

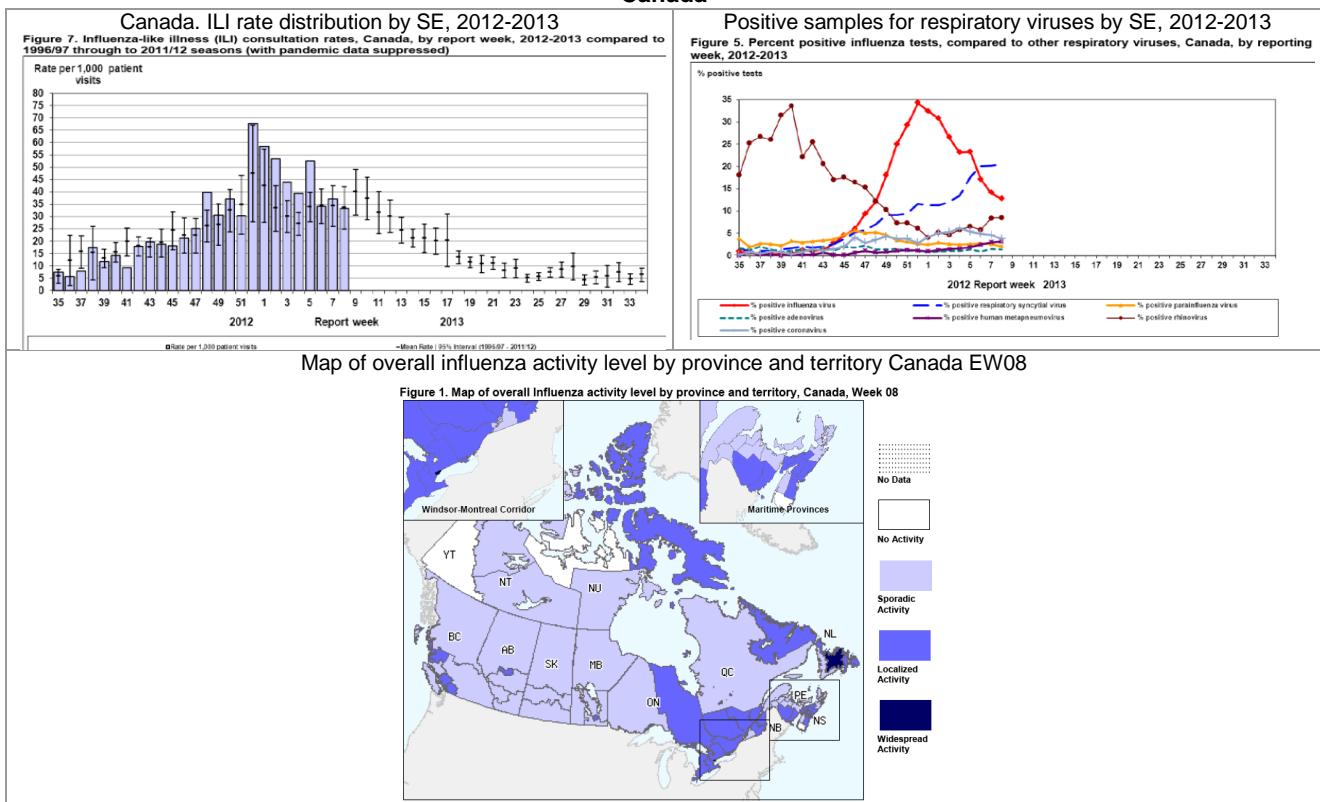


## 2. EPIDEMIOLOGIC AND VIROLOGIC UPDATE OF INFLUENZA & OTHER RESPIRATORY VIRUSES BY COUNTRY

### North America

In Canada<sup>1</sup>, in epidemiological week (EW) 08, specific indicators of influenza activity continued to decrease, while indicators of the circulation of respiratory viruses such as the ILI consultation rate were similar to recent weeks. The influenza-like illness (ILI) consultation rate (33.2 ILI consultations per 1,000 patients) decreased slightly and is within the expected range for this time of year. Among influenza-associated hospitalizations, the group  $\geq 65$  years was the most affected age group (42.9%). Among the total samples analyzed, the proportion of samples positive for influenza decreased from 14.1% in EW 07 to 12.7% in EW 08. Of the influenza cases detected in EW 08, 71.5% were influenza A (29.8% influenza A(H3N2), 11.7% were A(H1N1)pdm09 and 58.5% influenza A untyped) and 28.5% were influenza B (that has increased over the past 5 weeks from 2.1% in EW 03). Concerning other respiratory viruses, the RSV percent positivity in EW 07 (20.5%) was similar to EW 07 and the percentage of tests positive for rhinovirus in EW 08 (8.5%) was similar to EW 07. Among the characterized influenza viruses this season, the majority have been the vaccine strains (100% of the H1N1pdm09 cases, 100% of the H3N2 cases, and 83.2% of the influenza B cases).

### Canada



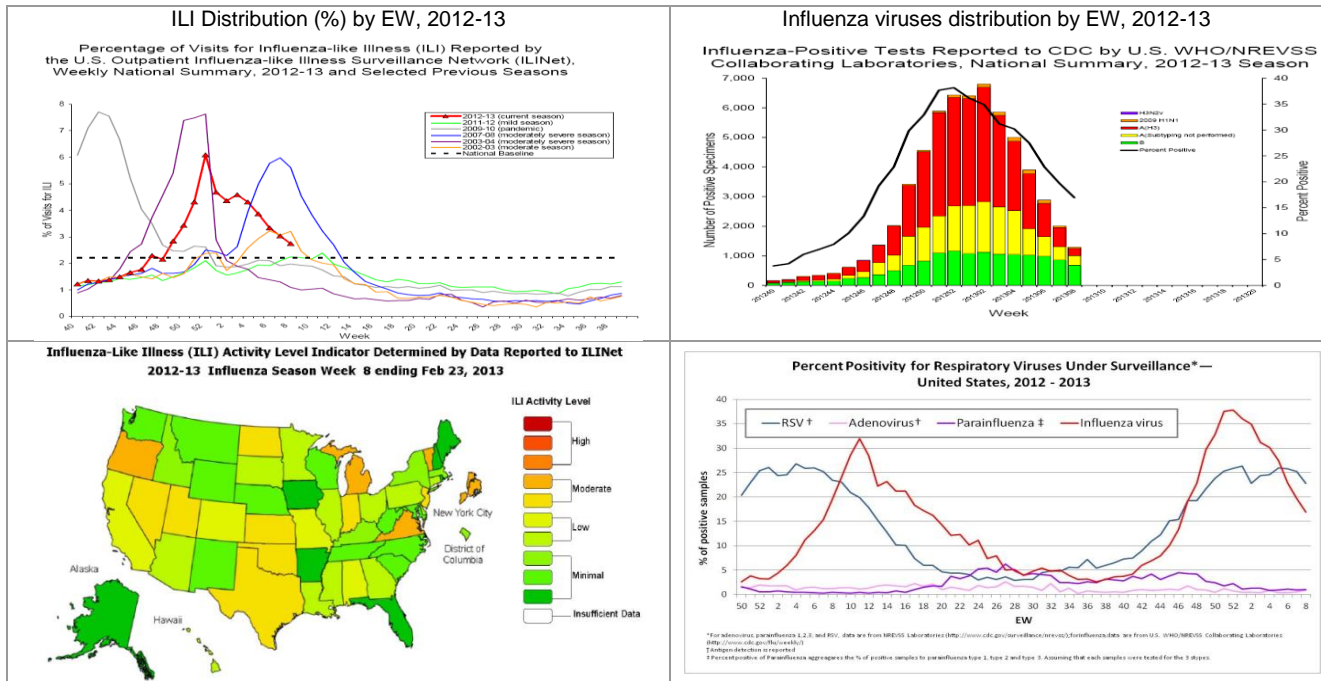
In the United States<sup>2</sup> in EW 08, influenza activity remained elevated in the United States, but decreased in most areas. Nationally the proportion of ILI consultations (2.7%) decreased as compared to the previous week but remained above the baseline (2.2%); and 8 of 10 regions reported a proportion of outpatient visits for ILI at or above their region-specific baseline levels. No state experienced high ILI activity. Nationally, the proportion of deaths attributed to pneumonia and influenza for EW 08 (8.4%) was above the epidemic threshold for this time of year (7.5%). In EW 08, three influenza-associated pediatric deaths were reported (one associated with A(H3N2), one with an untyped influenza A virus, and one with influenza B). From October 1, 2012 to February 23, 2013 the influenza-associated hospitalization rate was 36.7/100,000 population, with the highest rates in those 65 years of age and older. Among all samples tested during EW 08 (n=7,609), the percentage of samples positive for influenza (16.9%) continued decreasing. Nationally, among the positive samples, 47% were influenza A [40.3% A(H3N2), 6.4% A(H1N1)pdm09 and 53.2% influenza A untyped]. Among the characterized influenza viruses this season, the majority have been the

<sup>1</sup> FluWatch Report. EW 08. Available at <http://www.phac-aspc.gc.ca/fluwatch/>

<sup>2</sup> USA: CDC FluView report. EW 08. Available at: <http://www.cdc.gov/flu/weekly/>

vaccine strains (99% of the A(H1N1)pdm09 cases, 99.5% of the A(H3N2) cases, and 71.8% of the influenza B cases). Since October 1, 2012, n=298 influenza A(H1N1)pdm09 samples have been tested for resistance to oseltamivir and thus far, only two resistant virus (0.7%) has been detected; this virus was sensitive to zanamivir. Among other respiratory viruses, the percentage of positive samples for RSV continued decreasing from its peak (26% in EW 05) to 22.8% in EW 08.

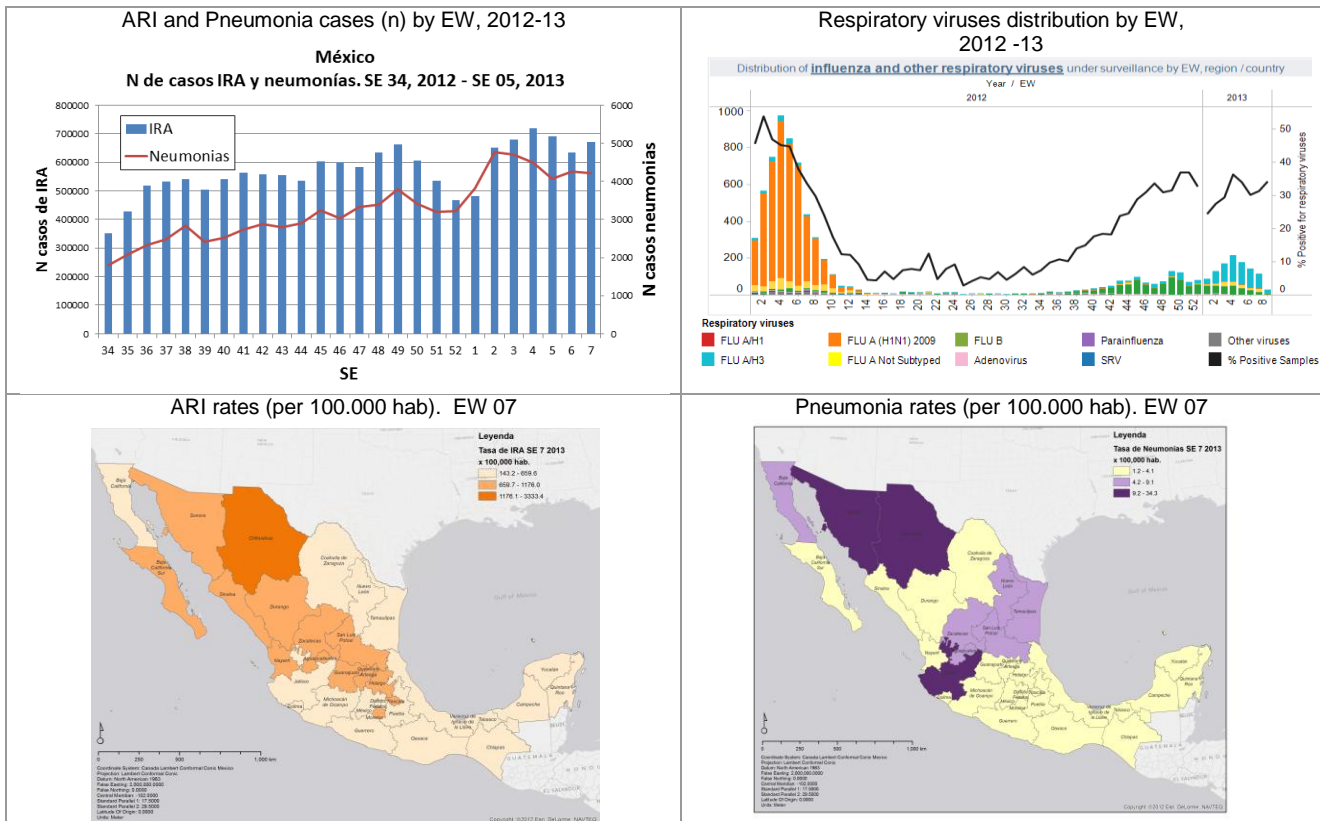
### United States



In Mexico<sup>3</sup>, nationally in EW 07, the number of ARI cases (n=669834) increased 6% as compared to EW 06; while the number of pneumonia cases (n=4212) decreased by 0.9% since EW 06. Regionally, the states that reported the highest rates per 100,000 habitants of pneumonia cases were: Veracruz (2.0), Puebla (1.8), Quintana Roo (1.7), México (1.3) and Chiapas (1.2). According to laboratory data, in 2013, between EW 04-08, among the samples tested (n=2,057) the percent positivity for influenza viruses was 33.2%. In EW 04-08, among the positive influenza cases 79.6% were influenza A ,(85.3% influenza A (H3N2)and 14.7% influenza A unsubtype), and 23.3% were influenza B.

<sup>3</sup> México. Dirección General de Epidemiología. Información epidemiológica. SE 07.

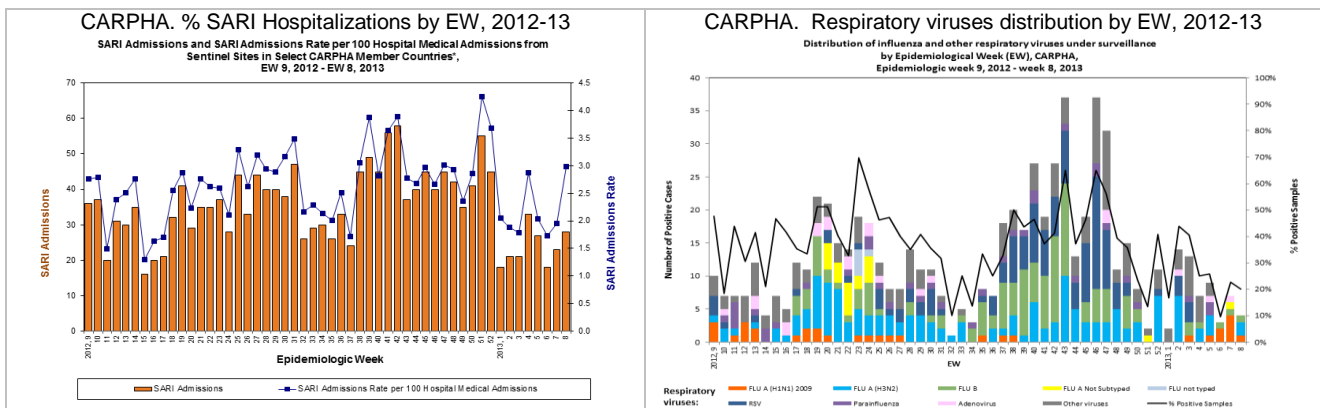
## Mexico



## Caribbean

CARPHA<sup>4</sup> received the weekly SARI/ARI data from six countries for EW 08, 2013: Barbados, Dominica, Jamaica, St. Lucia, St. Vincent & the Grenadines and Trinidad & Tobago. During EW 08, 2013, the proportion of severe acute respiratory infection (SARI)-related hospitalizations was 1.5%. The highest rate of SARI was among children 6 months to 4 years of age (9.0%). No SARI-related deaths were reported from this region in EW 08, 2013. In 2013 the following viruses have been laboratory confirmed in member countries: influenza A(H1N1)pdm09 (Anguilla, Jamaica, Trinidad & Tobago), influenza A(H3N2) (Anguilla, Barbados, Bermuda, Cayman Islands, Dominica, Jamaica, St. Lucia, Trinidad & Tobago), influenza B (Barbados, Cayman Islands, Dominica, Jamaica), RSV (Belize, Cayman Islands, Trinidad & Tobago), adenovirus (Cayman Islands, St. Lucia), human metapneumovirus (St. Vincent & the Grenadines), Parainfluenza type 1 (Barbados), parainfluenza type 3 (Cayman Islands, St. Lucia), rhinovirus (Anguilla, Belize, Cayman Islands, Dominica, St. Lucia, St. Vincent & the Grenadines, Trinidad & Tobago). So far in 2013, the overall percentage positivity for the specimens tested is 26.4%.

## CARPHA

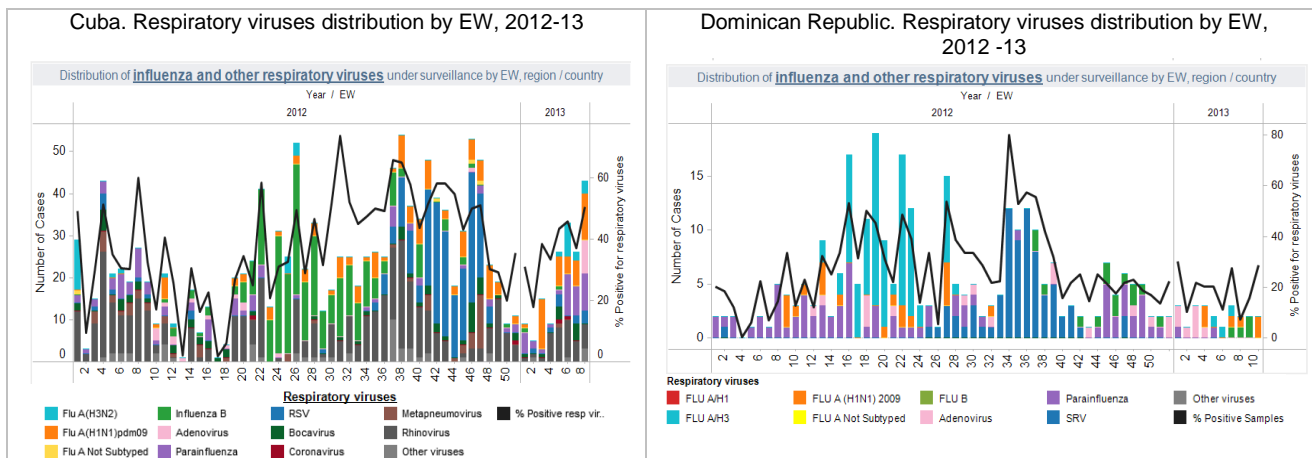


<sup>4</sup> Caribbean Public Health Agency (CARPHA)

In Cuba, during EW 08, and according to national laboratory data, among the samples analyzed (n=85), the percent positivity for respiratory viruses was 50.6% and 16.5% for influenza viruses. Influenza A(H1N1) pdm09, was mainly detected, followed by parainfluenza, rhinovirus, RSV and influenza A(H3N2). According to epidemiologic report, 30.5% of the samples analyzed were from SARI cases and 14% were from patients presenting with ARI. The majority of SARI cases occurred in adults over 65 years of age. There no reports of SARI deaths in EW 08

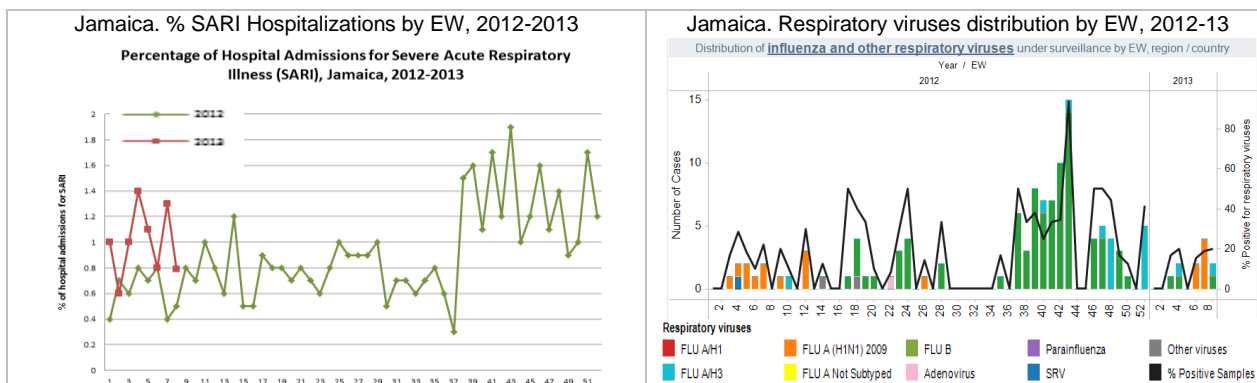
In the Dominican Republic, according to national laboratory data, among the 7 samples analyzed, in EW 10, the percentage positive for influenza viruses was 28.6%. Influenza A(H1N1) pdm09 was the predominant virus this week.

### Cuba and Dominican Republic



In Jamaica for EW 8, the proportion of consultations for ARI was 4.9% (0.6% lower than EW 7). The proportion of admissions due to SARI was 0.8% (0.5% decrease when compared to the EW before). There was no SARI deaths reported for EW 08. According to laboratory data the percentage of positive samples for influenza virus in EW 8 was 20.0% among samples tested (n= 10). Influenza A (H3N2) and Influenza B viruses were identified.

### Jamaica



In French Territories:

In Guadeloupe<sup>5</sup>, the epidemiological monitoring indicated that the influenza epidemic in Guadeloupe has declined in the past 3 weeks. Nevertheless, the number of ILI seen in general medical consultation continued to be at the top of the maximum values expected for the period. Only one severe case of influenza admitted to the ICU has been identified thus far. The circulating subtypes identified at the beginning of 2013 correspond to influenza A (H1N1) pdm09.

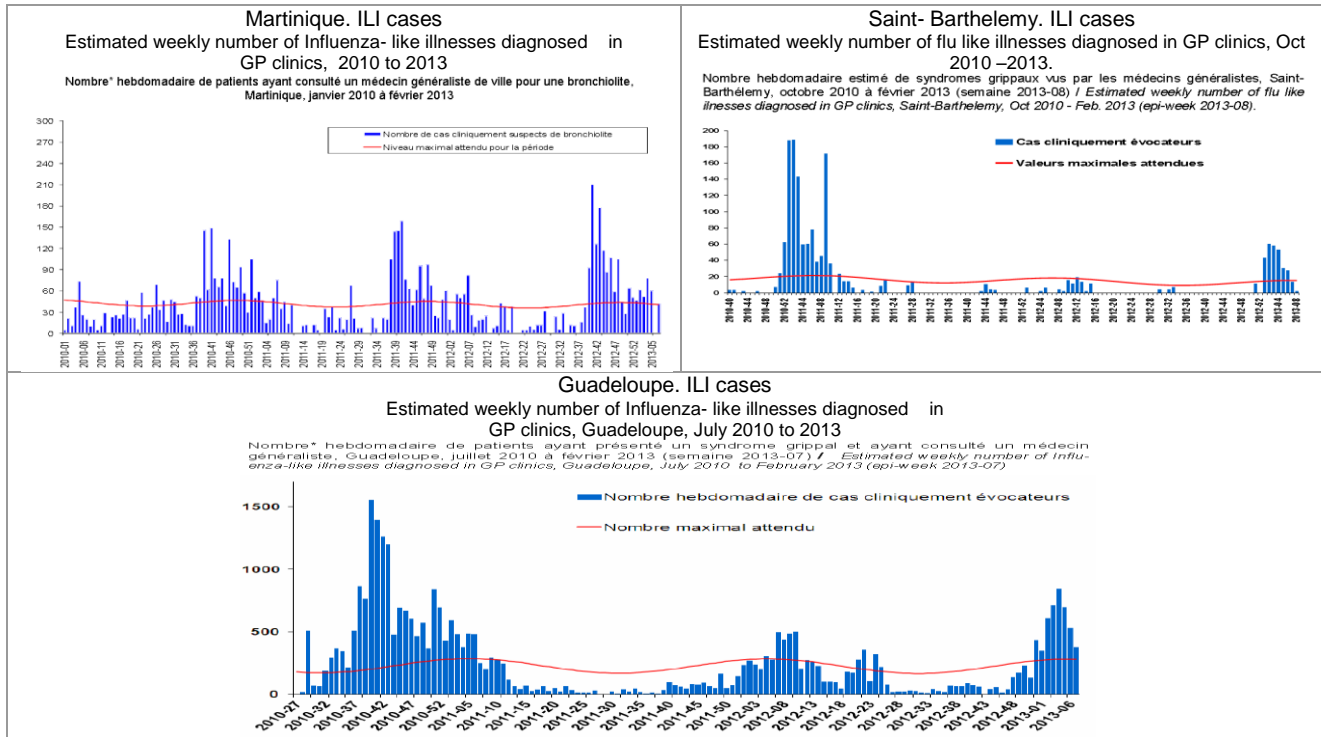
<sup>5</sup> Guadeloupe. Le point épidémiologique — EW 08 / 2013. CIRE Antilles Guyana.



In San Bartolomé<sup>5</sup>, in the EW 08, after an increase above the expected values for the period since the EW 01 of 2013 in the number of consultations for ILI, there is observed a significant decline in the number of consultations, declaring the end of the epidemic. No influenza virus has been identified since December 2012.

Martinique<sup>6</sup> declared an epidemic of bronchiolitis caused by RSV since the first week of October 2012, reporting numbers of cases that are five times higher than the maximum values for the season. Up to EW 07, there numbers have been decreasing, but they still well above the expected.

### French Territories



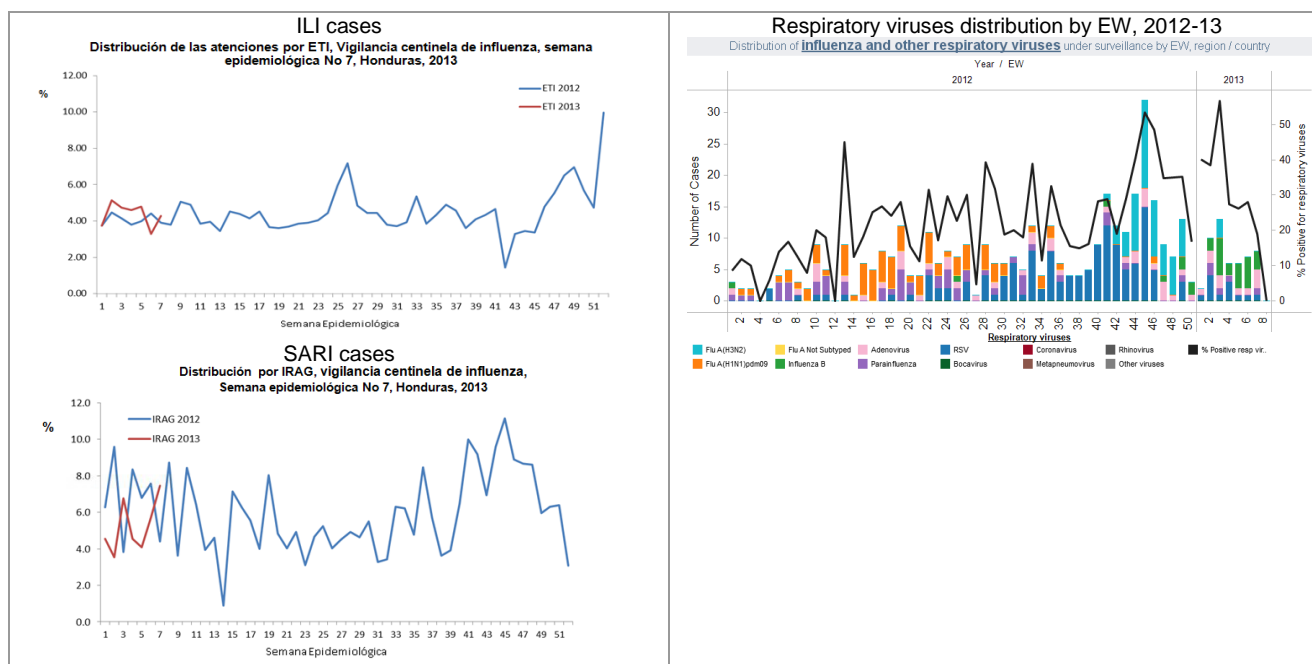
### Central America

In Honduras<sup>7</sup>, nationally in EWs 08, there were no significant changes in the proportion of ILI consultations (~5%) from that of the previous EW. This proportion remained within the same levels as the ones recorded during the same period last year. However, the proportion of SARI hospitalizations (~8%) increased in the past two weeks and was similar than that observed in 2012 for the same period. According to laboratory data from EWs 04-08 among the samples tested (n=123), the percent positivity for all respiratory viruses was 21.9% and for influenza viruses was 11.4%. Influenza B was dominant among all the positives followed by RSV.

<sup>6</sup> Martinique. Le point épidémiologique — EW 08 / 2013. CIRE

<sup>7</sup> Honduras. Boletín de la vigilancia de influenza y otros virus respiratorios en Honduras SE 08. Dir. General de Vigilancia de la Salud

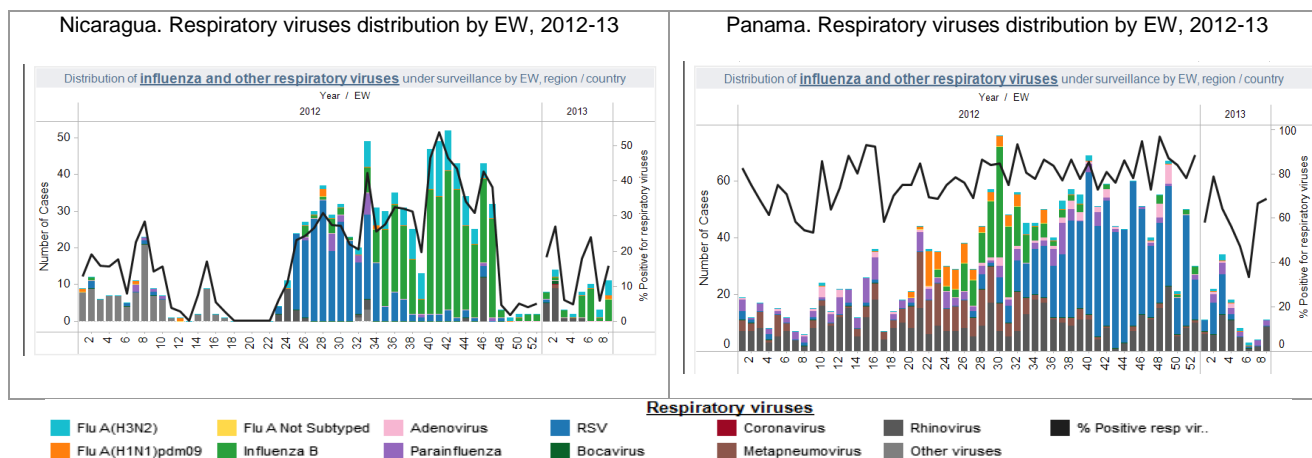
## Honduras



In Nicaragua, according to national laboratory data from EWs 04-08, 2013, among all 252 samples analyzed, the percent positivity for respiratory viruses was ~13.5%. Influenza B was the most prevalent virus (22/252), followed by influenza A(H3N2) (9/252).

In Panama, according to laboratory data from EWs 04-08, 2013, of all samples tested (n=80), 55% were positive for respiratory viruses and only 3.8% were positive for influenza virus. Rhinovirus (28/80) was the most prevalent virus, followed by parainfluenza (8/80).

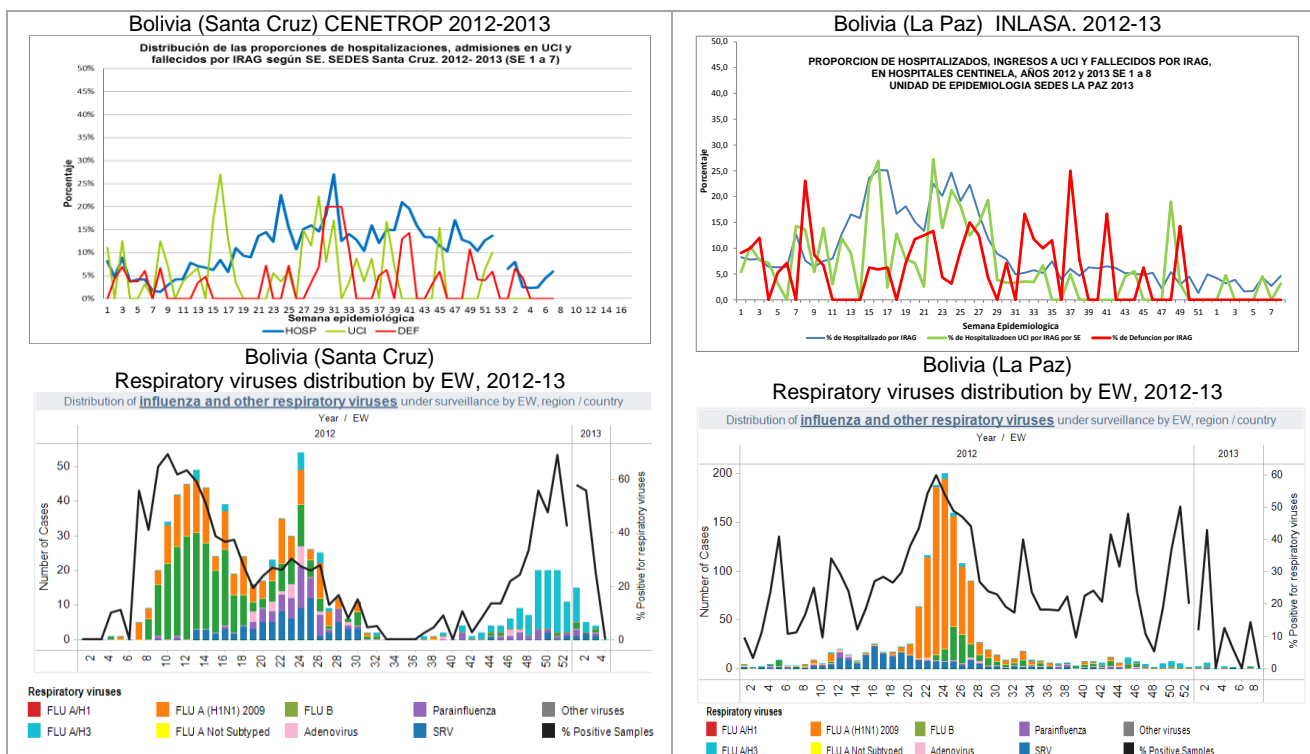
## Nicaragua and Panama



## South America – Andean countries

In Bolivia, according to data from CENETROP (Santa Cruz), among 30 samples processed between EWs 07-08, 2013 there was 43% positivity for all respiratory viruses (predominantly RSV) and 3% positivity for influenza viruses. According to data from La Paz, among 27 samples processed between EWs 07-08 of 2013, 11% were positive for all respiratory viruses and 11% for influenza viruses. Influenza B was the most prevalent virus (3/3). Data from La Paz indicated that the proportion of SARI hospitalizations in EW 08 remained low (4.6% - 11/238) as in recent weeks. No SARI-related deaths were reported.

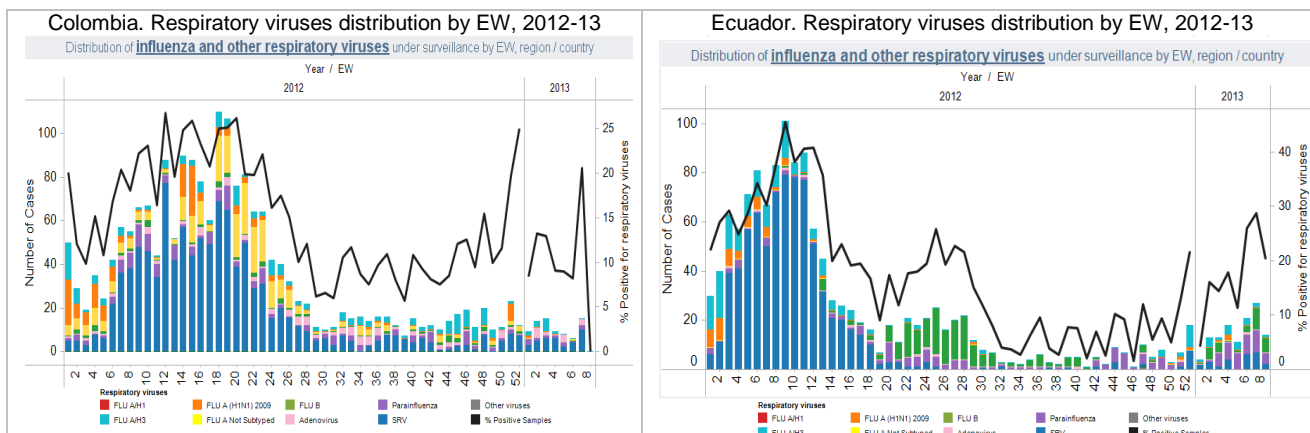
## Bolivia



In Colombia, according to national INS laboratory data, including statistics from the Departments of Antioquia, Nariño and Bogotá, among 93 samples analyzed during EW 07 and EW 08 of 2013 the percent positivity was 16% for all respiratory viruses. RSV was predominant among all the positives (10/15). Nationally the proportion of outpatient visits and hospitalizations for ARI showed no significant changes during the first weeks of 2013 (remained around 10%).

In Ecuador, according to national laboratory data, among 98 samples analyzed for SARI between EWs 07-08 of 2013, there was 27% positivity for all respiratory viruses and 12% positivity was for influenza viruses. Among the positives, influenza B, parainfluenza and RSV were predominant. In the SARI surveillance system, the proportions of SARI hospitalizations showed a slight increase since the beginning of the year reaching 4% (123/2,763) in EW 08, 2013. There were no reports of SARI-related deaths.

## Colombia and Ecuador



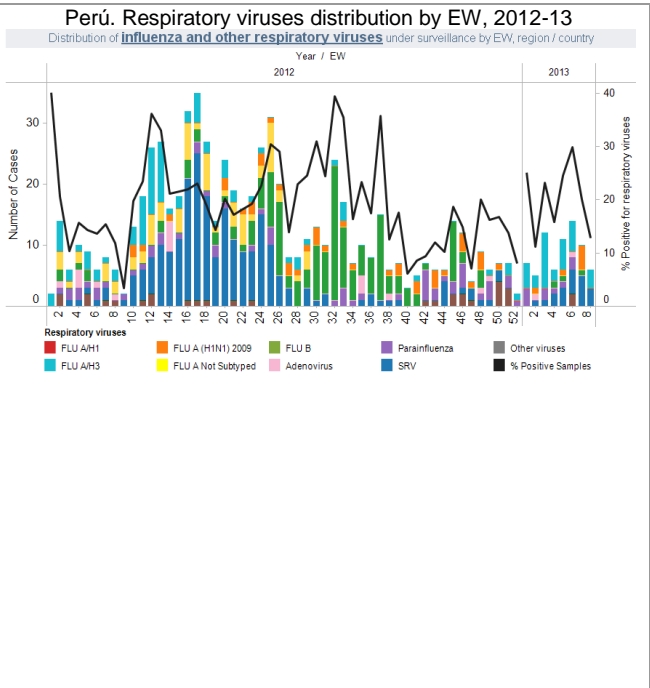
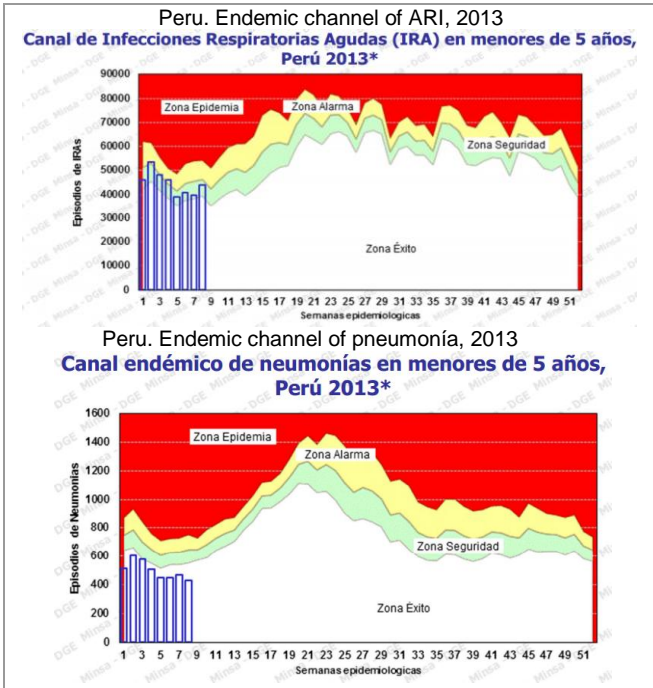
In Peru<sup>8</sup>, nationally, in EW 08 of 2013, the number of ARI cases in children under 5 years of age was slightly above the expected level for this time of the year. However, the number of pneumonia cases in children under 5 years of age was within expected levels for this time of year. Regionally, the departments that

<sup>8</sup> Perú. Sala de Situación de Salud. SE 08, 2013. Ministerio de Salud. Dirección General de Epidemiología



reported pneumonia activity above their epidemic threshold were: Ancash, Lambayeque and Tumbes. According to national laboratory data for EWs 07-08, 2013, among the 79 samples analyzed, the percentage positivity was 16.5% for all respiratory viruses and 8% for influenza. RSV (8/16) was the most dominant virus during this period followed by influenza A(H1N1)pdm09 (4/16) and influenza A(H2N3) (3/16).

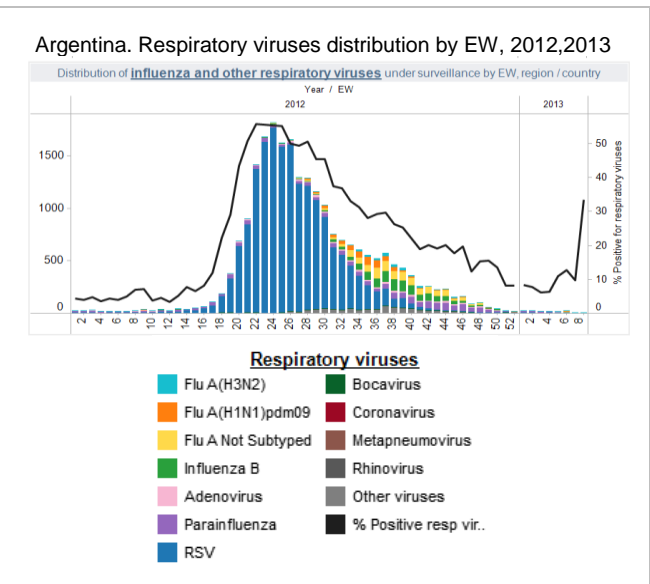
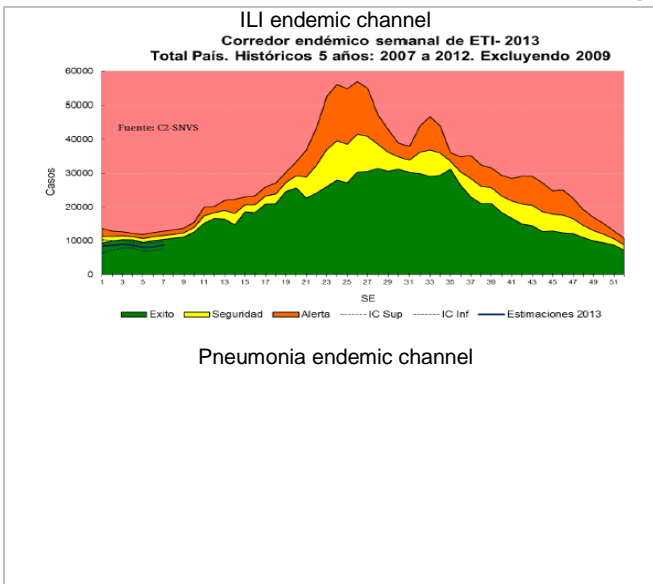
**Peru**



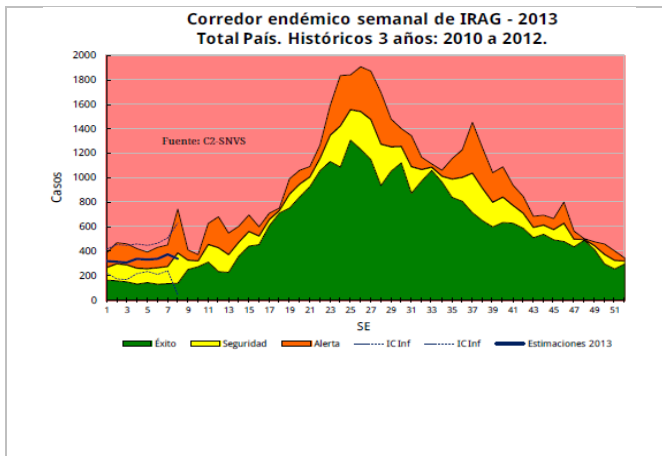
**South America – Southern Cone**

In Argentina<sup>9</sup>, nationally, according to the data reports ILI activity was within the safety zone during EW 08 of 2013. The information obtained by monitoring of ARI hospitalizations during this same period showed levels between the safety and the warning zones for the endemic channels. According to laboratory data from EW 07 and EW 08 of 2013, 93 samples were processed nationally, and the percent positivity for all respiratory viruses was 15% and 8.6% for influenza viruses. Influenza A(H1N1)pdm09 was the most prevalent (6/14).

**Argentina**

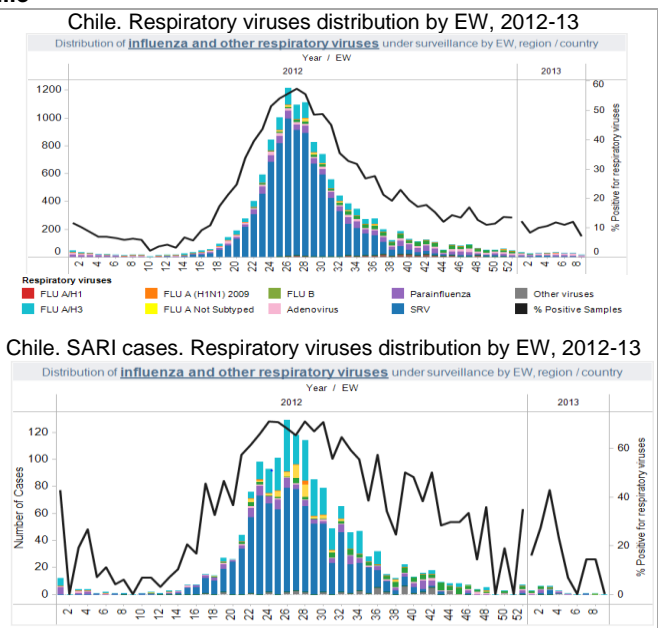
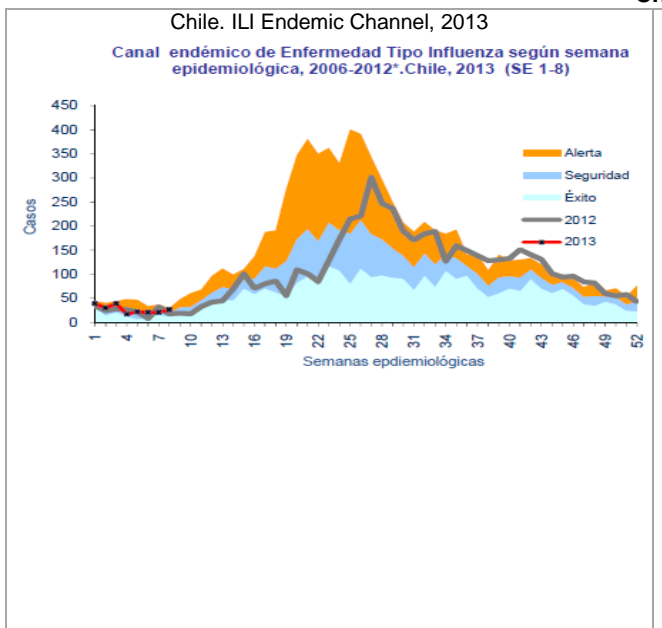


<sup>9</sup> Argentina. Boletín integrado de vigilancia. SE 08.



In Chile<sup>10</sup>, nationally for EW 08 of 2013, ILI activity (rate: 1.7/100,000 pop.), remained low, at the margin between the endemic channel success and safety zone. According to laboratory data in EW 08, 270 samples were analyzed, 7% of which were positive for respiratory viruses and 0.7% for influenza viruses. Adenovirus was the most prevalent virus (12/19) In the SARI surveillance system, among 14 samples processed for respiratory viruses; two were positive; one for parainfluenza virus and the other for influenza A unsubtype.

### Chile

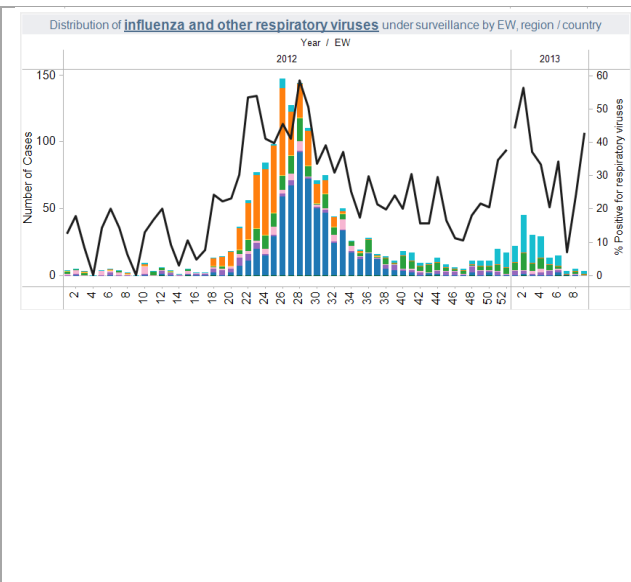
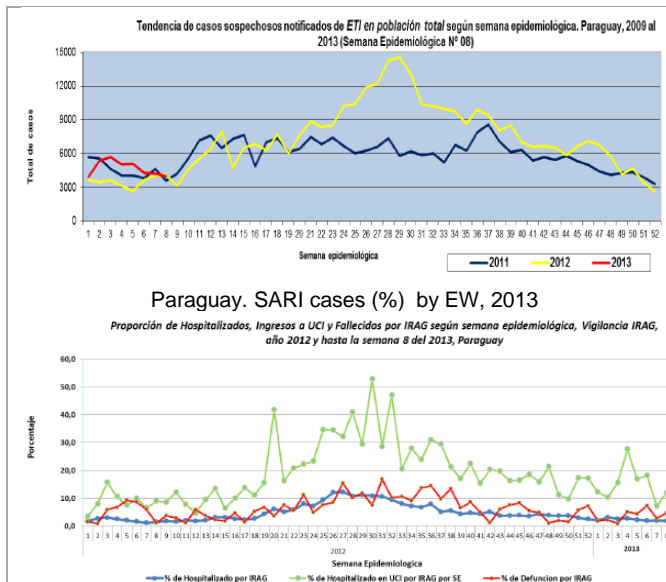


In Paraguay, in EW 08, 2013, nationally, the ILI rate (59.8/100,000 population) declined and was within the same levels seen during the same time in previous years. Nationally, the proportion of ILI consultations was (4.1%-196/4.837) during EW 08. The SARI surveillance for EW 08 showed that the proportion of SARI-related hospitalizations (1.9%-38/2028), remained without significant changes from the previous week. So far this year, 20 SARI-related deaths have been reported, and in one, adenovirus was detected. According to the national laboratory data, among 66 samples processed between EW 06 - 07, 2013, 26% were positive for all respiratory viruses and 17% for influenza viruses. Among the positive samples, influenza A(H3N2) was the most prevalent virus (9/17). Among the SARI cases, 19 samples were processed in the between EWs 07-08, only one sample was positive for influenza A(H3N2).

### Paraguay

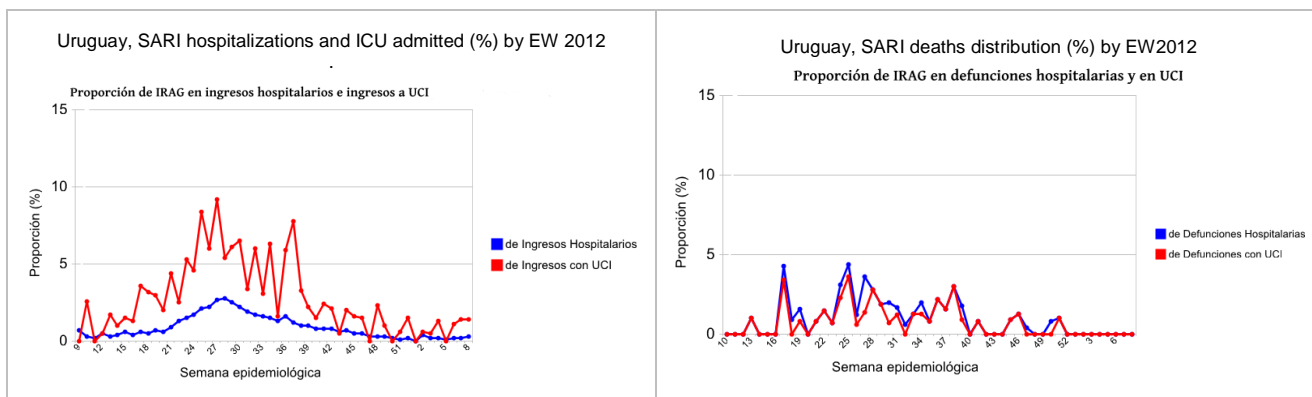
Paraguay. ILI cases	Paraguay. Respiratory viruses distribution by EW, 2012
---------------------	--

<sup>10</sup> Chile. Informe de situación. SE 08. Disponible en: [www.pandemia.cl](http://www.pandemia.cl)



In Uruguay<sup>11</sup>, according to the national SARI surveillance system in EWs 01-08, 2013, the proportions of SARI-related hospitalizations and SARI-related ICU admissions were at low levels, without significant changes as compared to previous weeks. No SARI-related deaths were reported.

### Uruguay



<sup>11</sup> Uruguay. Generador de gráficos de la división de epidemiología, Dirección General de Salud – Ministerio de Salud Pública.