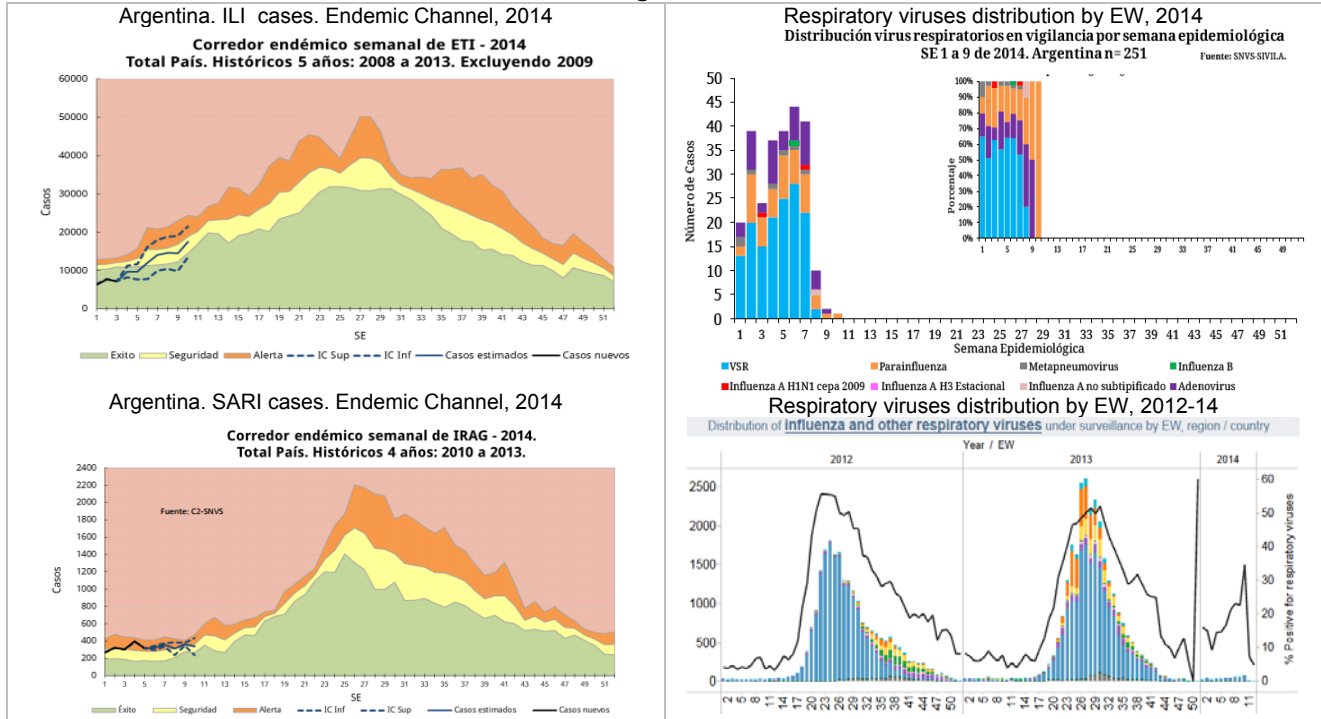


<sup>7</sup> Venezuela. Boletín epidemiológico, EW 11.

## South America – South Cone and Brazil

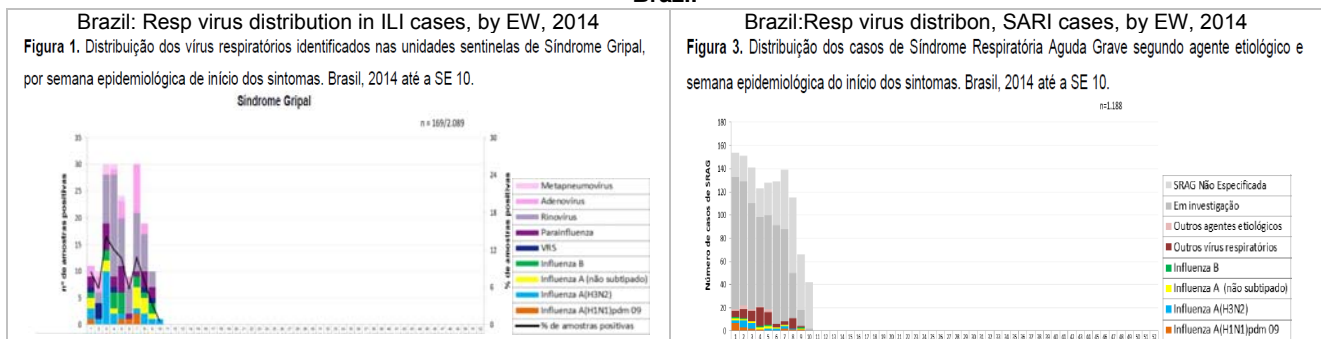
In Argentina<sup>8</sup>, according to reports and calculated estimations, the national activity of ILI, pneumonia and bronchiolitis in children <2 years old, during EW 10 was within the security zone of the endemic channel. The proportion of SARI-associated hospitalizations was within the security zone of the endemic channel, but was 13% lower than the levels seen last year. According to laboratory data, 329 samples were processed during EW 11-12, of which 6.1% were positive for respiratory viruses and 0.3% were positive for influenza. Among the positive samples, parainfluenza (10%), adenovirus (30%) and RSV (25%) predominated.

### Argentina



In Brazil<sup>9</sup>, according to ILI sentinel surveillance data through EW 10, 2,089 samples were analyzed, of which 8.1% were positive for influenza or another respiratory virus. Among the positive samples between EW 7-10, rhinovirus, adenovirus and influenza A (not subtyped) predominated. Based on universal SARI surveillance data during this same period, 1,188 SARI cases were reported and 4.5% of these were positive for influenza. Among the positive samples, influenza A(H1N1)pdm09 and A(H3N2) predominated. Through EW 10, 135 SARI-associated deaths were reported, of which 3.0% were positive for influenza.

### Brazil



In Chile<sup>10</sup>, ILI activity during EW 11 remained low (rate: 2.0 per 100,000 inhabitants) and was in the security zone of the endemic channel. ILI consultancies were less than 0.5% of all urgent care hospital visits, less than the 2013 period. According to sentinel SARI surveillance, during 2014 218 SARI cases were analyzed, with 9% positive for respiratory viruses (21 cases) and a low level of influenza (3 influenza B and 2 influenza

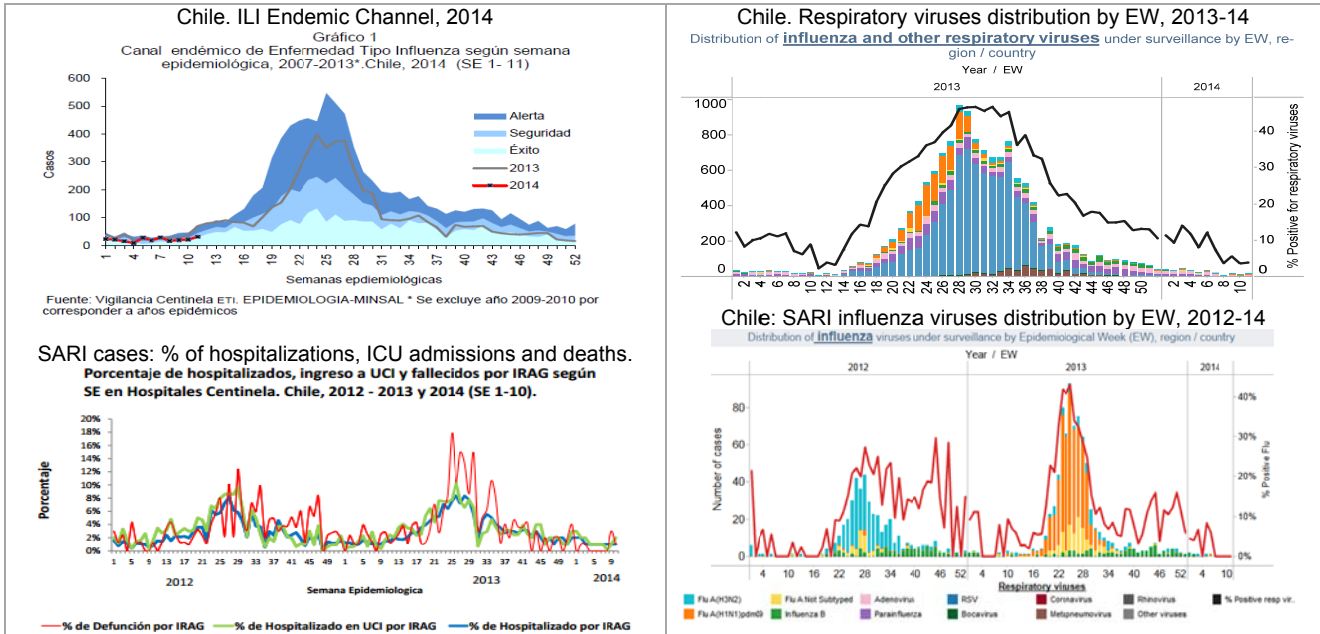
<sup>8</sup> Argentina. Boletín integrado de vigilancia. SE 10.

<sup>9</sup> Brasil. Boletim informativo. Secretaria de Vigilância em Saúde. SE 10, 2014.

<sup>10</sup> Chile. Informe de situación. EW 11. Available at: <http://epi.minsal.cl/>

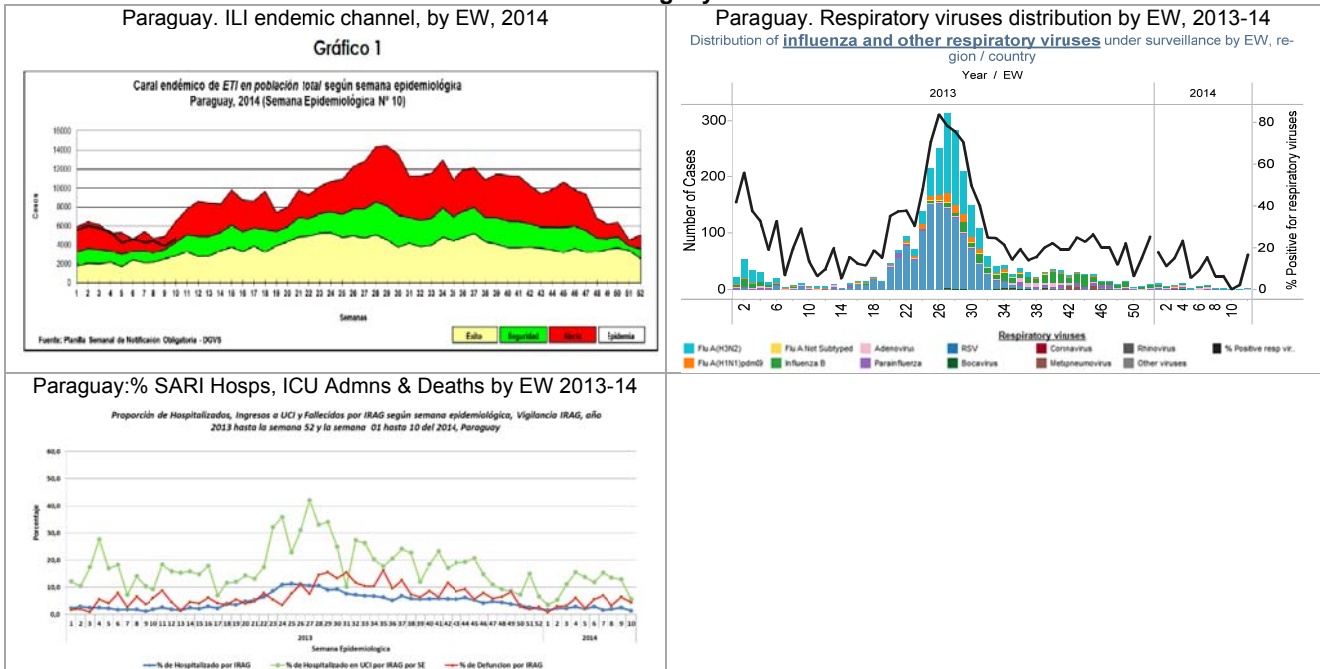
A). According to laboratory data, 915 samples were processed during EW 11-12, of which 3.4% were positive for respiratory viruses and 0.2% were positive for influenza. Among the positive samples, adenovirus (64.5%) and RSV (22.6%) predominated.

**Chile**



In Paraguay<sup>11</sup> during EW 10, the ILI consultation rate (69.8 per 100,000 inhabitants) increased from the previous EW and was within the alert zone of the endemic channel. The proportion of SARI-associated hospitalizations (1.4%) was within the expected range for this time of year. The most affected age groups were children <2 years of age and adults ≥60 years. Based on laboratory data from EW 9-12, 141 samples were analyzed, of which 4.3% were positive for a respiratory virus. Among the positive samples, adenovirus, RSV, parainfluenza and influenza B were detected.

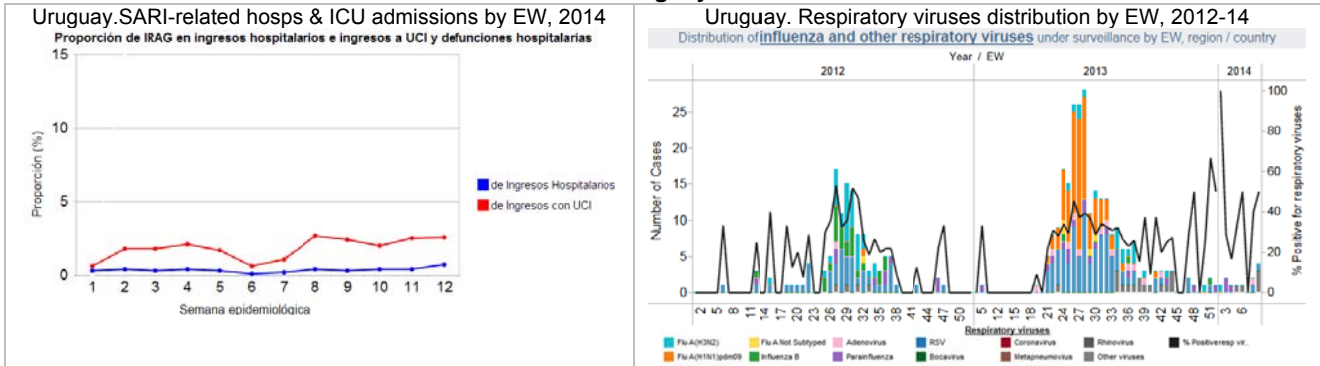
**Paraguay**



<sup>11</sup> Paraguay. Informe de situación. Vigilancia de ETI e IRAG. SE 10.

In Uruguay<sup>12</sup> during EW 12, the proportions of SARI-associated hospitalizations, ICU admissions and deaths remained at low levels. Based on laboratory data from EW 8-11, 13 samples were analyzed and of these, 6 (46.2%) were positive for a respiratory virus. Among the positive samples, RSV and adenovirus were detected.

### Uruguay



<sup>12</sup> Uruguay. Generador de gráficos de la división de epidemiología, Dirección General de Salud – Ministerio de Salud Pública