

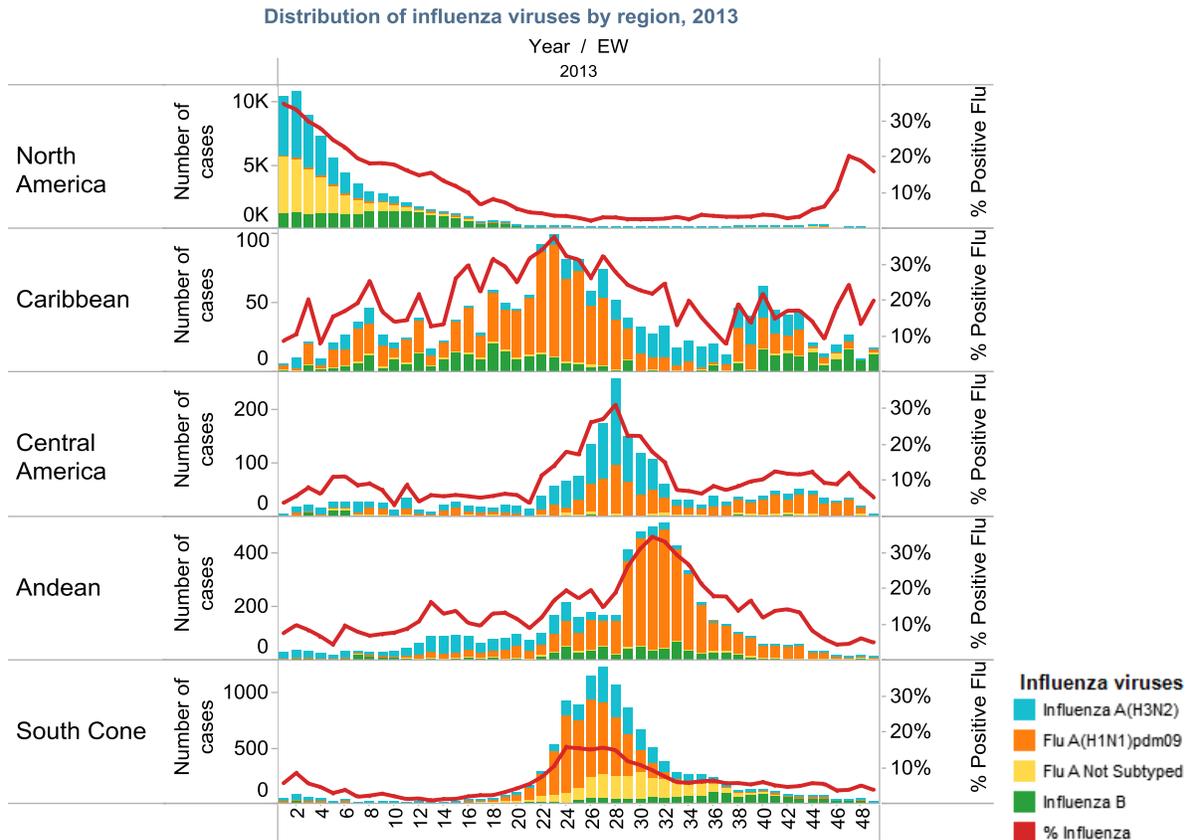
PAHO interactive influenza data: [http://ais.paho.org/phis/viz/ed\\_flu.asp](http://ais.paho.org/phis/viz/ed_flu.asp)  
Influenza Regional Reports: [www.paho.org/reportesinfluenza](http://www.paho.org/reportesinfluenza)

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

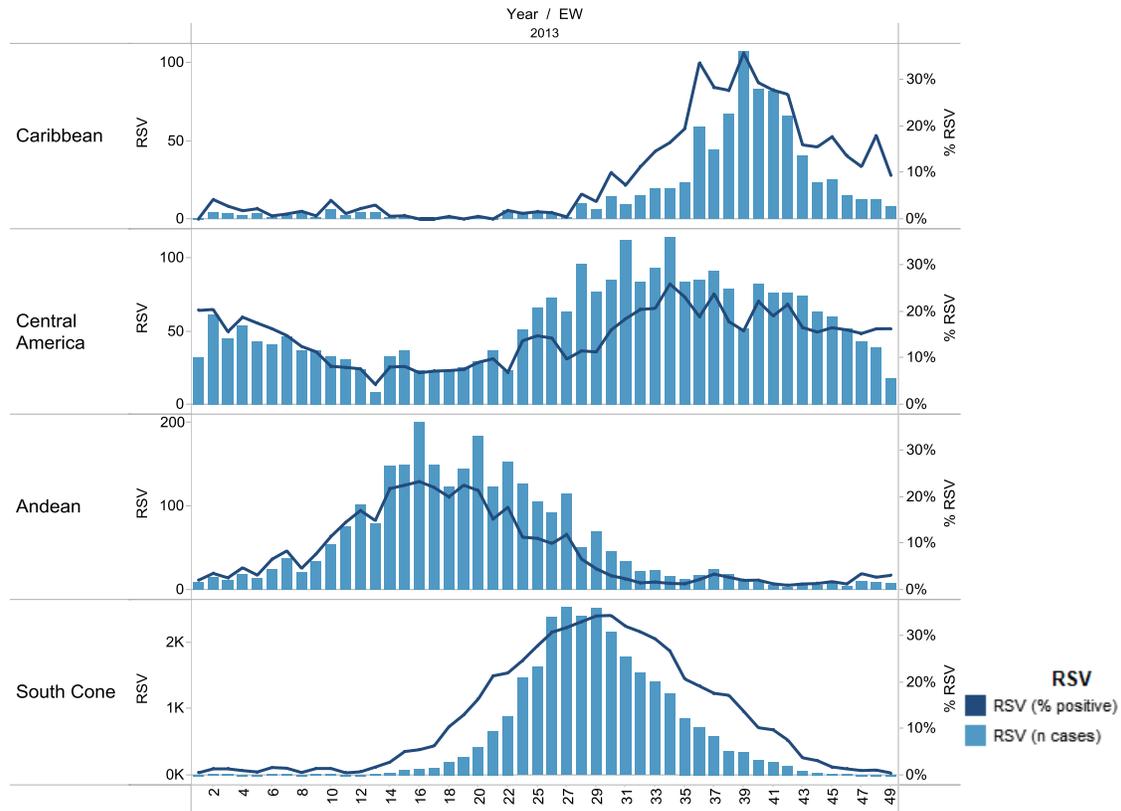
- **North America:** Influenza activity continued to increase slightly in Canada, the United States and Mexico. Among circulating influenza viruses, influenza A predominated.
- **The Caribbean and Central America:** RSV continued circulating in the region. Low levels of influenza virus were also observed, with influenza B detected in Cuba and Dominican Republic, and influenza A(H1N1)pdm09 detected in Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua.
- **South America – Andean Countries:** Acute respiratory virus activity remained low in most countries in the region. Among circulating respiratory viruses, parainfluenza (Bolivia (La Paz), Colombia, Ecuador), RSV (Colombia, Peru), influenza A(H1N1)pdm09 (Bolivia (La Paz), Ecuador) and influenza B (Peru) were detected.
- **South America - South Cone and Brazil:** Acute respiratory virus activity was low and within the expected level for this time of year. Parainfluenza continued to circulate in the region, and as well as RSV (Argentina), influenza B (Chile, Paraguay) and adenovirus (Argentina, Chile).

Influenza circulation by region. 2013



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

Respiratory Sincicial Virus by region, 2013



### 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:

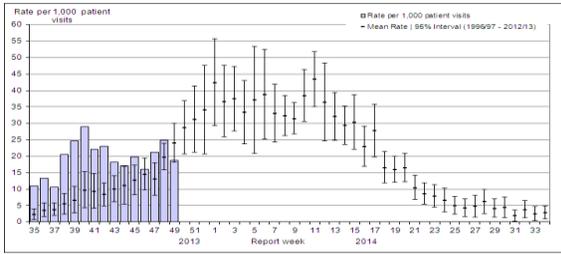
In Canada<sup>1</sup>, during EW 49 influenza activity continued its increasing trend. The national influenza-like illness (ILI) consultation rate was 18.7 per 1,000 patient visits, a decrease compared to the previous week. Since the beginning of the 2013-14 influenza season, 67 influenza-associated hospitalizations have been reported (38 pediatric and 29 adult), of which 5 required ICU admission (3 pediatric and 2 adult). No influenza-associated deaths have been reported. Based on laboratory data for EW 49, the overall percentage of positive influenza tests was 6.1% (N=200), an increase compared to the previous week. Among the positive tests, 93.0% were influenza A, of which 67.2% were influenza A(H1N1)pdm09. Among other respiratory viruses, RSV (increasing) and rhinovirus (decreasing) predominated.

<sup>1</sup> Canada: FluWatch Report. EW 49. Available at <http://www.phac-aspc.gc.ca/fluwatch/>

Canada

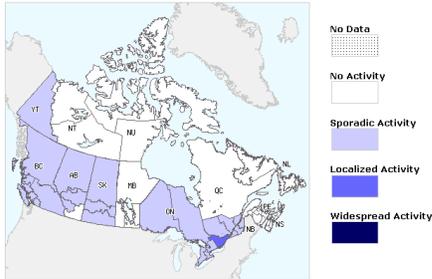
Canada: ILI Consultation Rates, by EW, 2013-14

Figure 5. Influenza-like-illness (ILI) consultation rates by report week, compared to the 1996-97 through to 2012-13 seasons (with pandemic data suppressed), Canada, 2013-2014



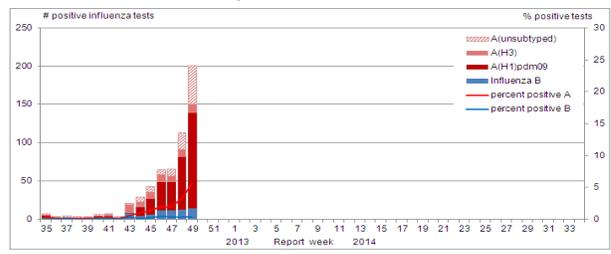
Canada: Influenza/ILI Activity by region, EW 49, 2013

Figure 1. Map of overall influenza/ILI activity level by province and territory, Canada, Week 49



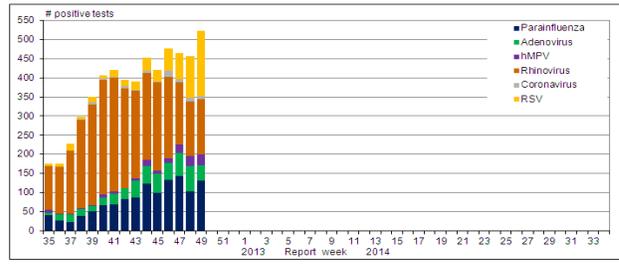
Canada: Influenza virus distribution by EW, 2013-14

Figure 2. Number of positive influenza tests and percentage of tests positive, by type, subtype and report week, Canada, 2013-14



Canada: Respiratory virus distribution by EW, 2013-14

Figure 3. Number of positive laboratory tests for other respiratory viruses by report week, Canada, 2013-14

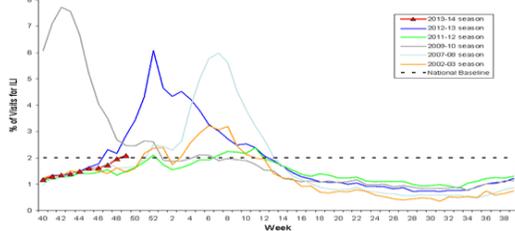


In the United States<sup>2</sup> during EW 49, influenza activity continued its increasing trend with 2.1% of outpatient visits associated with ILI and 6.2% of deaths associated with pneumonia and influenza. No influenza-associated pediatric deaths were reported during EW 49 (3 deaths have been reported this season). Since October 1, 2013 there have been 531 laboratory confirmed influenza-associated hospitalizations reported and corresponds to a rate of 2.0 per 100,000 population. According to laboratory data for EW 49, 6,219 samples were analyzed, of which 13.3% were positive for influenza. Among the positive samples, 94.0% were influenza A (48.8% were A(H1N1)pdm09) and 6.0% were influenza B. Based on antiviral resistance testing, 1.8% (7/395) of the influenza A(H1N1)pdm09 samples tested were oseltamivir resistant.

United States

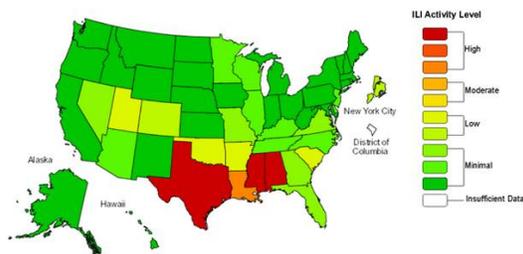
US: Percent of ILI visits by EW, 2013-14

Percentage of Visits for Influenza-like illness (ILI) Reported by the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), Weekly National Summary, 2013-14 and Selected Previous Seasons



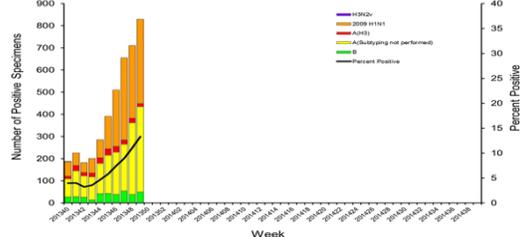
US: ILI Activity by State, EW 48, 2013

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet 2013-14 Influenza Season Week 49 ending Dec 07, 2013



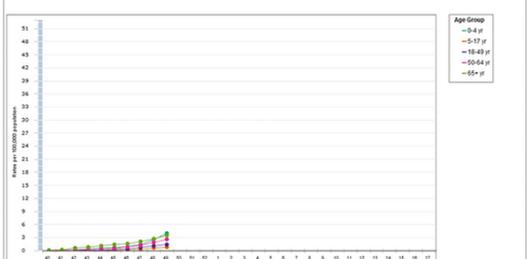
US: Influenza viruses distribution by EW, 2013-14

Influenza Positive Tests Reported to CDC by U.S. WHO/NREVSS Collaborating Laboratories, National Summary, 2013-14



US: Lab-confirmed influenza hosps by age group, 2013-14

Laboratory-Confirmed Influenza Hospitalizations Preliminary rates as of Dec 07, 2013



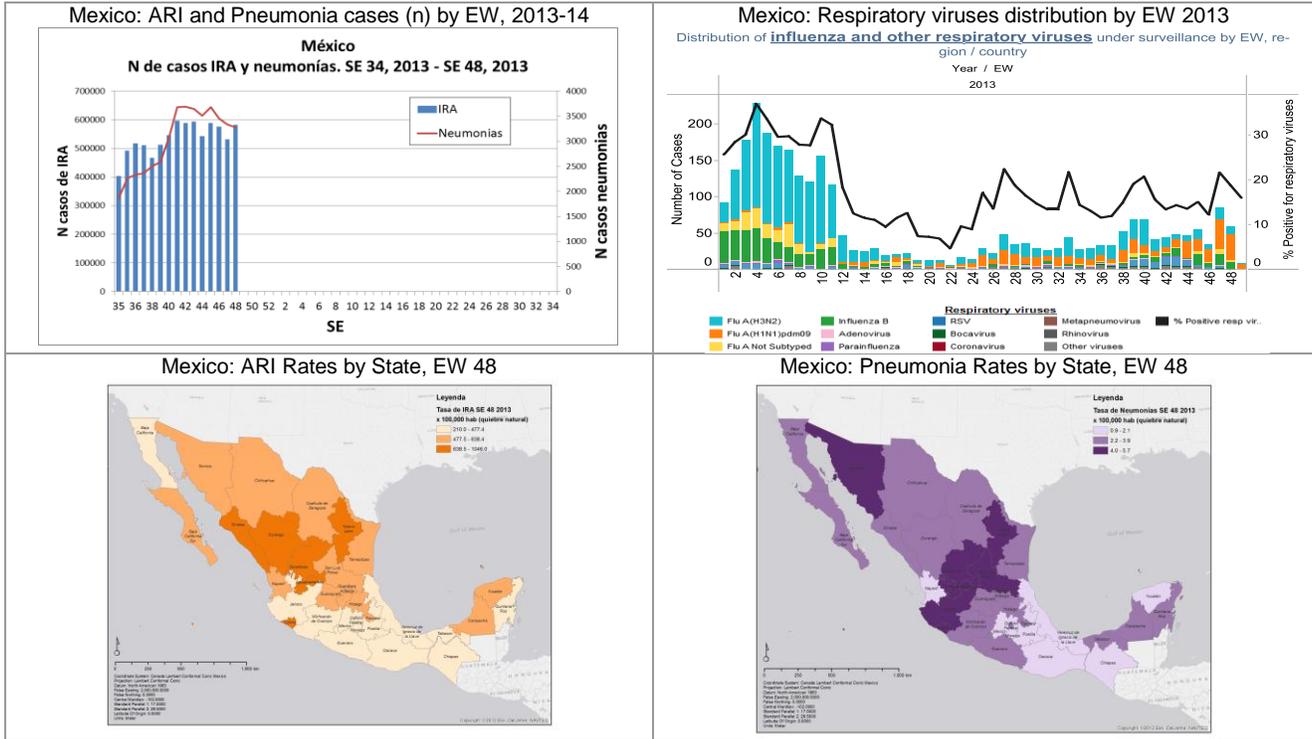
In Mexico<sup>3</sup>, during EW 48 the number of ARI cases increased by 9.5% while the number of pneumonia cases decreased by 2.1%, compared to the previous week. The highest levels of ARI activity were reported in Aguascalientes, Zacatecas and Sinaloa, and the highest levels of pneumonia activity were reported in

<sup>2</sup> USA: CDC FluView report. EW 49. Available at: <http://www.cdc.gov/flu/weekly/>

<sup>3</sup> México. Dirección General de Epidemiología. Información epidemiológica. SE 48.

Colima, Nuevo Leon and Zacatecas. According to laboratory data from EW 46-49, 1,070 samples were tested, of which 17.9% were positive for a respiratory virus and 17.0% for influenza. Among the positive influenza samples, 83.5% were influenza A (67.8% were A(H1N1)pdm09 and 21.1% were A(H3N2)) and 16.5% were influenza B.

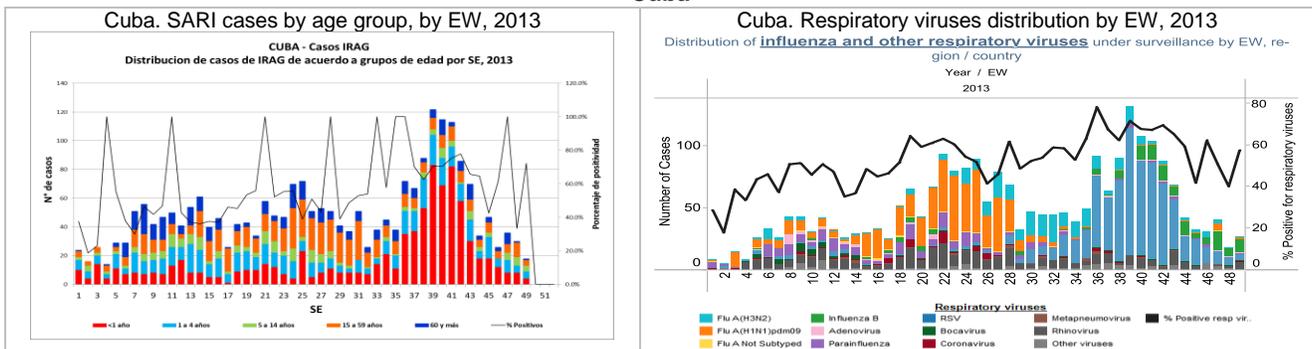
### Mexico



### Caribbean

In Cuba during EW 48, the number of SARI-associated hospitalizations decreased compared to the previous EW and has shown a decreasing trend since peaking in EW 39. Children 1 to 4 years of age comprised the largest proportion of these cases. No SARI-associated deaths were reported during this period. According to national laboratory data for EW 46-49, 221 samples were analyzed, of which 52.5% were positive for a respiratory virus and 24.4% were positive for influenza. Among positive samples, influenza B (34.5%) and RSV (29.3%) predominated.

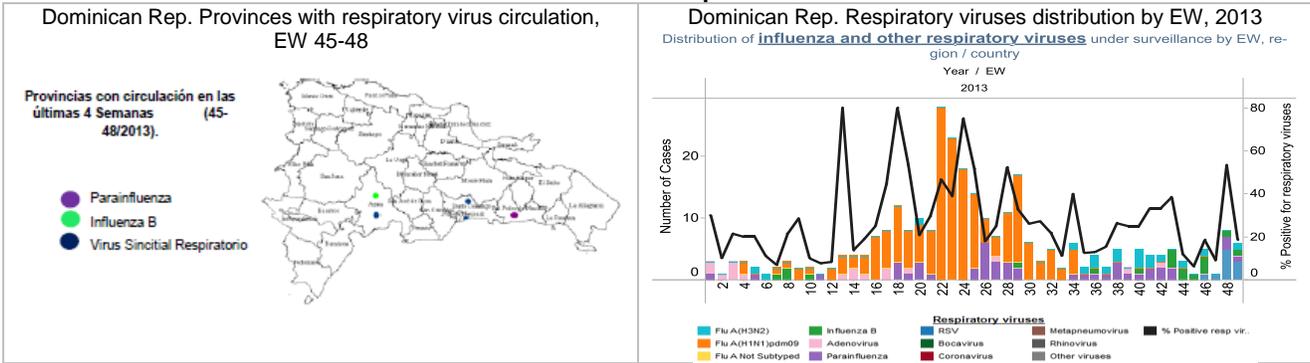
### Cuba



In the Dominican Republic<sup>4</sup>, the cumulative ILI rate for EW 1-48 was 2,057 per 10,000 inhabitants, and is 12% less than what was reported this period last year. During this period 1,725 SARI cases were reported through sentinel surveillance, of which 18 were reported during EW 48. There were no SARI-associated deaths reported during EW 48. According to laboratory data for EW 45-48, 85 samples were analyzed, of which 23.5% were positive for a respiratory virus and 8.2% were positive for influenza. Among positive influenza samples, 71.4% were influenza B and 28.6% were influenza A (all influenza A(H3N2)). Among other respiratory viruses, RSV (50.0% of positive samples) predominated.

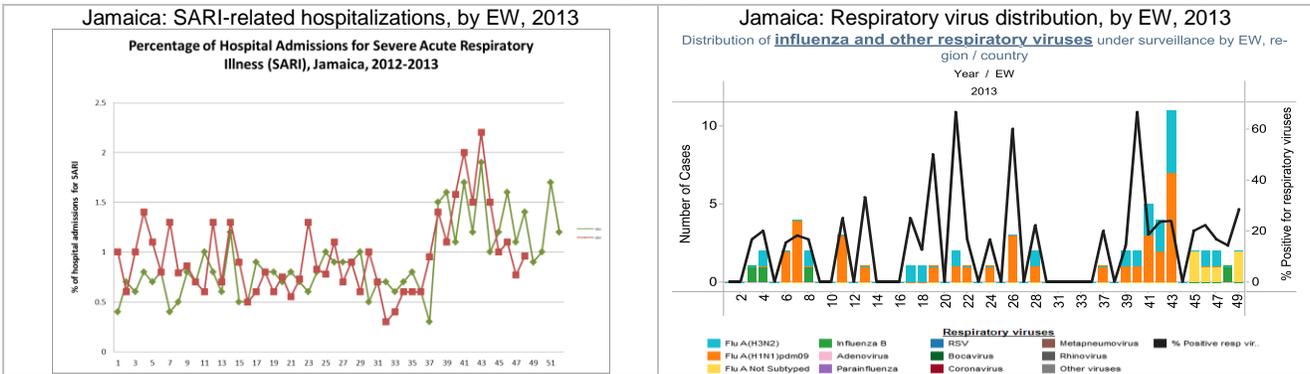
<sup>4</sup> República Dominicana. Dirección Nacional de Vigilancia Epidemiológica. Boletín Semanal SE 48.

## Dominican Republic



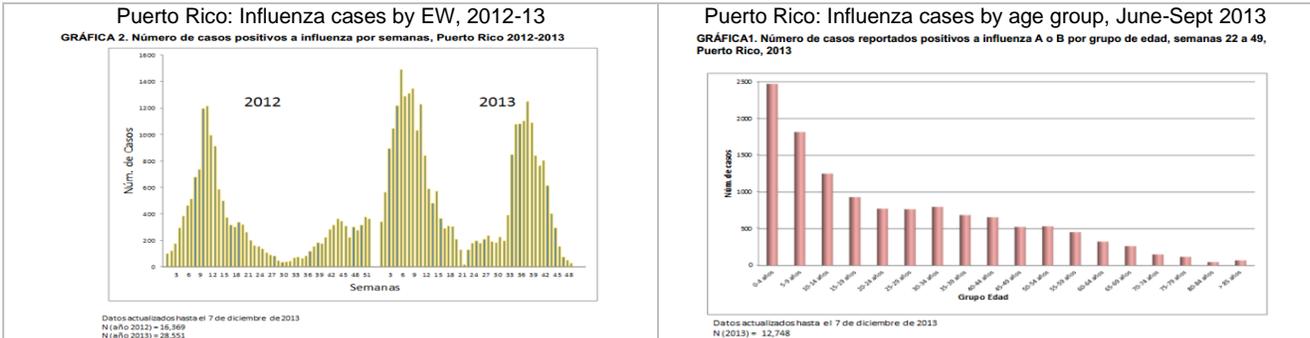
In Jamaica, based on sentinel surveillance data for EW 48, the proportion of ARI-associated consultations (6.7%) decreased compared to the previous week while the proportion of SARI-associated hospitalizations (1.0%) increased slightly. No SARI-associated deaths were reported during this period. Based on laboratory data for EW 45-48, 38 samples were analyzed of which 18.4% were positive for influenza. Among the influenza positive samples, 85.7% were influenza A (33.3% were A(H3N2)) and 14.3% were influenza B.

## Jamaica



In Puerto Rico<sup>5</sup> during EW 49, the number of influenza cases (n=26) continued a decreasing trend since peaking in EW 37. Of these, 76.9% were associated with influenza A and 23.1% with influenza B. Since the beginning of June, 12,748 influenza cases have been reported and children aged 0-14 years accounted for 43% of those cases. Since June, 756 influenza-associated hospitalizations and 16 influenza-associated deaths have been reported.

## Puerto Rico



## Central America

In Costa Rica, based on national laboratory data from EW 45-48, 254 samples were analyzed, of which 37.4% were positive for a respiratory virus and 10.6% were positive for influenza. Among influenza positive

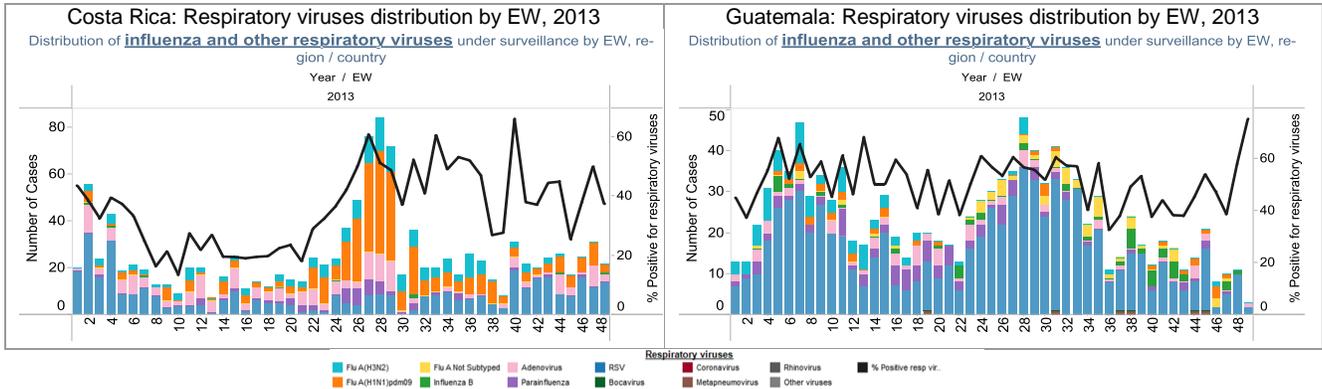
<sup>5</sup> Puerto Rico. Departamento de Salud. Vigilancia de influenza de Puerto Rico SE 49.

<http://www.salud.gov.pr/influenza/Informes%20Influenza/Informe%20Influenza%20Semana%2049.pdf>

samples, 96.3% were influenza A (100% were A(H1N1)pdm09). Among other respiratory viruses, RSV predominated (52.6% of positive samples) followed by adenovirus (17.9%).

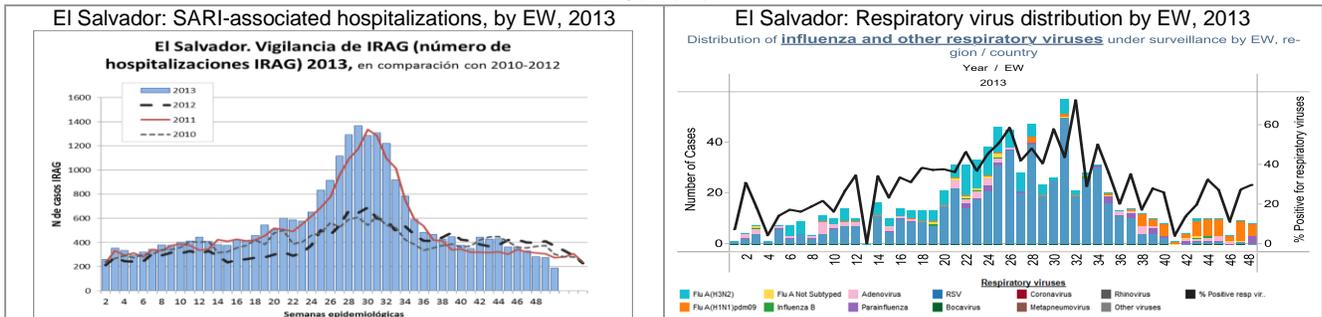
In Guatemala, based on laboratory data from EW 46-49, 66 samples were analyzed, of which 48.5% were positive for a respiratory virus and 16.7% were positive for influenza. Among influenza positive samples, 72.7% were influenza A (50.0% were A(H1N1)pdm09) and 27.3% were influenza B. Among the other respiratory viruses, RSV predominated (59.4% of positive samples).

### Costa Rica and Guatemala



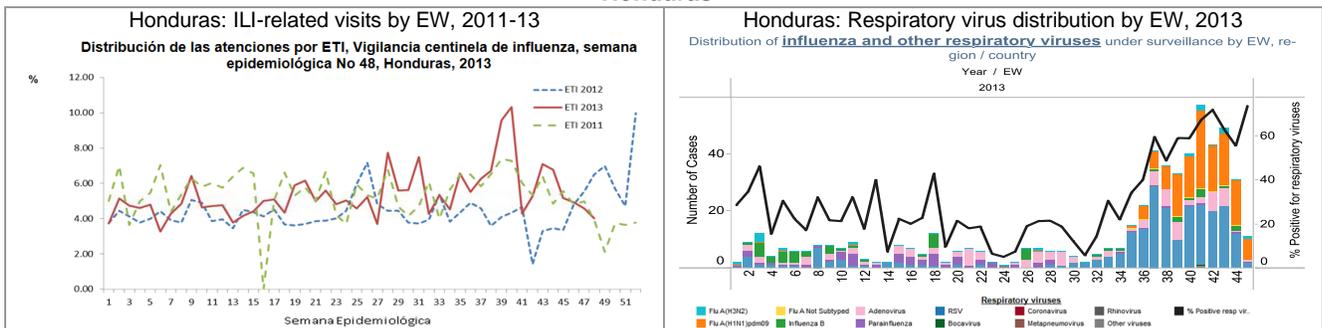
In El Salvador, during EW 49, the proportion of SARI hospitalizations (4.3%), SARI ICU admissions (12,5%) and SARI deaths (8,5%) remained low and lower than what was observed in previous years (2010-2012). Based on national laboratory data from EW 45-48, 124 samples were analyzed, of which 24.2% were positive for a respiratory virus and 17.7% were positive for influenza. Among influenza positive samples, 100% were influenza A(H1N1)pdm09. Among other respiratory viruses, adenovirus and RSV were detected.

### El Salvador



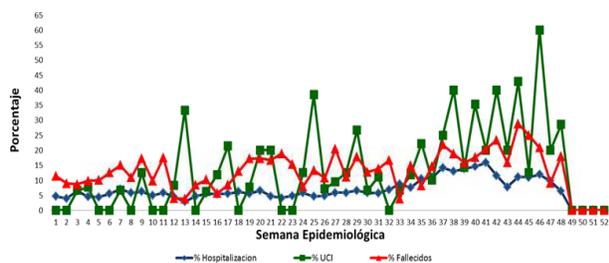
In Honduras<sup>6</sup>, during EW 48, the proportion of ILI-associated visits (4.0%) and SARI-associated hospitalizations (6.4%) hospitalizations decreased compared to the previous week while the proportion of SARI-associated deaths (18.0%) increased. Based on national laboratory data for EW 42-45, 209 samples were analyzed, of which 64.1% were positive for a respiratory virus and 30.1% were positive for influenza. Among the positive samples, influenza A(H1N1)pdm09 (42.5%) and RSV (41.8%) predominated.

### Honduras



<sup>6</sup> Honduras. Influenza Bulletin, EW 48

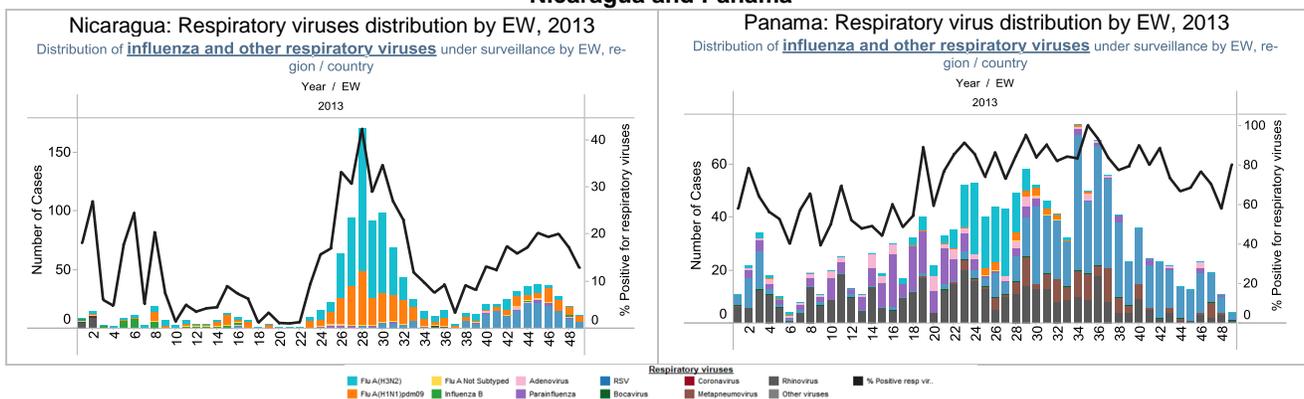
Honduras: SARI-related hosps, ICU adms & deaths, by EW,2013  
 Distribución de hospitalizaciones, admitidos en UCI, fallecidos por IRAG, vigilancia  
 centinela de influenza. Honduras, semana epidemiológica No. 1-48, 2013.



In Nicaragua, based on national laboratory data from EW 46-49, 518 samples were analyzed of which 18.0% were positive for a respiratory virus and 7.7% were positive for influenza. Among influenza positive samples, 92.5% were influenza A (83.8% were A(H1N1) and 16.2% were A(H3N2)). Among other respiratory viruses, RSV predominated (50.5% of positive samples).

In Panama, based on national laboratory data from EW 46-49, 81 samples were analyzed, of which 70.4% were positive for a respiratory virus. Among positive samples, RSV (61.4%) predominated, followed by rhinovirus (15.8%) and human metapneumovirus (14.0%)

### Nicaragua and Panama

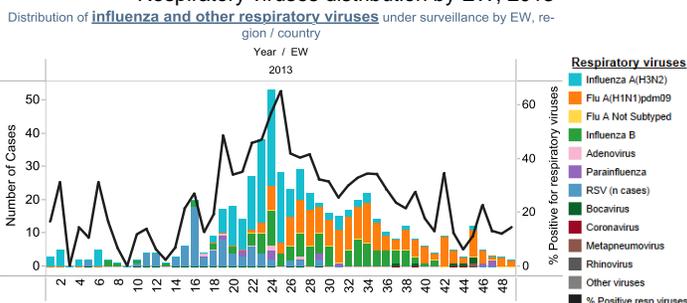


### South America – Andean countries

In Bolivia, according to laboratory data from INLASA (La Paz) from EW 46-49, 71 samples were analyzed of which 15.5% were positive for a respiratory virus and 11.9% were positive for influenza. Among positive samples, influenza A(H1N1)pdm09 predominated (76.9%), followed by parainfluenza (23.1%).

### Bolivia (La Paz)

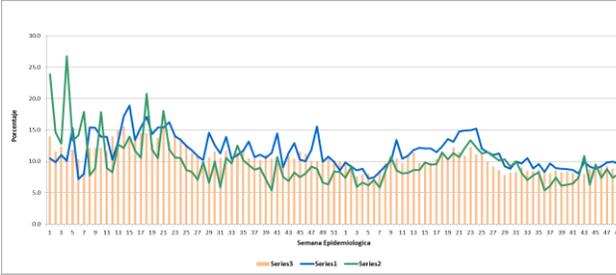
Bolivia (La paz). INLASA.  
 Respiratory viruses distribution by EW, 2013



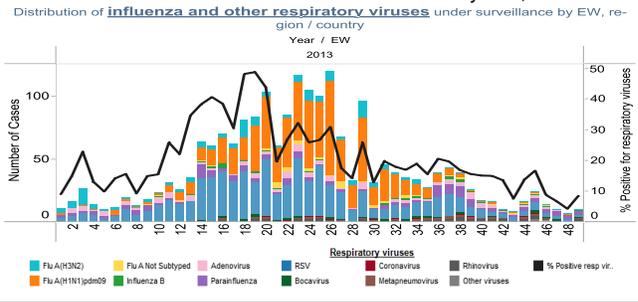
In Colombia, nationally during EW 49, the proportions of hospitalizations (9.6%), ICU admissions (8.0%) and deaths (9.1%) with ARI-associated ICD-10 codes (J00 to J22) remained at low levels. Based on INS national laboratory data from EW 46-49, 597 samples were analyzed, of which 6.9% were positive for a respiratory virus and 0.7% were positive for influenza. Among the positive samples, parainfluenza (34.1%) and RSV (24.4%) predominated.

## Colombia

Colombia: Percent Outpatient Visits, Hosps and ICU Admissions with J00 to J20 codes, by EW 2012-13



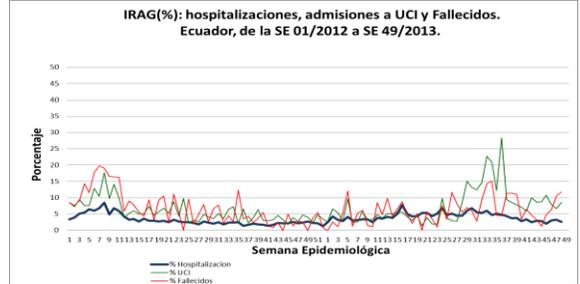
Colombia: Influenza and ORV distribution by EW, 2013



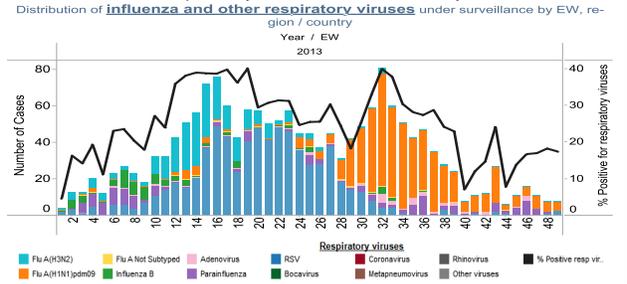
In Ecuador during EW 48, the proportion of SARI-associated hospitalizations (2.6%) and ICU admissions (8.6%) remained similar to what was observed during the previous week. Based on national reference laboratory data from EW 46-49, 251 SARI samples were analyzed, of which 17.1% were positive for a respiratory virus and 9.2% were positive for influenza. Among the positive samples, influenza A(H1N1)pdm09 (53.5%) and parainfluenza (30.2%) predominated.

## Ecuador

Ecuador. :% SARI Hosps, ICU Adms & Deaths by EW 2013



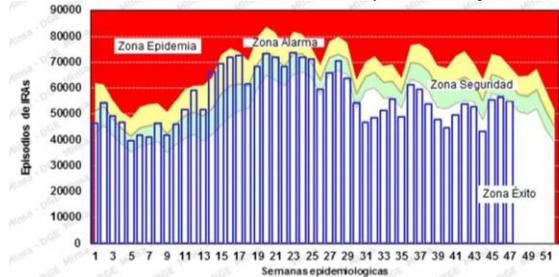
Ecuador. Respiratory viruses distribution by EW, 2013



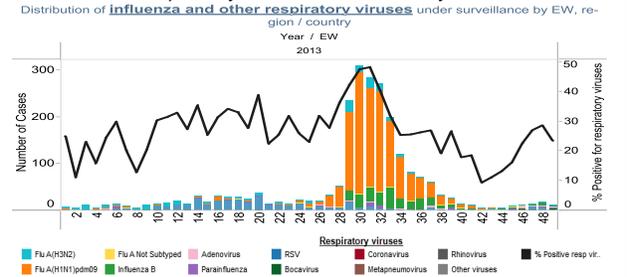
In Peru<sup>7</sup> during EW 47, the number pneumonia reports in patients older than 5 years of age decreased compared to the previous EW. Among children younger than 5 years, the number of pneumonia reports increased from the previous week. However, both are within the expected levels for this time of year. Based on national laboratory data from EW 46-49, 211 samples were analyzed, of which 25.6% were positive for a respiratory virus and 9.0% were positive for influenza. Among the positive samples, influenza B predominated (31.5%), followed by RSV (27.8%) and human metapneumovirus (18.5%).

## Peru

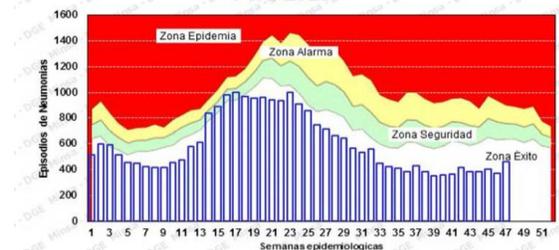
Peru.: Pneumonia endemic channel, patients >5yrs, 2013



Perú. Respiratory viruses distribution by EW, 2013



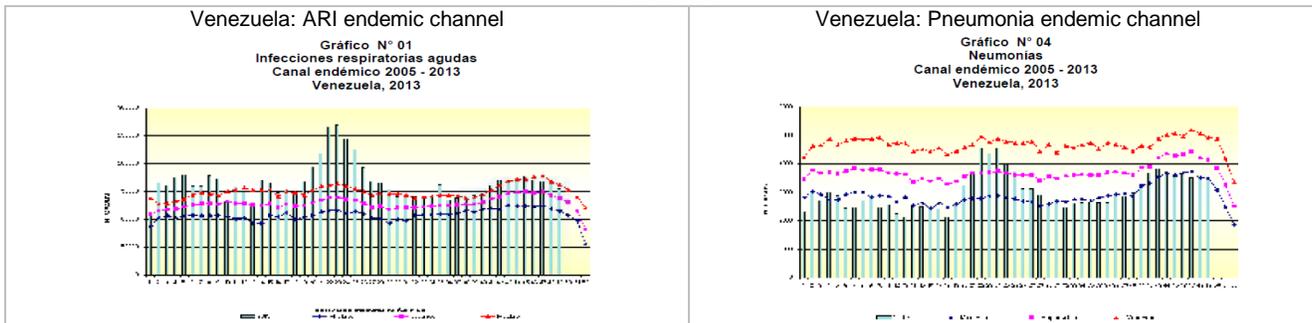
Peru. Pneumonia endemic channel, patients <5yrs, 2013  
Canal endémico de neumonías en menores de 5 años, Perú 2013\*



<sup>7</sup> Perú. Sala de Situación de Salud. EW 47, 2013. Ministerio de Salud. Dirección General de Epidemiología

In Venezuela<sup>8</sup> during EW 49, ARI and pneumonia activity decreased by 8.1% and 2.6%, respectively, compared to the previous EW. Both were within the expected values for this time of year. During EW 48, 119 SARI-associated hospitalizations were reported, with children less than 1 year of age comprising the largest proportion of cases. Based on virologic data from EW 1-49, 5,298 samples were analyzed from suspected influenza cases, of which 52.6% were positive for influenza. Among the positive samples, 91.7% were influenza A(H1N1)pdm09.

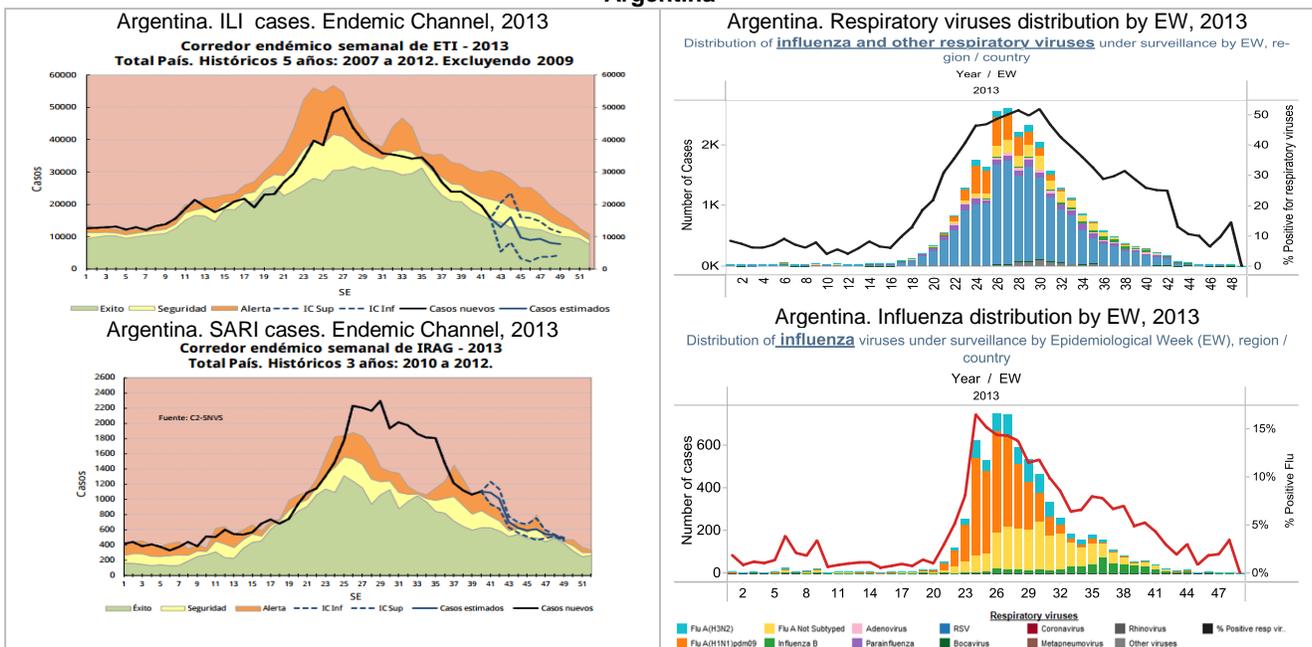
### Venezuela



### South America – Southern Cone and Brazil

In Argentina<sup>9</sup>, according to reports and calculated estimations, national ILI activity during EW 48 was within the success zone of the endemic channel and continued a decreasing trend since its peak in EW 26. The proportion of SARI-associated hospitalizations was within the alert zone of the endemic channel, but also showed a decreasing trend since EW 26. Based on laboratory data from EW 46-49, 770 samples were analyzed, of which 8.7% were positive for a respiratory virus and 2.1% for influenza. Among positive samples, parainfluenza (32.8%), RSV (26.9%) and adenovirus (13.4%) were detected.

### Argentina



In Brazil<sup>10</sup>, according to ILI sentinel surveillance data through EW 48, 15,825 samples were analyzed, of which 21.5% were positive for influenza or another respiratory virus. During EW 47, 1.0% of samples were positive for a respiratory virus, and among these adenovirus and influenza A(H3N2) were detected. Based on universal SARI surveillance data during this same period, 35,438 SARI cases were reported and 16.7% were positive for influenza. Of these positive samples, influenza A(H1N1)pdm09 predominated (63.2%), followed by influenza B (22.3%) and A(H3N2) (11.2%). Additionally, to date in 2013, 4,208 SARI-associated

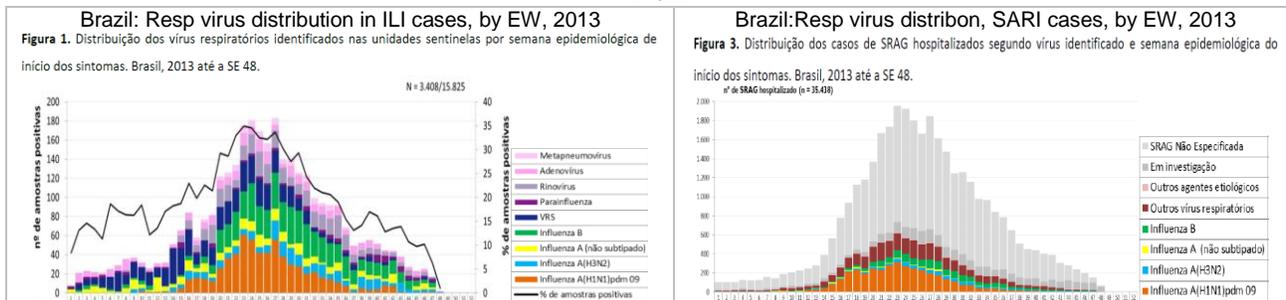
<sup>8</sup> Venezuela. Boletín epidemiológico, EW 49, 2013.

<sup>9</sup> Argentina. Boletín integrado de vigilancia. SE 48.

<sup>10</sup> Brasil. Boletim informativo. Secretaria de Vigilância em Saúde. SE 48, 2013.

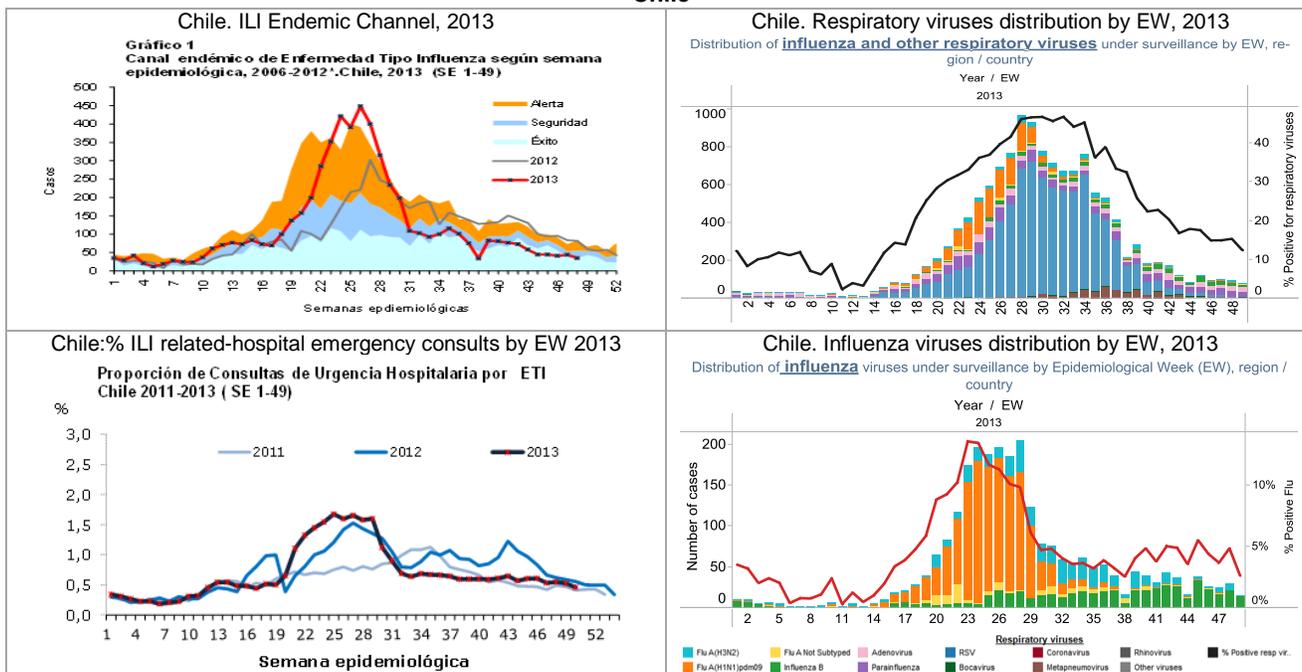
deaths have been reported of which 22.7% were positive for influenza, and of these, 80.4% were associated with influenza A(H1N1)pmd09.

### Brazil



In Chile<sup>11</sup> ILI activity during EW 49 (rate: 3.1 per 100,000 inhabitants) remained low and was within the success zone of the endemic channel. The proportion of ILI-associated hospital emergency consultations was 0.4%, and also maintained a low and stable level. Based on laboratory data from EW 48-49, 1,231 samples were tested, of which 13.8% were positive for a respiratory virus and 3.7% were positive for influenza. Among the positive samples, parainfluenza (35.3%), adenovirus (28.8%) and influenza B (20.6%) were detected.

### Chile

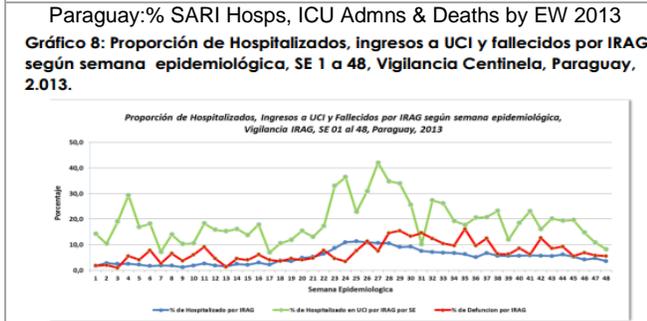
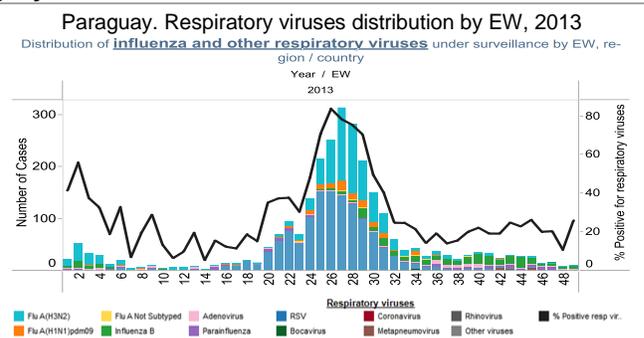
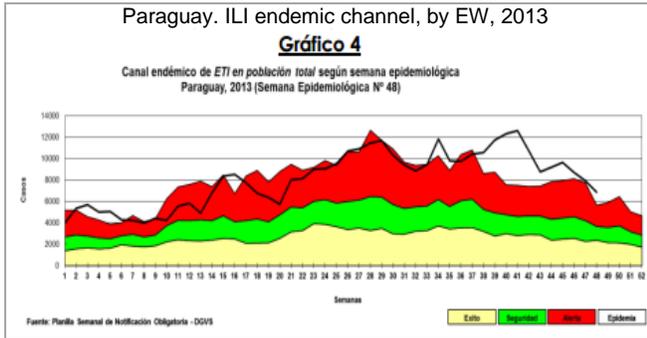


In Paraguay<sup>12</sup> during EW 48, the ILI consultation rate (103 per 100,000 inhabitants) decreased compared to the previous EW and bordered on the alert zone of the endemic channel. The proportion of SARI-associated hospitalizations (3.6%) was within the expected range for this time of year and children less than 5 years of age comprised the largest portion (55.0%) of these cases. Based on reference laboratory data from EW 46-49, 259 SARI samples were analyzed, of which 18.1% were positive for a respiratory virus and 9.7% were positive for influenza. Among influenza samples, 96.0% were influenza B. Among other respiratory viruses, parainfluenza (29.8% of positive samples) predominated, followed by human metapneumovirus (14.9%).

<sup>11</sup> Chile. Informe de situación. EW 49. Available at: <http://epi.minsal.cl/>

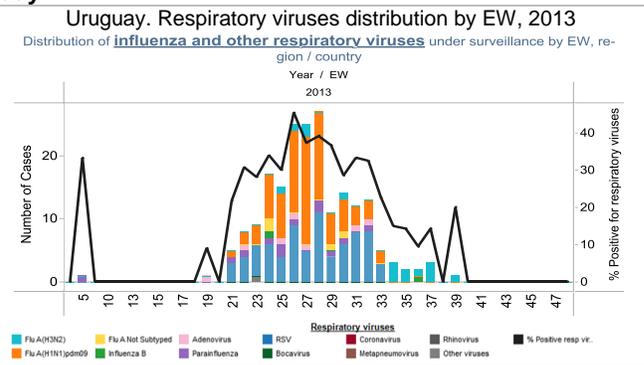
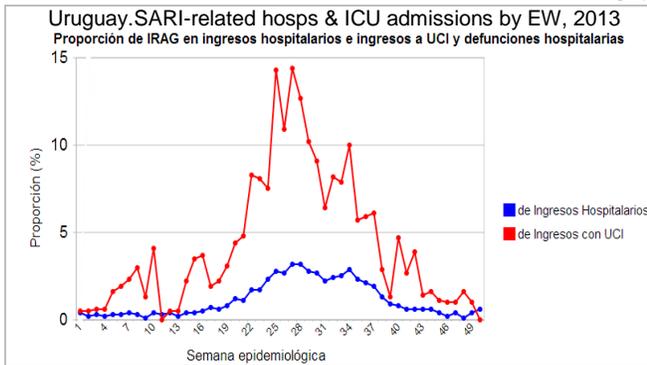
<sup>12</sup> Paraguay. Informe de situación. Vigilancia de ETI e IRAG. SE 48, 2013

## Paraguay



In Uruguay<sup>13</sup> during EW 49, the proportions of SARI-associated hospitalizations, ICU admissions and deaths were similar to the previous EW, and remained at low levels. Based on laboratory data from EW 45-48, 12 SARI samples were analyzed, of which none were positive for a respiratory virus.

## Uruguay



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