

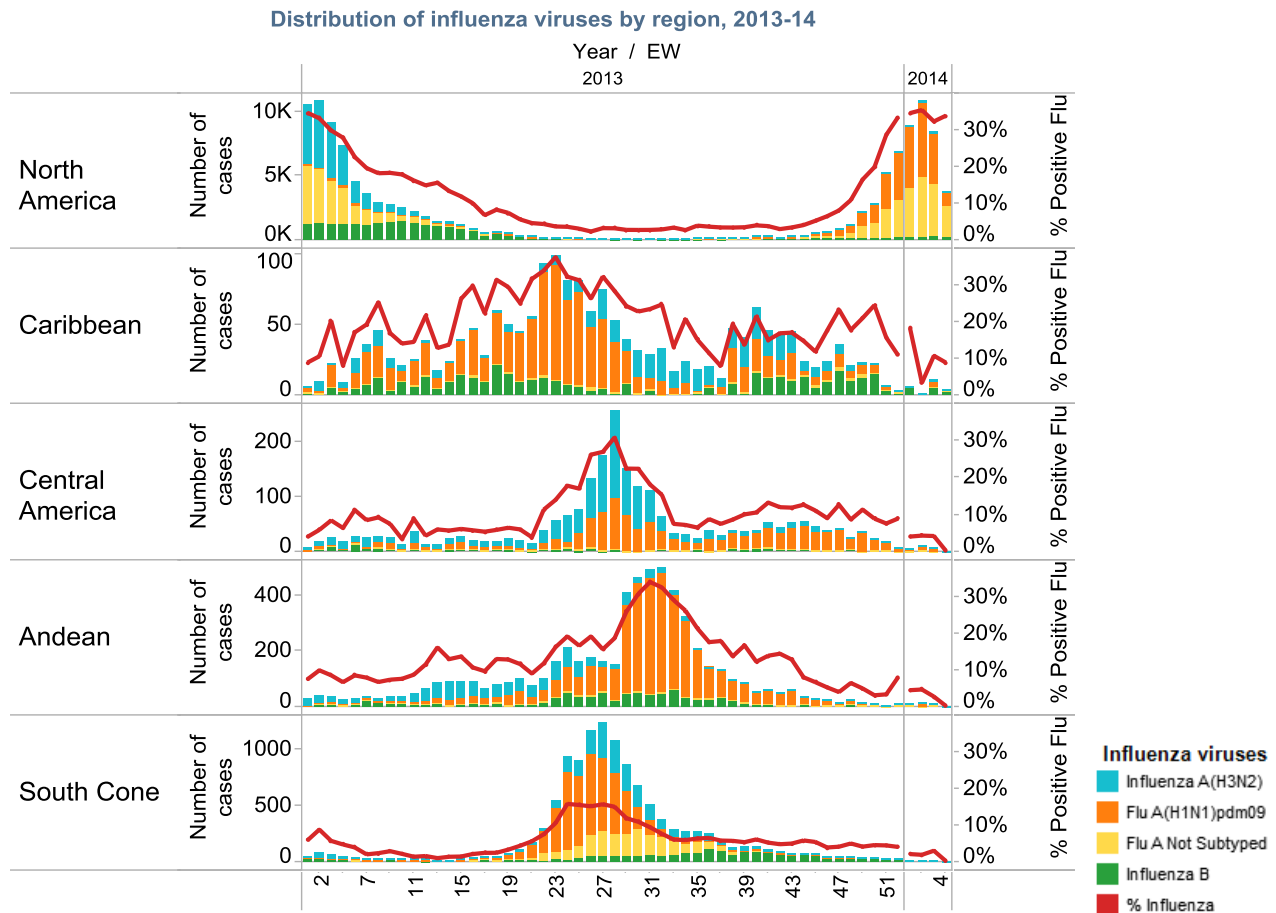
PAHO interactive influenza data: [http://ais.paho.org/phis/viz/ed\\_flu.asp](http://ais.paho.org/phis/viz/ed_flu.asp)  
Influenza Regional Reports: [www.paho.org/reportesinfluenza](http://www.paho.org/reportesinfluenza)

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

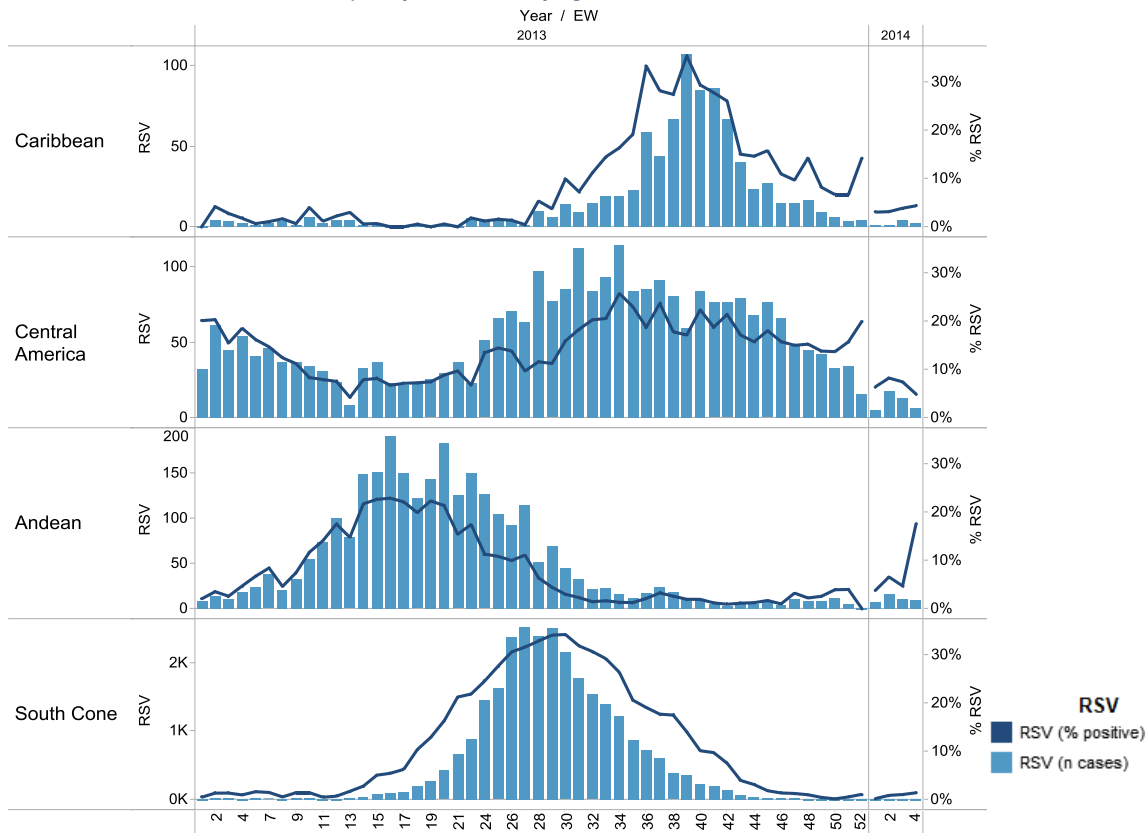
- North America: Although influenza activity remained high in Canada and the United States, various indicators have decreased in the previous weeks. In Mexico, influenza activity continued to increase. In the region, influenza A(H1N1)pdm09 continued as the predominant circulating virus.
- The Caribbean and Central America: Influenza and other respiratory viruses activity in the region remained low.
- South America – Andean Countries: Acute respiratory illness activity as well as influenza and other respiratory viruses activity remained low in the region.
- South America - South Cone and Brazil: Acute respiratory illness activity as well as influenza and other respiratory viruses activity was low and within the expected level for this time of year in all countries of the region.

Influenza circulation by region. 2013-14



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

Respiratory Sincicial Virus 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

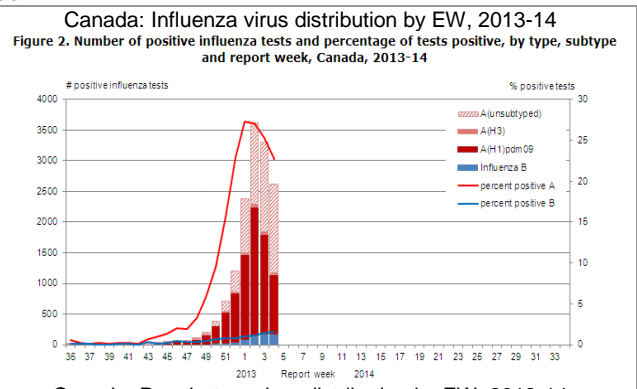
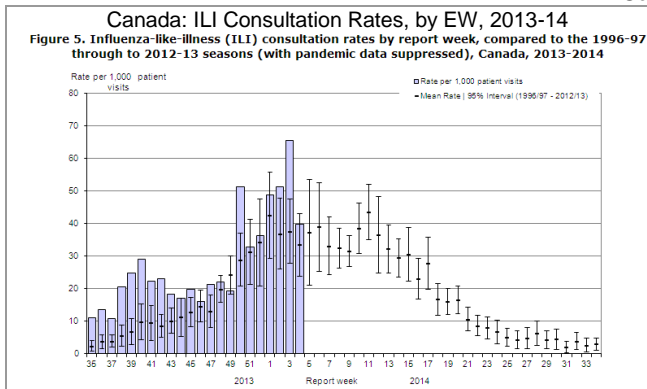
### EPIDEMIOLOGIC AND VIROLOGIC UPDATE OF INFLUENZA & OTHER RESPIRATORY VIRUSES BY COUNTRY

#### North America:

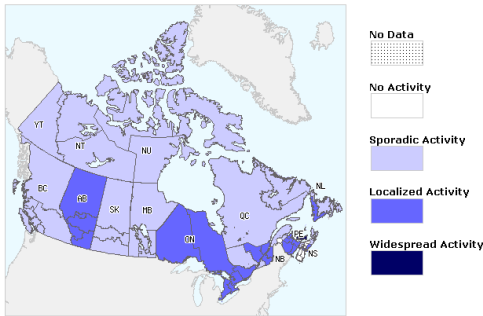
In Canada<sup>1</sup> during EW 4, overall influenza activity decreased compared to the previous week. The national influenza-like illness (ILI) consultation rate was 39.8 per 1,000 patient visits, a decrease compared to the previous week and was within the expected levels for this time of year. Since the beginning of the 2013-14 influenza season, 2,298 influenza-associated hospitalizations have been reported and the majority of these cases have been adults  $\geq 45$  years of age. To date this season, 113 deaths have been reported (compared to 182 during the same period of the 2012-13 season) and 99% were associated influenza A. The highest proportion of these deaths (51%) occurred among adults 20-64 years of age, followed by adults  $\geq 65$  years (37%). Based on laboratory data for EW 4, the overall percentage of positive influenza tests was 24.3% (N=2,620), a decrease compared to the previous week. Among the positive tests, 93.5% were influenza A (39.9% influenza A(H1N1)pdm09, 1.0% A(H3N2) and 59.1% not subtyped) and 6.5% were influenza B. Among other circulating respiratory viruses, RSV predominated.

<sup>1</sup> Canada: FluWatch Report. EW 4. Available at <http://www.phac-aspc.gc.ca/fluwatch/>

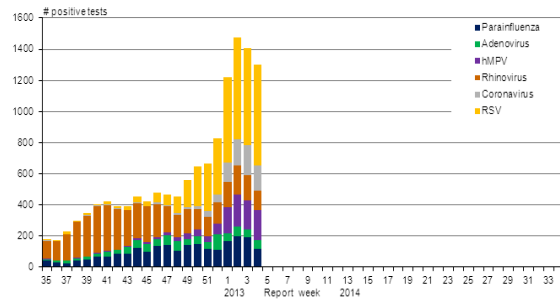
## Canada



**Canada: Influenza/ILI Activity by region, EW 4, 2014**  
**Figure 1. Map of overall influenza/ILI activity level by province and territory, Canada, Week 04**

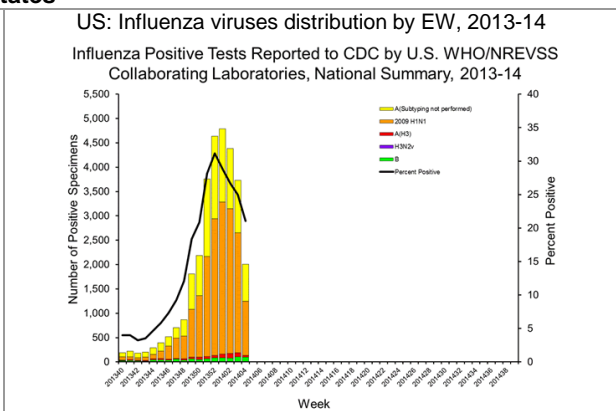
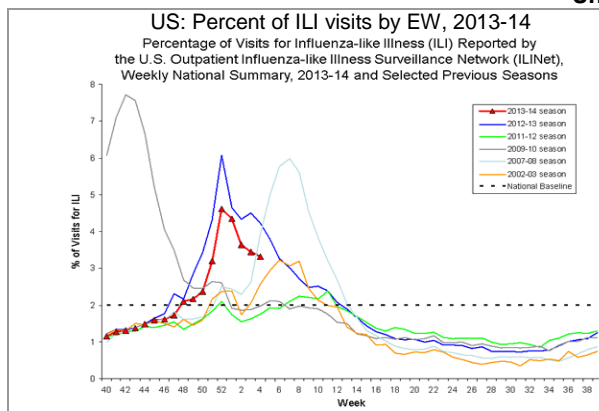


**Canada: Respiratory virus distribution by EW, 2013-14**  
**Figure 3. Number of positive laboratory tests for other respiratory viruses by report week, Canada, 2013-14**

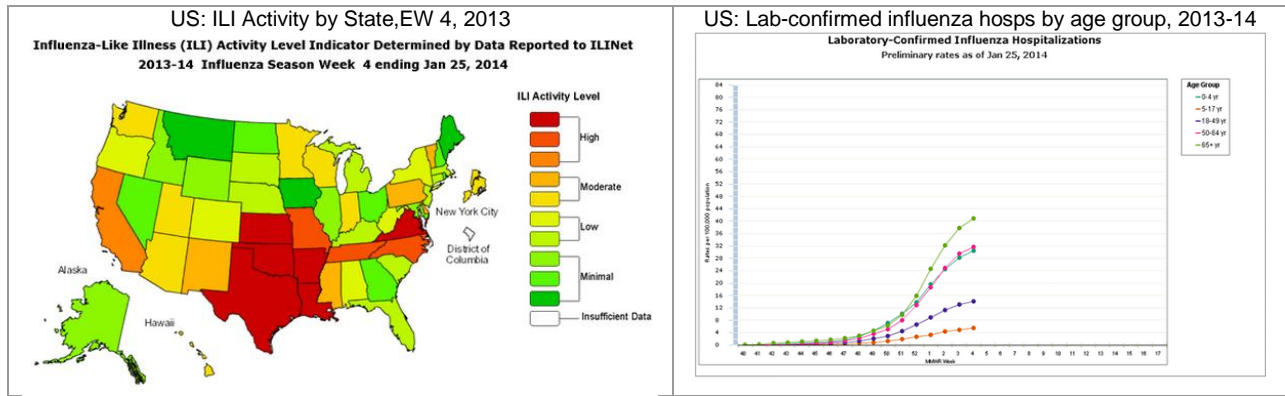


In the United States<sup>2</sup> during EW 4, influenza activity remained high, although some indicators decreased. The proportion of outpatient visits for influenza-like illness (ILI) was 3.3%, above the national baseline of 2.0%, but a slight decrease compared to the previous EW (3.4%). All 10 regions reported ILI activity above region-specific baseline levels. The proportion of deaths attributed to pneumonia and influenza for EW 4 (8.8%) was above the epidemic threshold (7.3%). A total of 37 influenza-associated pediatric deaths have been reported this season, of which nine were reported during EW 4. Of these deaths, four were associated A(H1N1)pdm09 and occurred during EW 52, 2 and 3; three were associated with influenza A, not subtyped and occurred during EW 3 and 4; one was associated with influenza B and occurred during EW 3; and one was associated with influenza but the type was not determined and occurred during EW 1. Since October 1, 2013, 5,494 laboratory confirmed influenza-associated hospitalizations have been reported (rate: 20.3 per 100,000 population). The highest hospitalization rate was among adults  $\geq 65$  years followed by 50-64 years and children 0-4 years. Adults aged 18-64 years comprised more than 60% of the reported hospitalizations. According to laboratory data for EW 4, 9,514 samples were analyzed, of which 21.1% were positive for influenza. Among the positive samples, 95.0% were influenza A (58.6% A(H1N1)pdm09, 1.6% A(H3N2) and 39.8% not subtyped) and 5.0% were influenza B. Based on antiviral resistance testing, 0.9% (21/2,254) of the influenza A(H1N1)pdm09 samples tested were oseltamivir resistant.

## United States

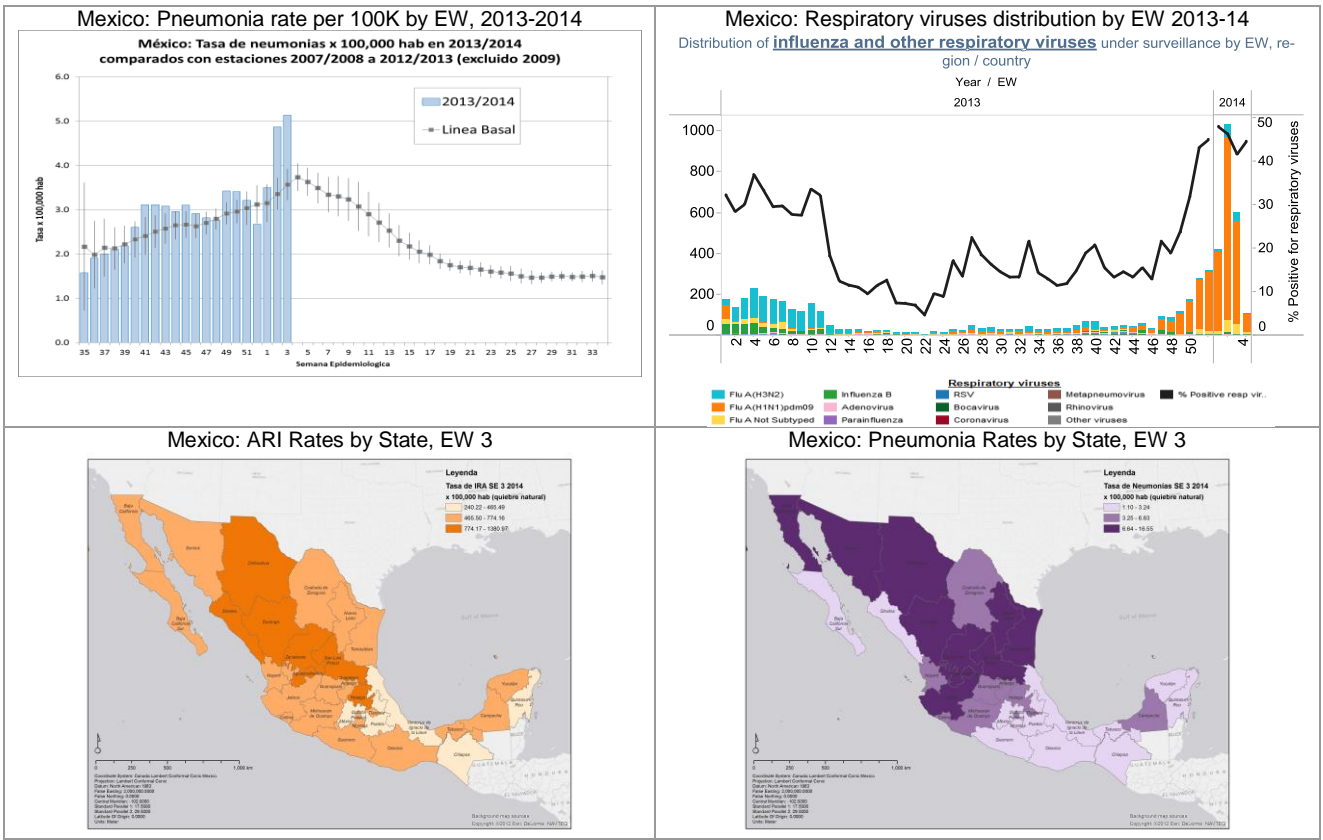


<sup>2</sup> USA: CDC FluView report. EW 4. Available at: <http://www.cdc.gov/flu/weekly/>



In Mexico<sup>3</sup>, during EW 3 influenza activity increased with respect to the previous weeks. Both ARI and pneumonia rates increased from the previous EW and were above expected levels for this time of year. The highest levels of ARI activity were reported in Zacatecas, Durango and Aguascalientes, and the highest levels of pneumonia activity were reported in Chihuahua, Aguascalientes and Jalisco. Nationally, through January 30, 2014, the proportion of ILI/SARI-associated medical visits was 3.2%, an increase compared to the previous EW. During this same period, 273 influenza-associated deaths were reported, of which 91.9% were associated with influenza A(H1N1)pdm09. According to laboratory data during EW 3-4, 1,803 samples were analyzed, of which 41.9% were positive for influenza. Among the positive influenza samples, 98.1% were influenza A (80.6% A(H1N1)pdm09 and 6.3% A(H3N2)) and 1.9% were influenza B.

**Mexico**



**Caribbean**

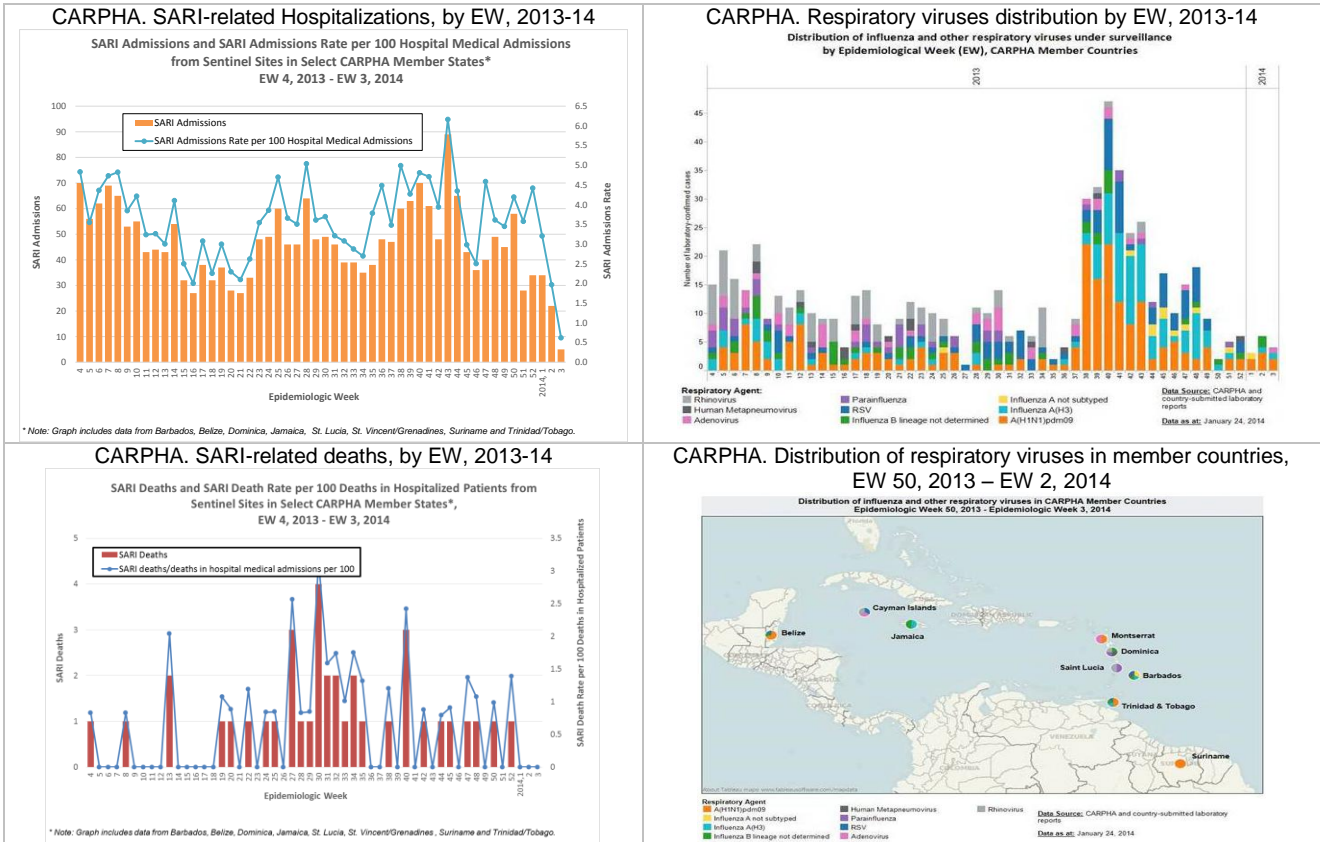
CARPHA<sup>4</sup> received weekly SARI/ARI data from the following countries for EW 1-3: Barbados, Jamaica, St. Vincent & the Grenadines, and Trinidad & Tobago. The proportion of SARI-associated hospitalizations has shown a decreasing trend for the last several weeks and children under 6 months to 4 years of age have had the highest rate of SARI admissions. No SARI-associated deaths were reported during this period.

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

<sup>4</sup> Caribbean Public Health Agency (CARPHA) EW 3

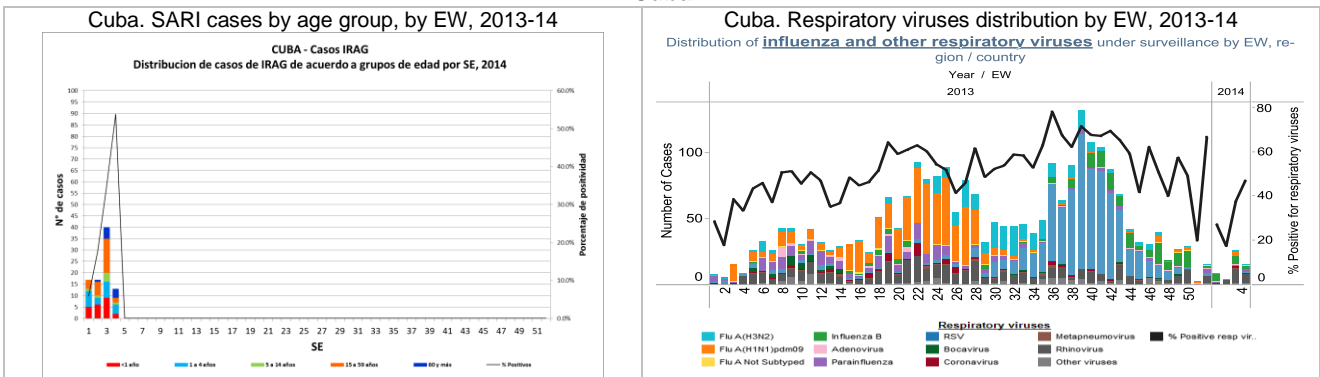
According to laboratory data from EW 3, the following viruses were detected: influenza A(H1N1)pdm09 (Belize, Montserrat, Trinidad & Tobago), influenza A(H3) (Barbados, Jamaica, Trinidad & Tobago), influenza A, not subtyped (Barbados), influenza B (Barbados, Belize, Trinidad & Tobago), human metapneumovirus (Dominica), parainfluenza (Dominica), RSV (Barbados) and adenovirus (Montserrat).

**CARPHA**



In Cuba during EW 4, the number of SARI-associated hospitalizations decreased compared to the previous week. Persons aged 1-4 years and ≥60 years comprised the largest proportion of these cases. No SARI-associated deaths were reported during this period. According to national laboratory data for EW 1-4, 159 samples were analyzed, of which 34.6% were positive for a respiratory virus and 12.6% were positive for influenza. Among positive samples, rhinovirus (43.6%) and influenza B (27.3%) were predominant.

**Cuba**

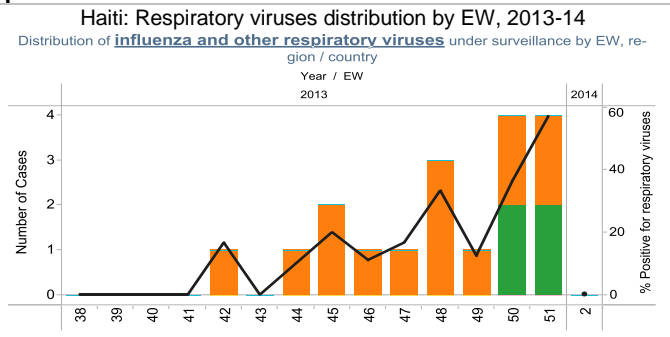
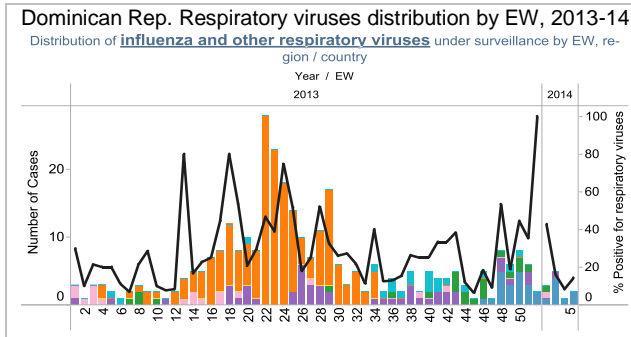


In the Dominican Republic, based on laboratory data for EW 2-5, 64 samples were analyzed, of which 17.2% were positive for a respiratory virus and 1.6% were positive for influenza. Among positive influenza samples, 100% were influenza B. Among other respiratory viruses, RSV (72.7% of positive samples) predominated.

In Haiti, based on laboratory data for EW 49-2, 28 samples were analyzed, of which 32.1% were positive for influenza. Among positive samples, 55.6% were influenza A (100% were A(H1N1)pdm09) and 44.4% were influenza B.

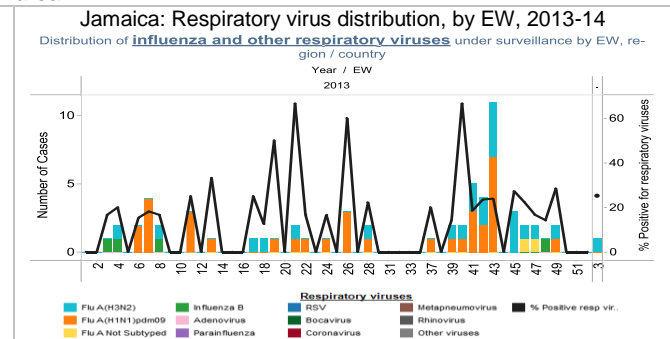
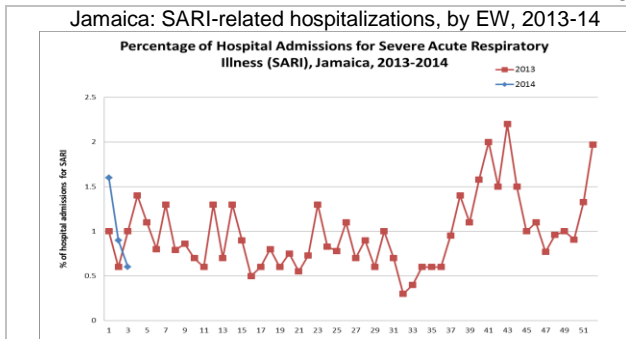


## Dominican Republic and Haiti



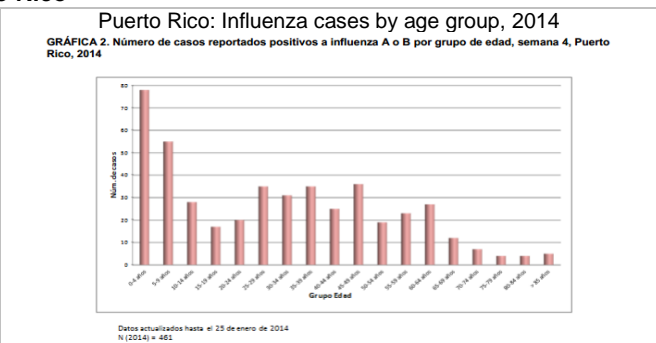
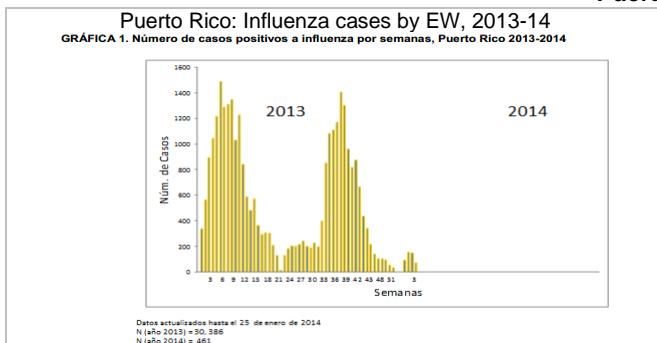
In Jamaica, based on sentinel surveillance data for EW 3, the proportion of ARI-associated consultations (4.0%) increased compared to the previous week while the proportion of SARI-associated hospitalizations (0.6%) decreased. No SARI-associated deaths were reported during this period. Based on laboratory data for EW 52-3, 6 samples were analyzed of which one was positive for influenza A(H3N2).

## Jamaica



In Puerto Rico<sup>5</sup> during EW 4, the number of influenza cases (n=71) remained low. Of these, 77.5% were associated with influenza A and 22.5% with influenza B. Since the beginning of 2014, 461 influenza cases have been reported and persons aged 0-19 years accounted for 39% of those cases. During this same period, 38 influenza-associated hospitalizations and no influenza-associated deaths have been reported.

## Puerto Rico

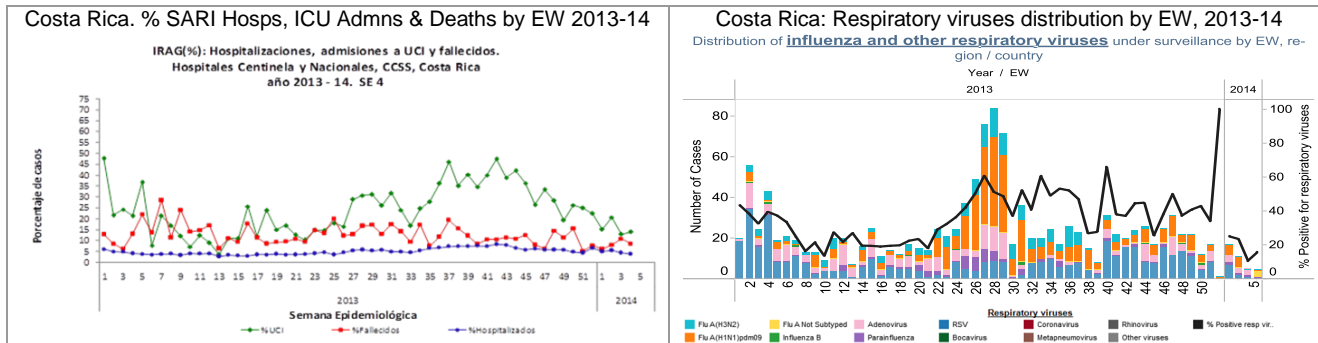


## Central America

In Costa Rica, according to ILI/SARI surveillance data, influenza and other respiratory virus activity remained low during EW 4. The proportions of SARI-associated hospitalizations (3.9%), SARI-associated ICU admissions (14%) and SARI-associated deaths (8.5%) were similar to the previous EW. Based on laboratory data from EW 2-5, 194 samples were analyzed, of which 19.6% were positive for a respiratory virus and 7.2% were positive for influenza. Among the positive influenza samples, 100% were influenza A (78.6% A(H1N1)pdm09). Among other respiratory viruses, RSV (26.3% of positive samples), adenovirus (26.3%) and parainfluenza (10.5%) were detected.

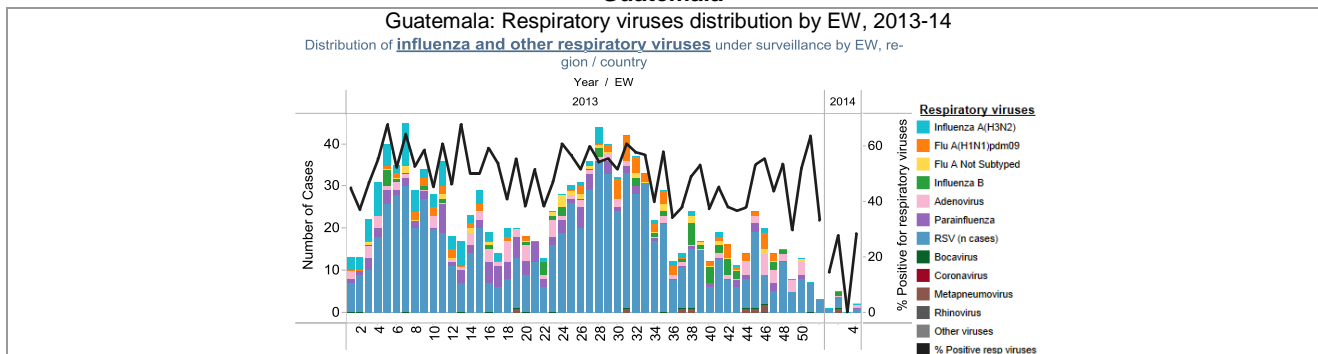
<sup>5</sup> Puerto Rico. Departamento de Salud. Vigilancia de influenza de Puerto Rico SE.4

## Costa Rica



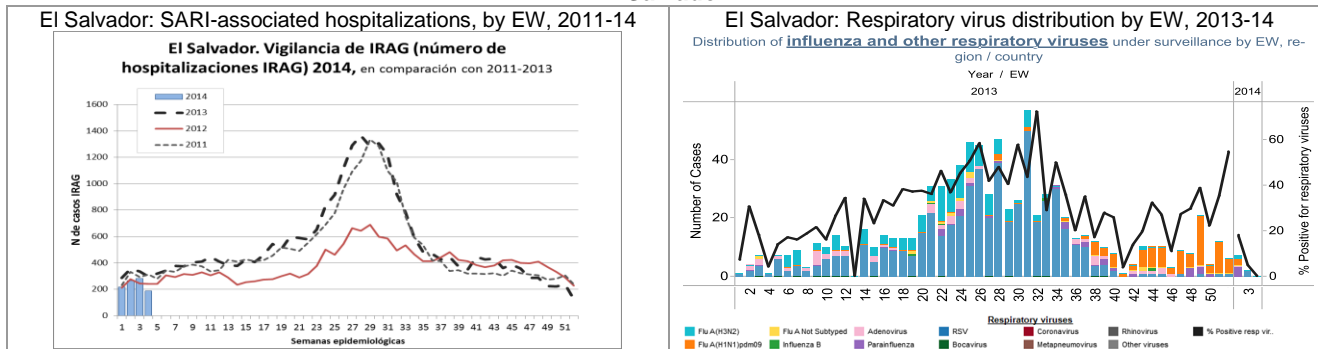
In Guatemala, based on laboratory data from EW 1-4, 38 samples were analyzed, of which 21.1% were positive for a respiratory virus and 2.6% were positive for influenza. Among the positive influenza samples, 100% were influenza B. Among other respiratory viruses, RSV predominated (62.5% of positive samples).

## Guatemala



In El Salvador, during EW 4, the proportions of SARI-associated hospitalizations (4.2%), ICU admissions (9.1%) and deaths (7.0%) remained low and within the expected levels for this time of year. According to national laboratory data from EW 1-4, 92 samples were analyzed, of which 9.8% were positive for a respiratory virus and 3.3% were positive for influenza. Among influenza positive samples, 100% were influenza A (66.7% A(H1N1)pdm09 and 33.3% A(H3N2)). Among other respiratory viruses, parainfluenza (33.3% of positive samples), RSV (22.2%) and adenovirus (11.1%) were detected.

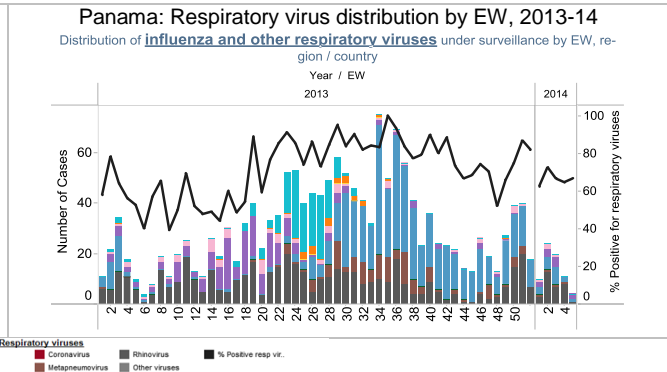
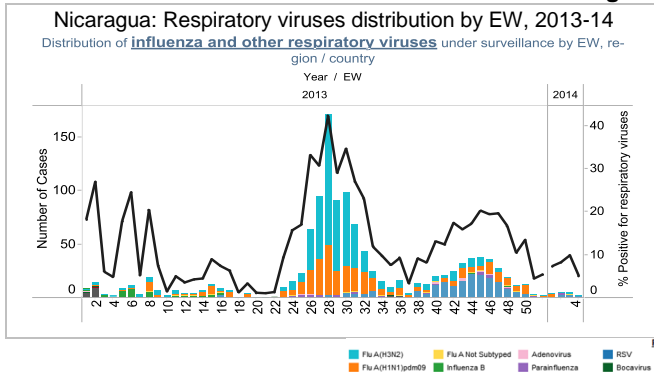
## El Salvador



In Nicaragua, according to national laboratory data from EW 1-4, 207 samples were analyzed of which 7.7% were positive for a respiratory virus and 2.4% were positive for influenza. Among influenza positive samples, 100% were influenza A (80.0% A(H1N1)pdm09 and 20.0% A(H3N2)). Among other respiratory viruses, RSV (50.0% of positive samples) and parainfluenza (18.8%) were detected.

In Panama, based on national laboratory data from EW 1-4, 98 samples were analyzed of which 73.1% were positive for a respiratory virus. Among the positive samples, rhinovirus (45.6%), RSV (25.0%) and parainfluenza (13.2%) predominated.

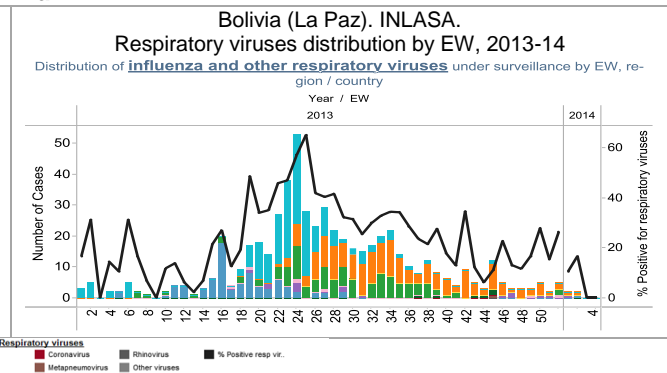
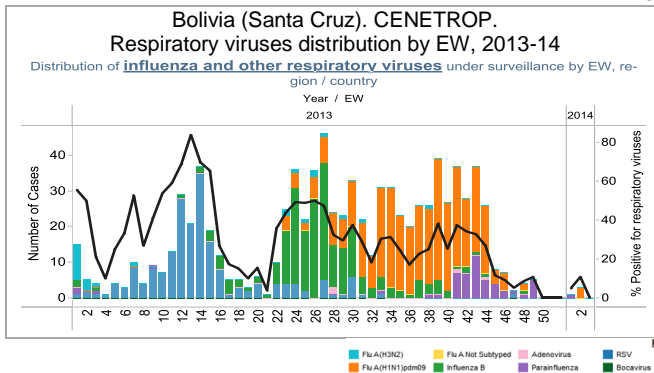
## Nicaragua and Panama



## South America – Andean countries

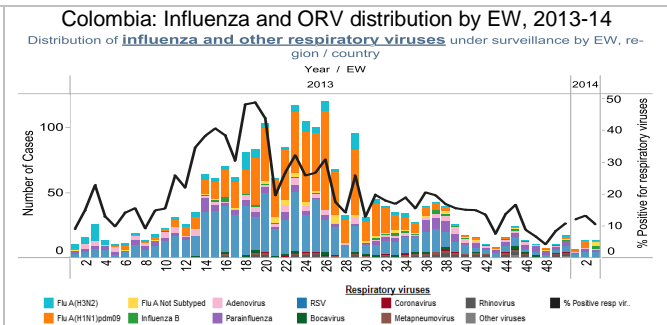
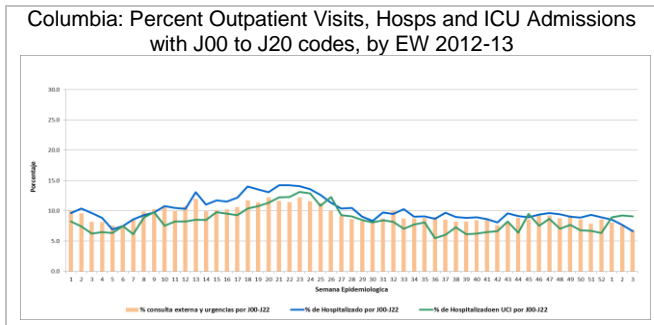
In Bolivia, according to laboratory data from CENETROP (Santa Cruz), from EW 52-3, 88 samples were analyzed of which 4.5% were positive for a respiratory virus and 3.4% were positive for influenza. Among the positive samples, influenza A(H1N1)pdm09 (75.0%) and parainfluenza (25.0%) were detected. According to laboratory data from INLASA (La Paz) from EW 1-4, 41 samples were analyzed of which 9.8% were positive for a respiratory virus and 4.9% were positive for influenza. Among the positive influenza samples, 100% were influenza A(H1N1)pdm09. Among the other respiratory viruses, parainfluenza and RSV were detected.

## Bolivia



In Colombia, nationally during EW 3, the proportions of hospitalizations (6.6%), ICU admissions (9.1%), and outpatient and urgent visits (6.9%) with ARI-associated ICD-10 codes (J00 to J22) remained at low levels. Based on INS national laboratory data from EW 52-3, 287 samples were analyzed, of which 11.8% were positive for a respiratory virus and 5.2% were positive for influenza. Among the positive influenza samples, 80.0% were influenza A, of which 75.0% were A(H1N1)pdm09. Among other respiratory viruses, RSV (29.4% of positive samples) and parainfluenza (20.6%) predominated.

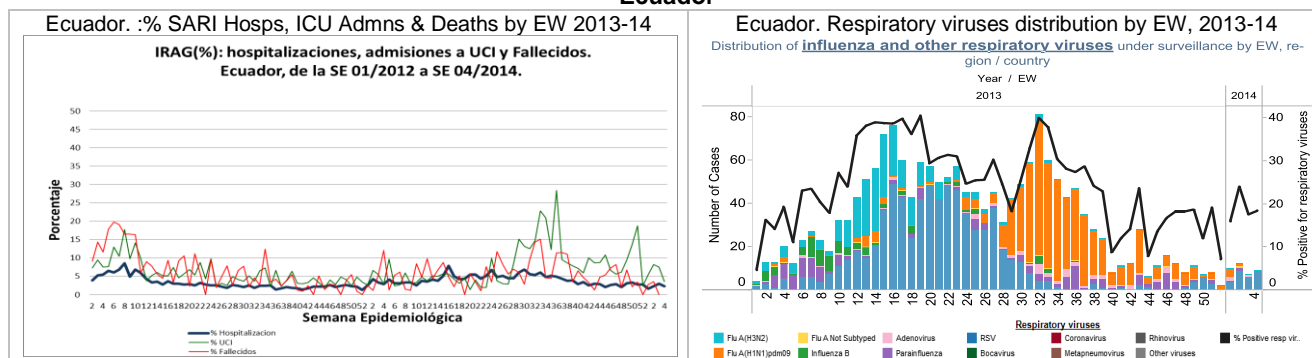
## Colombia



In Ecuador during EW 4, the proportion of SARI-associated hospitalizations (2.3%), ICU admissions (3.6%) and deaths (0.0%) decreased compared to the previous week. Based on national reference laboratory data from EW 1-4, 202 SARI samples were analyzed, of which 18.8% were positive for a respiratory virus and 2.5% were positive for influenza. Among the positive influenza samples, 100% were influenza A(H1N1)pdm09. Among the other respiratory viruses, RSV predominated (73.7% of positive samples).

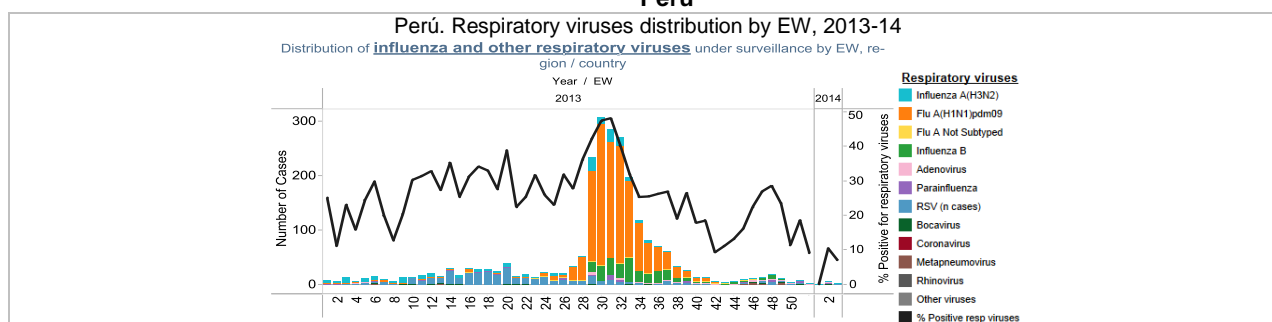


## Ecuador



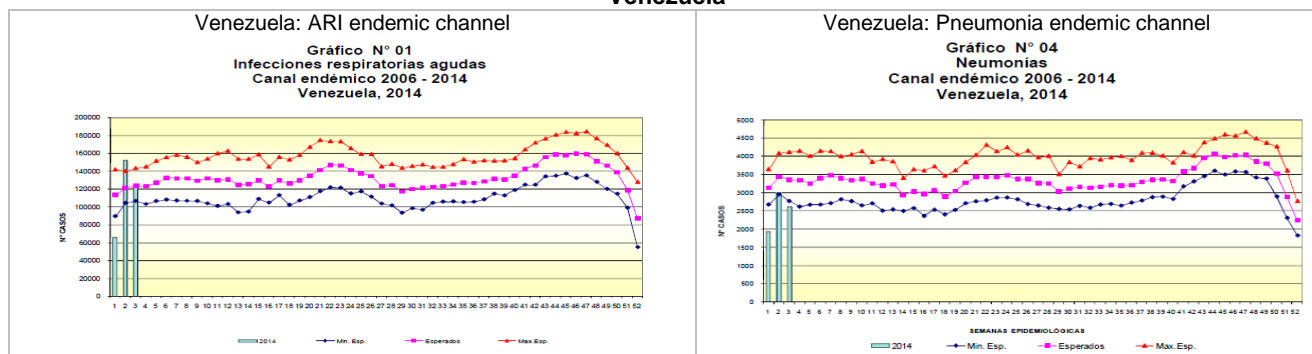
In Peru, based on national laboratory data from EW 52-3, 138 samples were analyzed, of which 7.2% were positive for a respiratory virus and 0.7% were positive for influenza. Among the positive influenza samples, influenza B was detected. Among other respiratory viruses, RSV (40.0%) and adenovirus (40.0%) predominated.

## Peru



In Venezuela<sup>6</sup> during EW 3, ARI and pneumonia activity decreased by 18.1% and 12.6%, respectively compared to the previous EW and were within the expected levels for this time of year. During EW 3, 99 SARI-associated hospitalizations were reported, with children  $\leq 4$  years of age comprising the largest proportion of cases. Based on virologic data from January 1, 2013 to January 18, 2014, 5,325 samples were analyzed from suspected influenza cases, of which 52.4% were positive for influenza. Among the positive samples, 91.7% were influenza A(H1N1)pdm09.

## Venezuela



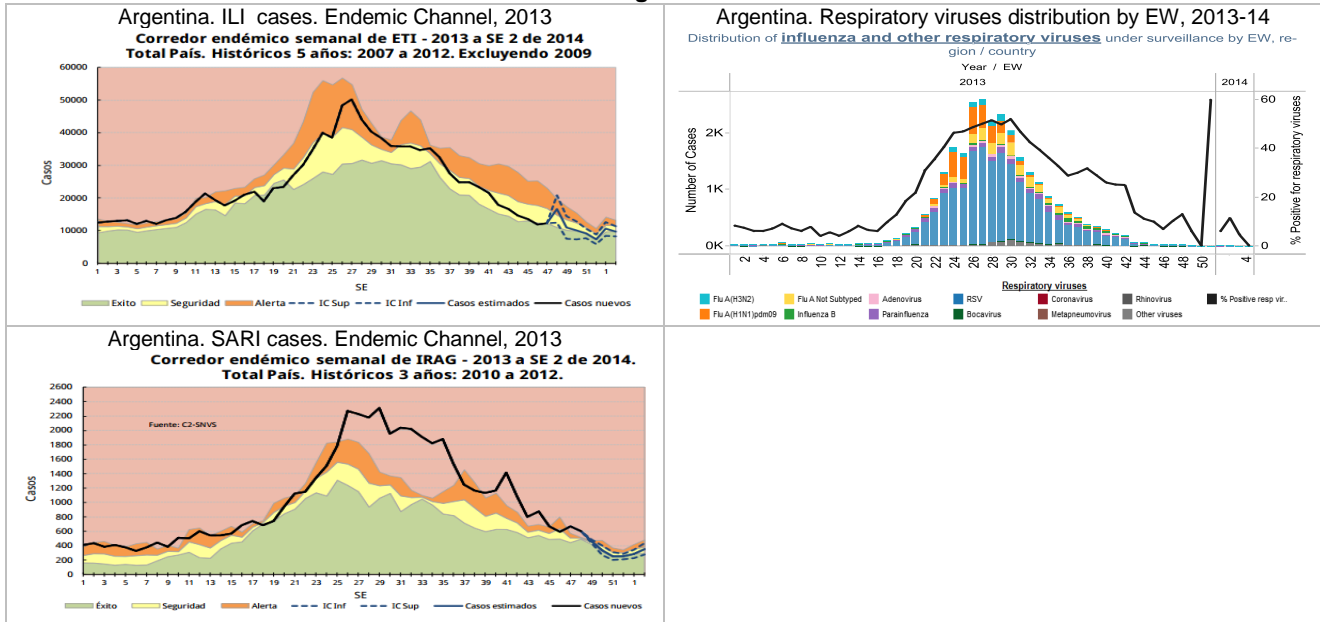
## South America – South Cone and Brazil

In Argentina<sup>7</sup>, according to reports and calculated estimations, national ILI activity during EW 3 bordered the success zone of the endemic channel and showed a decreasing trend since its peak in EW 27. The proportion of SARI-associated hospitalizations was within the epidemic zone of the endemic channel, but also showed a decreasing trend since EW 29. Based on laboratory data from EW 1-4, 229 samples were analyzed of which 8.3% were positive for a respiratory virus. Among the positive samples, parainfluenza (52.6) predominated followed by adenovirus (31.6%).

<sup>6</sup> Venezuela. Boletín epidemiológico, EW 3.

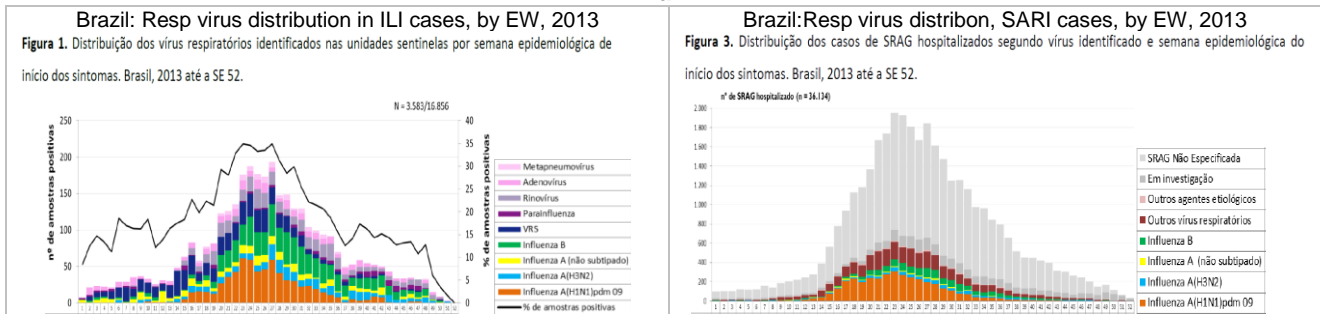
<sup>7</sup> Argentina. Boletín integrado de vigilancia. SE 3.

## Argentina



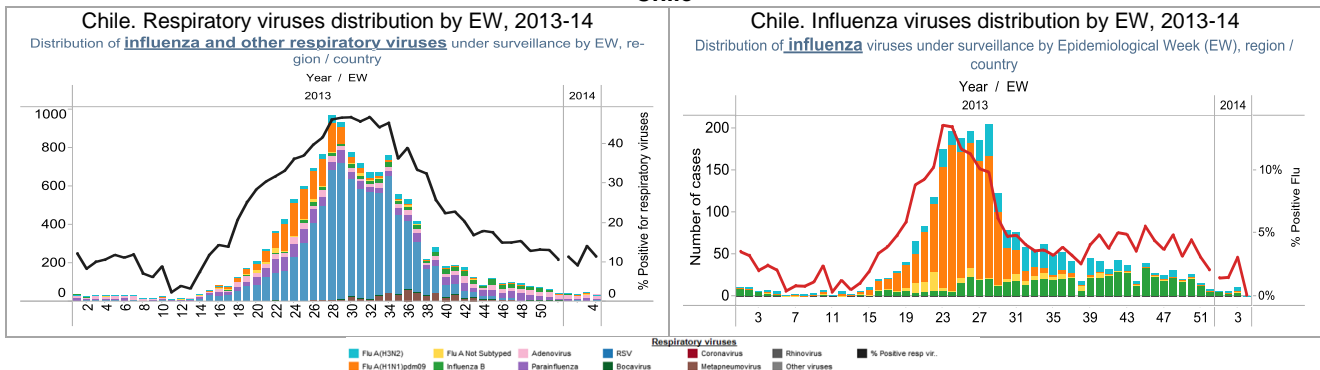
In Brazil<sup>8</sup>, according to ILI sentinel surveillance data through EW 52, 16,856 samples were analyzed, of which 21.3% were positive for influenza or another respiratory virus. Based on universal SARI surveillance data during this same period, 36,134 SARI cases were reported and 16.4% were positive for influenza. Of these positive samples, influenza A(H1N1)pdm09 predominated (62.9%), followed by influenza B (22.5%) and A(H3N2) (11.3%). Additionally, through EW 52, 4,328 SARI-associated deaths were reported of which 22.1% were positive for influenza, and of these, 80.3% were associated with influenza A(H1N1)pdm09.

## Brazil



In Chile, based on laboratory data from EW 3-4, 613 samples were analyzed, of which 12.7% were positive for a respiratory virus and 1.6% were positive for influenza. Among the positive influenza samples, 60.0% were influenza A (66.7% A(H3N2) and 33.3% A(H1N1)pdm09) and 40.0% were influenza B. Among other respiratory viruses, adenovirus predominated (48.7% of positive samples).

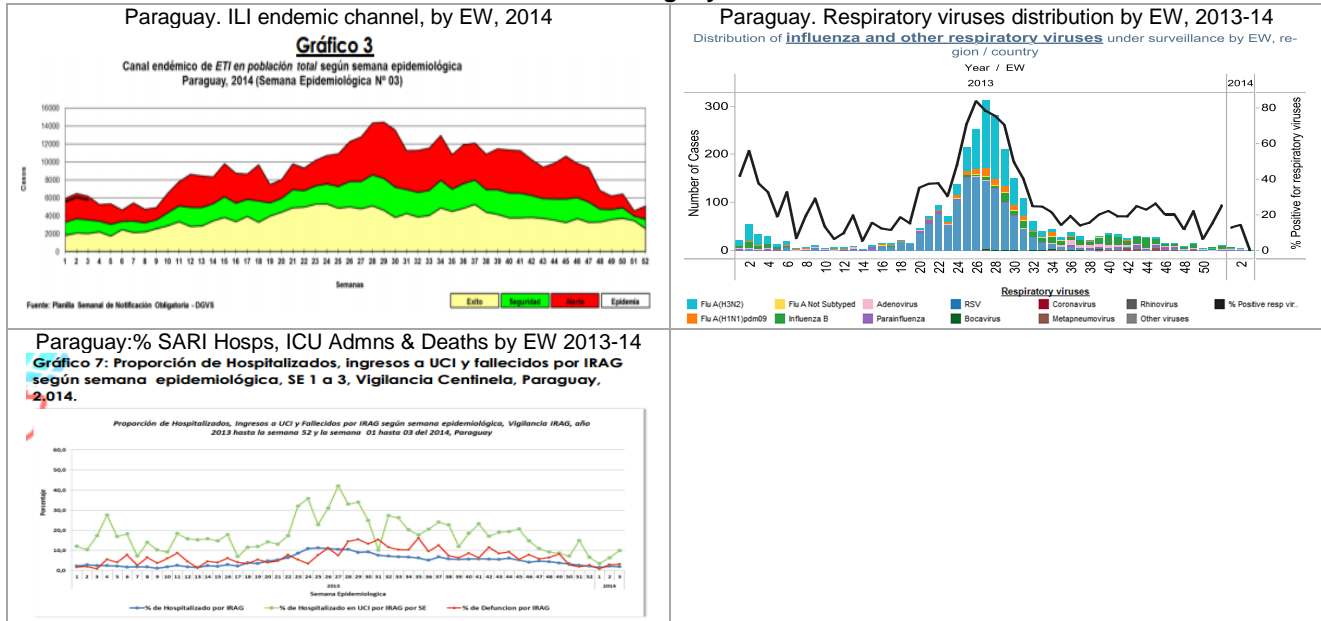
## Chile



<sup>8</sup> Brasil. Boletim informativo. Secretaria de Vigilância em Saúde. SE 52, 2013.

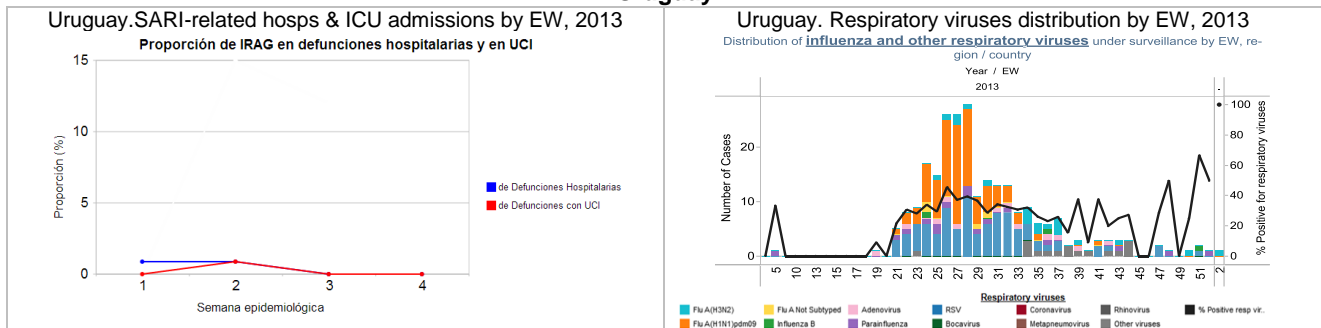
In Paraguay<sup>9</sup> during EW 3, the ILI consultation rate (86.6 per 100,000 inhabitants) decreased from the previous EW and was within the alert zone of the endemic channel. The proportion of SARI-associated hospitalizations (1.9%) was within the expected range for this time of year. The most affected age groups were children less than 2 years of age and adults ≥60 years. Based on laboratory data from EW 52-3, 127 samples were analyzed, of which 15.7% were positive for a respiratory virus and 10.2% were positive for influenza. Among influenza samples, 92.3% were influenza B. Among other respiratory viruses, adenovirus (20.0% of positive samples) and parainfluenza (15.0%) were detected.

### Paraguay



In Uruguay<sup>10</sup> during EW 4, 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 1-4, one sample was analyzed and it tested positive for influenza A(H3N2).

### Uruguay



## EMERGING RESPIRATORY PATHOGENS

### Middle East Respiratory Syndrome Coronavirus (MERS-CoV)

As of January 20, 2014: Since April 2012, 178 laboratory-confirmed cases of human infection with Middle East respiratory syndrome coronavirus (MERS-CoV) have been reported to WHO, including 76 deaths (Figure 1). The median age of all lab-confirmed cases (n=178) is 52 years; this varies by the presumed type of exposure. For primary cases, those who have no history of exposure to other human cases, median age is 58 years; for secondary cases, those who appear to have been infected by other humans, median age is 44 years. Overall, 62% are male; distribution by sex also varies by presumed exposure (76% male among primary cases; 53% among secondary cases).

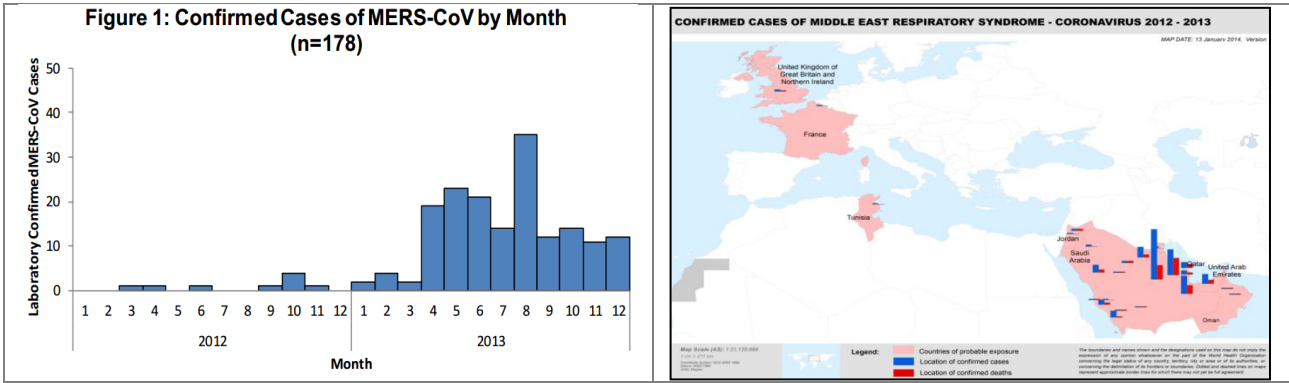
<sup>9</sup> Paraguay. Informe de situación. Vigilancia de ETI e IRAG. SE 3.

<sup>10</sup> Uruguay. Generador de gráficos de la división de epidemiología, Dirección General de Salud – Ministerio de Salud Pública

To date, affected countries in the Middle East include Jordan, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates (UAE); in Europe countries affected include: France, Germany, Italy and the United Kingdom (UK) and; and in North Africa: Tunisia.

All cases have a link to the Middle East. For those cases reported outside the Middle East, the link is either through recent travel to the region or exposure to a patient who acquired infection in the region. Since the last update of 22 November 2013, 21 laboratory-confirmed cases, including seven deaths, were reported to WHO. The geographic distribution of these 21 cases is 14 cases, including four deaths, from Saudi Arabia; six cases, including two deaths, from UAE; and one fatal case from Oman.

WHO Coronavirus infections [http://www.who.int/csr/disease/coronavirus\\_infections/en/](http://www.who.int/csr/disease/coronavirus_infections/en/)



### Avian Influenza A(H7N9)

As of January 30, 2014: The laboratory-confirmed cases of influenza A(H7N9) have been reported from 13 provinces/municipalities in eastern mainland China, Hong Kong, Special Administrative Region, China, and the Taipei Centers for Disease Control (Taipei CDC). Most cases are presumed to have contracted the infection directly from infected animals or their environment, particularly as a result of visiting live animal markets. Only a few small clusters with possible human-to-human transmission have occurred among family members, but there has been no evidence of sustained human-to-human transmission to date.

As of 28 January 2014, the case fatality rate of all confirmed cases is 22%, but many cases are still hospitalized. Of all cases, 67% were male. The median age of reported cases is 58 years and that of fatal cases is 66 years.

Cases occurred in a first wave (n=133) from February through May 2013. Reports of human infection decreased during the summer, with only two cases reported; they have increased since October, demonstrating a second wave, likely in conjunction with cooler temperatures.

WHO does not advise special screening at points of entry with regard to this event, nor does it currently recommend any travel or trade restrictions.

### WHO Avian influenza A(H7N9) Virus

[http://www.who.int/influenza/human\\_animal\\_interface/influenza\\_h7n9/en/](http://www.who.int/influenza/human_animal_interface/influenza_h7n9/en/)

