



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/influenzareports](http://www.paho.org/influenzareports)

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.

- In North America, influenza activity remains low. In the U.S., from July 12 through August 23, 2012, a total of 276 infections with influenza A (H3N2) variant (H3N2v) viruses have been reported in 10 states. The vast majority of cases have been associated with swine exposure though three likely instances of human-to-human transmission have been identified.
- In Central America and the Caribbean, activity of respiratory diseases remains low. Co-circulation of influenza viruses (influenza B, influenza A(H3N2) and influenza A(H1N1)pdm09) was reported, with predominance of influenza B (Cuba, Costa Rica, el Salvador, Nicaragua). Among other respiratory viruses, RSV increased in Dominican Republic and Nicaragua.
- In South America, the acute respiratory disease activity continued low (Bolivia) or decreasing (Argentina, Bolivia, Brazil, Chile and Paraguay), associated with the decreased activity of RSV. Co-circulation of influenza viruses (influenza B, influenza A(H3N2) and influenza A(H1N1)pdm09) was observed with varying prevalence.

### Epidemiologic and virologic influenza update

#### *North America*

In the United States<sup>1</sup>, in EW 33, nationally, the proportion of ILI consultations (0.7%) was below the baseline (2.4%). Nationally, the proportion of deaths attributed to pneumonia and influenza for EW 33 (6.1%) was below the epidemic threshold for this time of year (6.5%). In EW 33, no pediatric deaths associated with influenza were reported. Among all samples tested during EW 33 (n=1410), the percentage of samples positive for influenza (5.82%) increased slightly as compared to the previous week. Nationally, among the positive samples, 79.3% were influenza A [among the subtyped influenza A viruses, mainly influenza A(H3N2)v] and 20.7% were influenza B. From July 12 through August 23, 2012, a total of 276 infections with influenza A (H3N2) variant (H3N2v) viruses have been reported in ten states (Hawaii [1], Illinois [4], Indiana [138], Maryland [12], Michigan [5], Minnesota[1], Ohio [98], Pennsylvania [6], West Virginia [3], and Wisconsin [8]). So far during the current outbreaks, 13 confirmed cases have been hospitalized as a result of their illness; no deaths have occurred. The vast majority of cases have been associated with swine exposure though three likely instances of human-to-human transmission have been identified. At this time no ongoing human-to-human transmission has been identified. Public health and agriculture officials are investigating the extent of disease among humans and swine, and additional cases are likely to be identified as the investigation continues.

In Mexico, according to laboratory data, in EW 33, of the samples analyzed (n=4), no respiratory viruses were detected.

#### *Caribbean*

CAREC\*, in EW 33, received epidemiological information from 4 countries: Dominica, Jamaica, Suriname and Trinidad and Tobago. In EW 33, the proportion of severe acute respiratory infection (SARI) hospitalizations was 0.7% which is lower than what was seen in the prior week (1.9%). No SARI-related deaths were reported. In the last 4 weeks (EW 30 to 33) the following viruses have been laboratory confirmed: influenza A not typed (Barbados), influenza B (Barbados), respiratory syncytial virus (Barbados, Dominica), adenovirus (St. Vincent and the Grenadines), parainfluenza (St. Vincent and the Grenadines),

\* Includes Barbados, Belize, Dominica, Jamaica, St Vincents and the Grenadines, St Lucia, Suriname and Trinidad and Tobago

and rhinovirus (Dominica, St. Vincent and the Grenadines). To date in 2012, the overall percentage positivity for samples tested is 37%, with a 19% positivity for influenza.

In Jamaica for EW 32, the proportion of consultations for Acute Respiratory Illness (ARI) was 3.5% which was 0.3% higher than the previous week. The proportion of admissions due to Severe Acute Respiratory Illness (SARI) was 0.6% which was the 0.1% decrease when compared to the week before. There was no SARI death reported for epidemiological week 33. There was no detection of influenza viruses in EW 33.

In Cuba, according to laboratory data in EW 32, among the samples analyzed (n=48), the percent positivity for respiratory viruses was 25% and the percent positivity for influenza, among all samples analyzed, was 14%. Influenza B has been the predominant respiratory virus since EW 23, followed by influenza A(H1N1)pdm09 and other respiratory viruses.

In the Dominican Republic, according to laboratory data from EW 33, among the samples analyzed (n=18), the percent positivity for respiratory viruses remained low (4%). RSV was detected this EW.

### ***Central America***

In Costa Rica, in EW 33, according to laboratory data, among all samples tested (n=76), the percentage of positive samples for respiratory viruses was 23.7%, lower than the previous week (30.7%). Adenovirus, parainfluenza, SRV, influenza b and influenza A(H3N2) were detected.

In El Salvador, in EW 32, according to laboratory data, among all samples tested (n=75), the percentage of positive samples for respiratory viruses was 14.7%, lower than the previous week (28.8%). Influenza B, parainfluenza, SRV and other respiratory viruses were detected.

In Honduras, according to data from the Ministry of Health, up to the EW 30, among all the consultations, the proportion of ILI consultations (3.8%) was lower than in 2011 (4.15%). The proportion of SARI hospitalizations (5.5%) was less than the previous EW (4.6%). The case-fatality rate from SARI was 16.1% in the San Pedro Sula sentinel site and 33.3% in Tegucigalpa sentinel site. According to laboratory data, in EW 32, among all samples tested (n=8), the percentage of positive samples to respiratory viruses was of 25%, higher than the previous EW (22%), being detected parainfluenza and adenovirus.

In Nicaragua, in EW 33, according to laboratory data, among all samples tested (n=95), the percentage of positive samples for respiratory viruses was 49.5%, higher than the previous week (21.3%). SRV, parainfluenza, influenza A(H3N2) and influenza B were detected.

### ***South America – Andean***

In Santa Cruz, Bolivia, according to data from CENETROP laboratory for EW 33, no positive samples were detected for respiratory viruses in the 37 tested samples. According to INLASA laboratory, viral circulation from La Paz, Oruro, Potosí, Tarija, Pando, Beni and Chuquisaca there has showed a decreasing percentage of positive samples since EW 24, reaching 14.3% in EW 33 among the 14 samples analyzed. Influenza B and influenza (H3N2) were detected. In La Paz, SARI surveillance in EW 33 showed that the proportions of SARI hospitalizations (6.5%) and SARI admitted in ICU (3.4%) remained similar to the previous week. Three SARI-deaths were reported this week.

In Peru<sup>2</sup>, at the national level, in 2012 through EW 32, the number of pneumonias in children under 5 years old reached a rate of 75.8/10,000 children, which represents a lower level as compared to the previous year and remaining within the endemic channel. The numbers of ARI cases was within the endemic channels. According to laboratory data at the national level, in EW 33, among the samples analyzed (n=48), the percent positivity for respiratory viruses was 35.4%, which was lower than previous EW, with predominance of influenza B virus (10/17).

### ***South America – Brazil and Southern Cone***

In Argentina<sup>3</sup>, at the national level, endemic channels showed that the number of ILI and pneumonia cases in EW 31 remained within the expected level for this time of year. The number of SARI cases in EW 31 was lower than what was observed in 2012 and 2011. At the sub-national level, the Northwestern provinces and Cuyo (San Luis, Catamarca and Tucumán) and Southern provinces (Santa Cruz) continued to report higher rates than what is expected for this time of the year. According to laboratory data, the percentage of positive samples for respiratory viruses has shown a decreasing trend since EW 25, reaching 32.5% among the analyzed samples (n=652) in EW 31, with predominance of RSV (77%) among the positive samples.

In Brazil<sup>4</sup>, in EW 31, the number of SARI cases continued to decrease since its' peak in EW 26. Of the total cases this week, 94% were confirmed to be influenza of which 97% were confirmed to be the influenza A(H1N1)pdm09 virus. In 2012 through EW 31, 1063 SARI deaths were reported (85% of them associated with A(H1N1)pdm09 virus) mainly in the Southern and Southeastern regions, peaking in EW 25; since then there has been a decreasing trend through EW 31 (n=2).

In Chile<sup>5</sup>, in EW 31 at the national level, ILI activity decreased as compared to the previous week, remaining in the alert zone of the endemic channel (10.8/100,000 population). The percent of emergency visits for respiratory causes, showed a decrease and reached 23.4% in EW 31. According to laboratory data at the national level, in the same week, among the samples analyzed (n=1230), the percent positivity for respiratory viruses was 43.9%, which was lower than the previous week, with a predominance of RSV (77.6%) among the positive samples. According to the SARI surveillance system, the proportion of hospitalizations has shown a decreasing trend since EW 27, reaching 3.4% in EW 30. Since the beginning of the year, 61 SARI deaths have been reported and in five, influenza A/H3 was confirmed. There has been an increase in the percent positivity of SARI samples in the recent weeks, reaching 73.9% in EW 31 among all samples analyzed (n=46) with a predominance of RSV (57%) and influenza A/H3 (29%) among the positive samples.

In Paraguay<sup>6</sup>, at the national level, in EW 31, the proportion of ILI consultations (7%) showed a decrease with respect to previous EW. The same pattern was observed with the ILI rate for the same week (155.7/100,000 population). In the SARI surveillance system, the proportion of hospitalizations (8.3%) did not show significant changes with respect to prior EW. Since the beginning of the year, a total of 149 SARI-deaths were reported of which 24 were confirmed for some respiratory virus, of which 15 were for influenza A(H1N1)pdm09, 7 for RSV and 2 for other viruses. For the same week, among the samples analyzed from SARI cases (n=16), the percent positivity for respiratory viruses (18.8%) was lower than the previous week.

In Uruguay<sup>7</sup>, at the national level, in EW 34, in the SARI surveillance system, the proportion of hospitalizations and ICU admitted remained similar as compared to the previous week. Slight decreasing trend was reported since EW 27. Proportion of SARI deaths remained similar. In EW 29, the percentage of positive samples for respiratory viruses reached its highest value in 2012 (54.8%), with predominance of influenza A(H3N2), influenza B and VSR. In EW 33, the proportion of positive samples for respiratory viruses was 20% (n=10) with just one case of influenza A untyped.

#### Information for the National Influenza Centers:

##### **Identification of the virus of influenza A(H3N2)v**

The virus of **influenza A(H3N2)v** is the result of the incorporation of gene M of virus A(H1N1) pdm09 in the swine-origin triple reassortant influenza A(H3N2) virus. For the detection of the circulation of this virus it is necessary to test the influenza samples according to the following algorithm:

- Use the kit of the CDC for the typing of influenza viruses A/B (CDC Influenza Virus rRT-PCR TO/B typing panel (RUO) CDC # FluRUO-01).
- Evaluate all the positive samples for influenza A with the kits of the CDC for subtyping of influenza A, using the primers/probes with its controls for H1 and H3 seasonal, InfApdm and H1pdm for the virus of the pandemic of 2009, respectively (CDC Influenza Virus rRT-PCR A subtyping panel (RUO) CDC # FluRUO-04 & Pooled Influenza Positive Control (RUO) CDC# VA2716).

##### Interpretation of results:

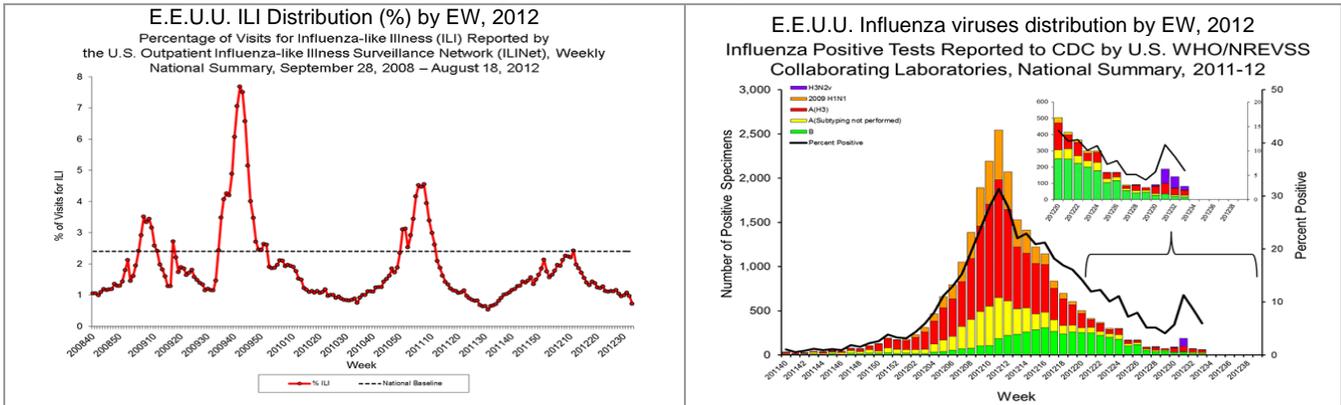
CASE	Inf A	Inf A pdm	H3	H1	H1pdm	B	RESULT
1	+	-	+	-	-	-	Influenza A(H3N2)
2	+	+	+	-	-	-	Influenza A(H3N2)v <sup>1</sup>
3	+	+	-	-	+	-	Influenza A (H1N1)pdm09
4	+	-	-	+	-	-	Influenza A(H1N1)
5	+	-	-	-	-	-	No subtype available <sup>1</sup>

<sup>1</sup> Send sample to CDC

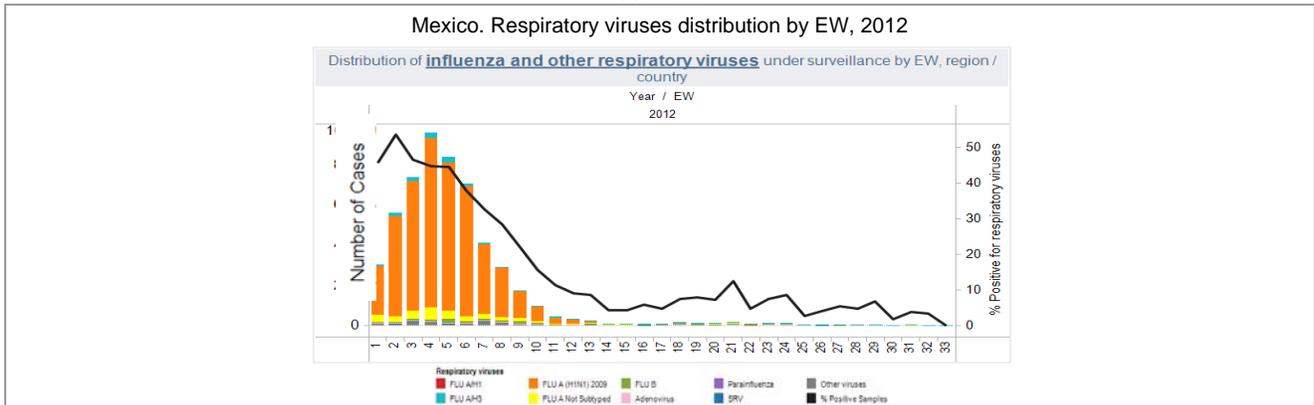
Graphs

North America

United States

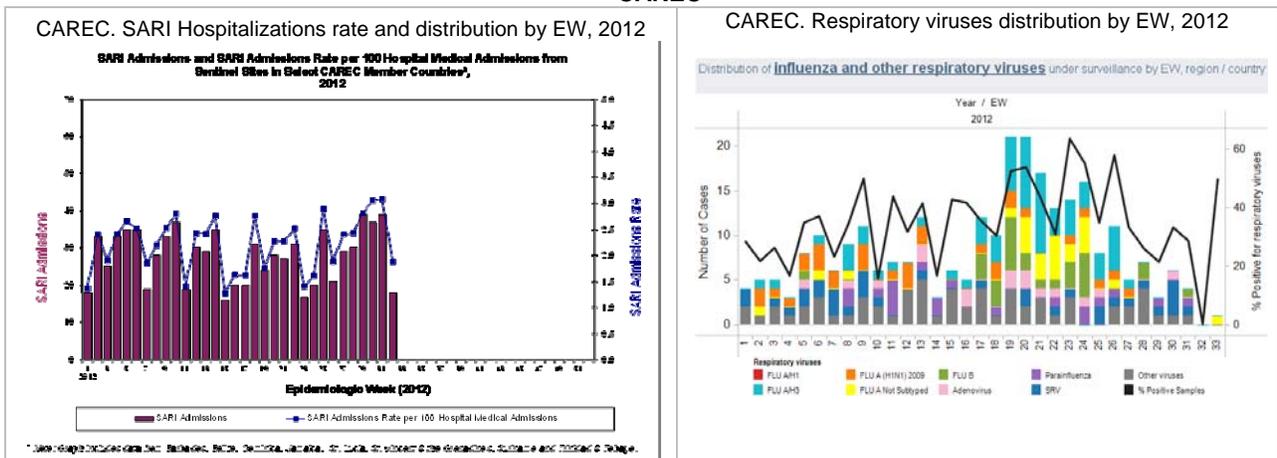


Mexico



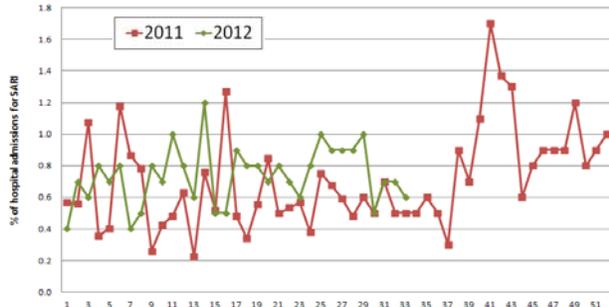
Caribbean

CAREC

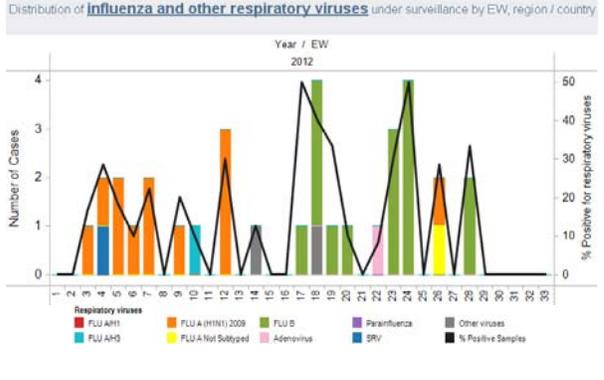


**Jamaica**

**Jamaica. SARI Hospitalization distribution (%) by EW, 2011 - 2012**  
 Percentage of Hospital Admissions for Severe Acute Respiratory Illness (SARI), Jamaica, 2011-2012

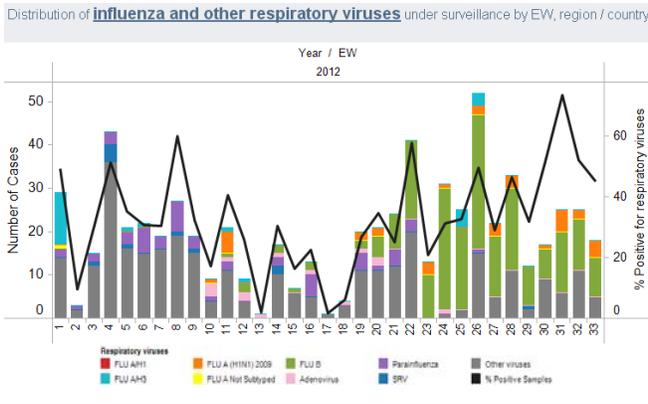


**Jamaica. Respiratory viruses distribution by EW, 2012**

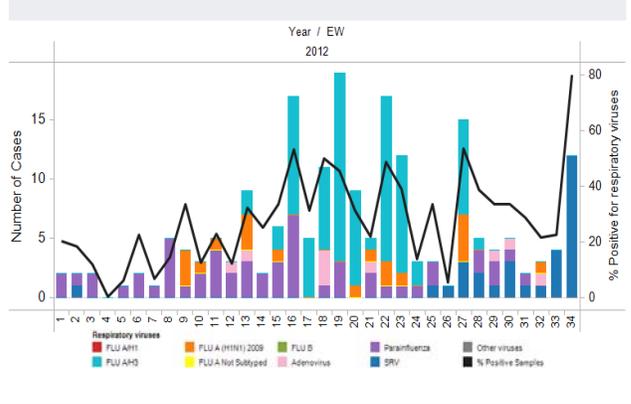


**Cuba and Dominican Republic**

**Cuba. Respiratory viruses distribution by EW, 2012**



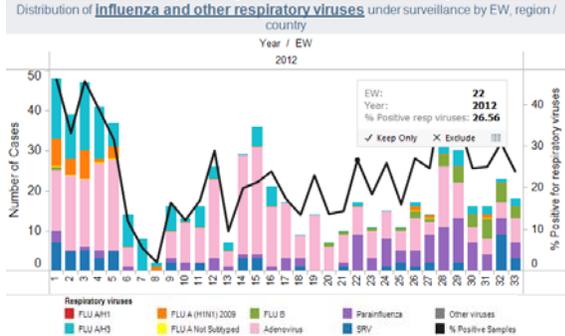
**Dominican Republic. Respiratory viruses distribution by EW, 2012**



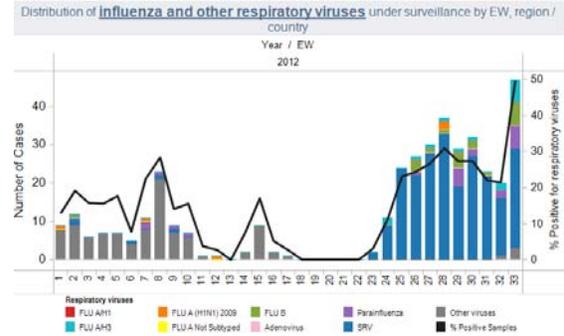
**Central America**

**Costa Rica, Nicaragua and El Salvador**

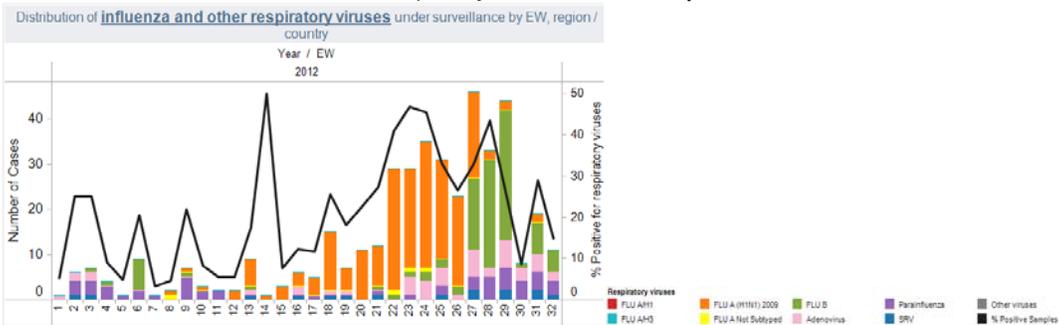
**Costa Rica. Respiratory viruses distribution by EW, 2012**



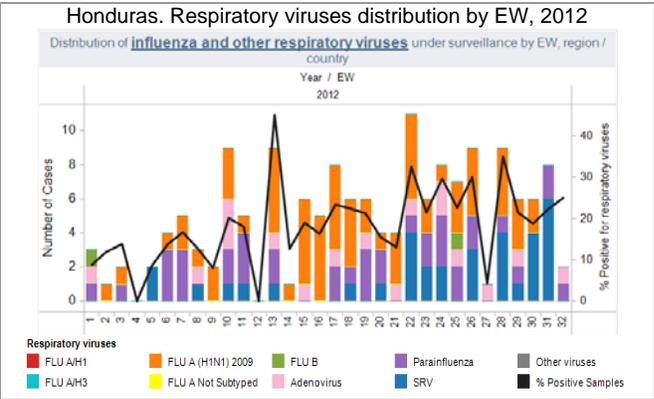
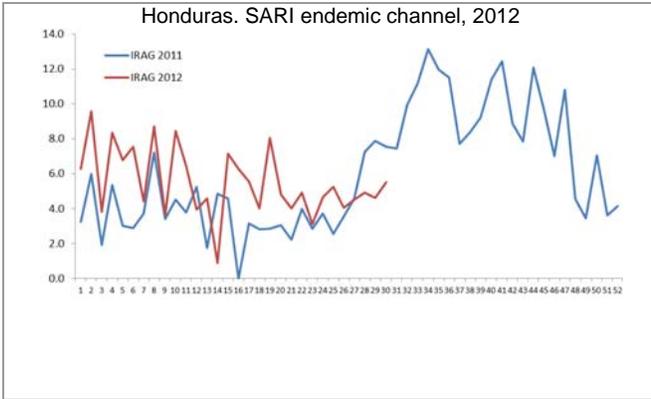
**Nicaragua. Respiratory viruses distribution by EW, 2012**



**El Salvador. Respiratory viruses distribution by EW, 2012**

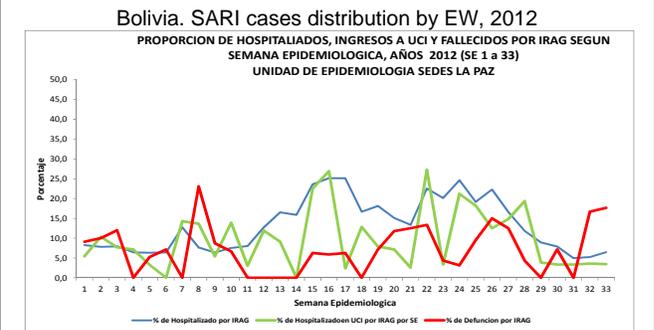
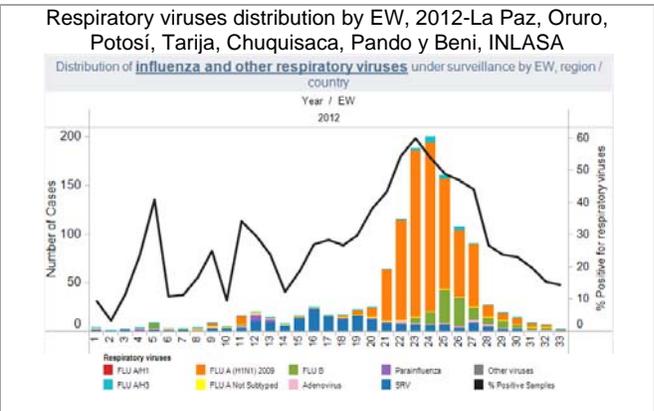
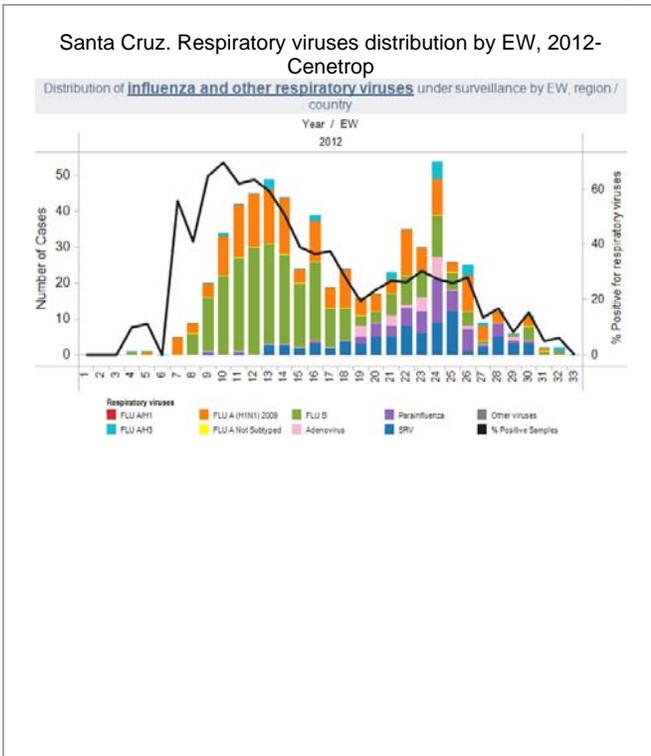


## Honduras

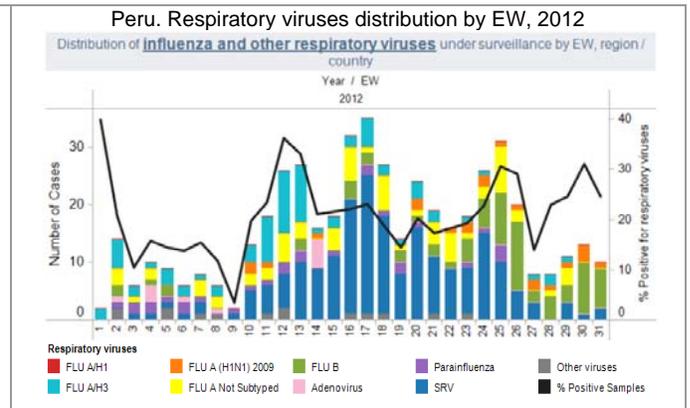
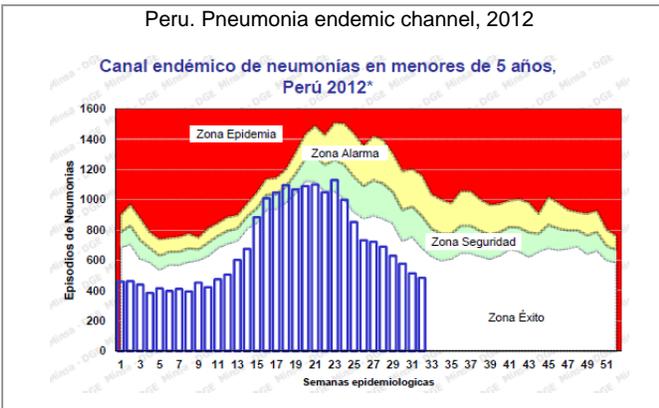


## South America - Andean

### Bolivia



### Peru

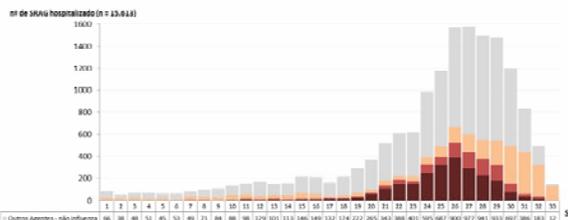


# South America, Brazil and Southern cone

## Brazil

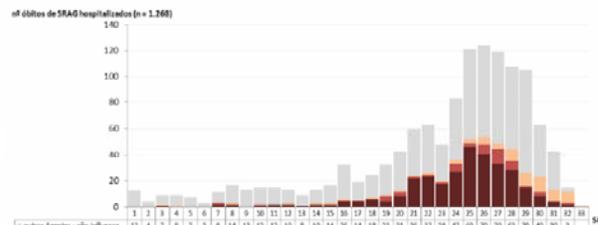
Brazil. SARI hospitalization distribution by EW, 2012

Figura 1: Casos de SRAG hospitalizados segundo virus identificado e por semana epidemiológica do inicio dos sintomas. Brasil, até SE 33/2012.



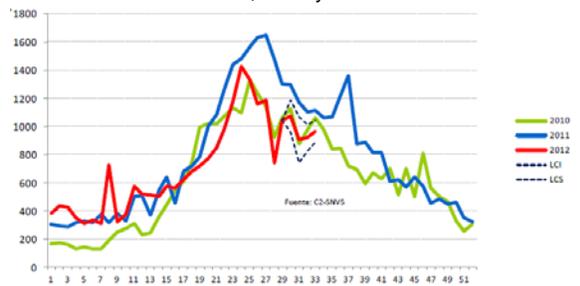
Brazil. SARI deaths distribution by EW, 2012

Figura 2: Óbitos por SRAG hospitalizados segundo virus identificado e por semana epidemiológica do inicio dos sintomas. Brasil, até SE 33/2012.



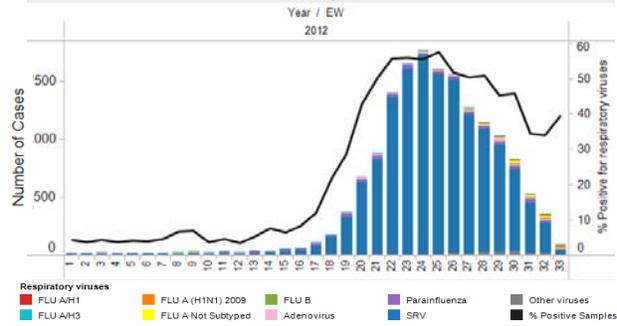
## Argentina

Argentina. SARI distribution by EW. 2010, 2011 y 2012



Argentina. Respiratory viruses distribution by EW, 2012

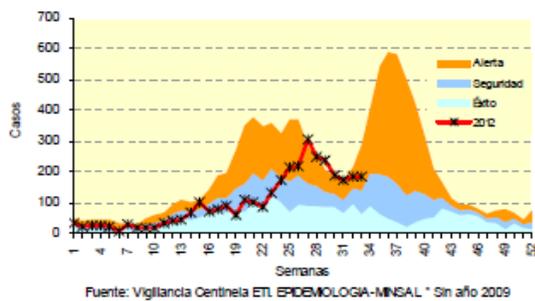
Distribution of influenza and other respiratory viruses under surveillance by EW, region / country



## Chile

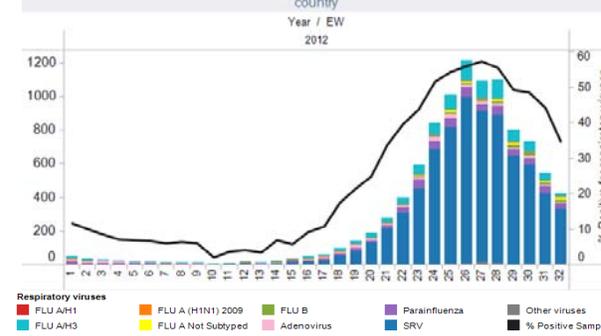
Chile. Endemic channel and ILI cases by EW, 2012

Canal endémico de Enfermedad Tipo Influenza según semana epidemiológica 2006-2011\*. Chile, 2012 (semana 1-33)



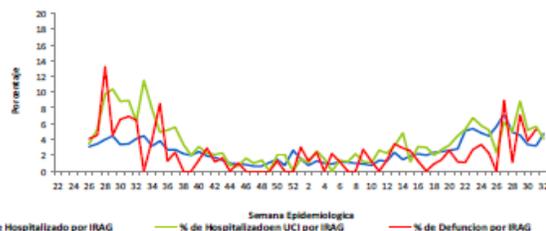
Chile. Respiratory viruses distribution by EW, 2012

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



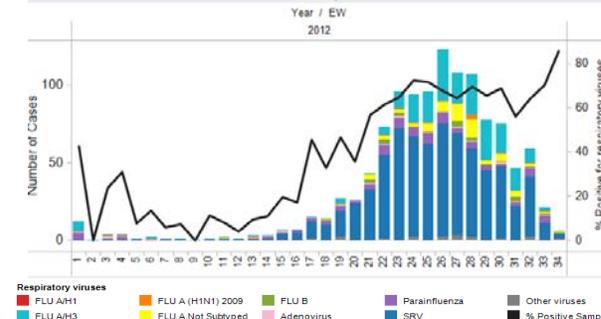
Chile. SARI cases (%) by EW, 2012

Porcentaje de hospitalizados, ingreso a UCI y fallecidos por IRAG según SE. Chile, Hospitales Centinela. 2011 y SE 1-32 de 2012.



Chile. SARI cases: Respiratory viruses distribution by EW, 2012

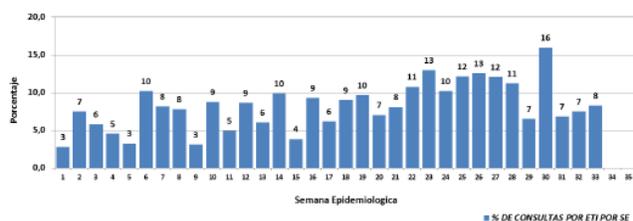
Distribution of influenza and other respiratory viruses under surveillance by EW, region / country



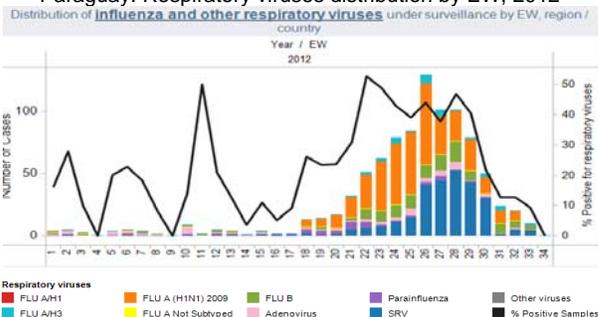
## Paraguay

Paraguay. ILI consults (%) by EW, 2012

Proporción de consulta por ETI según semana epidemiológica del 1 al 33 Paraguay, 2012

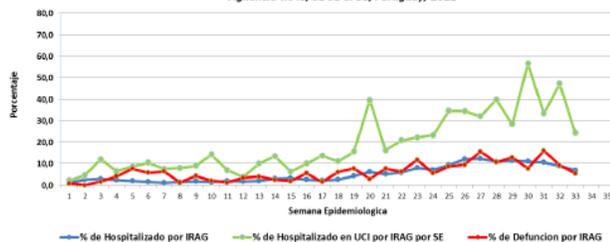


Paraguay. Respiratory viruses distribution by EW, 2012

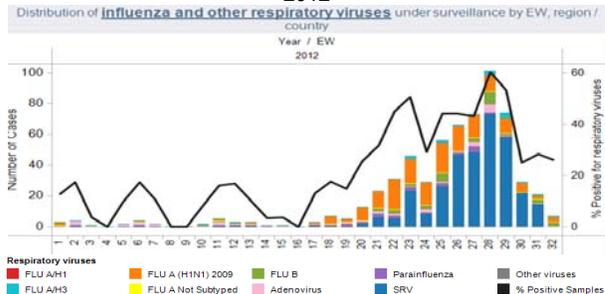


Paraguay. SARI cases (%) by EW, 2012

Proporción de Hospitalizados, Ingresos a UCI y Fallecidos por IRAG según semana epidemiológica, Vigilancia IRAG, SE 01 al 33, Paraguay, 2012



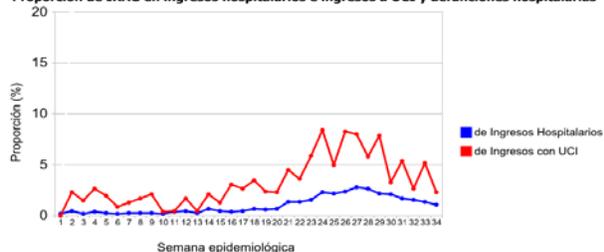
Paraguay. SARI Cases: Respiratory viruses distribution by EW, 2012



## Uruguay

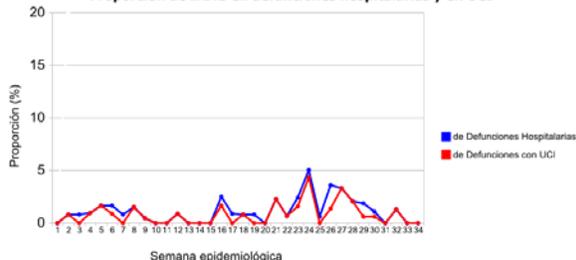
Uruguay, SARI hospitalizations and ICU admitted distribution (%) EW. 2012

Proporción de IRAG en ingresos hospitalarios e ingresos a UCI y defunciones hospitalarias

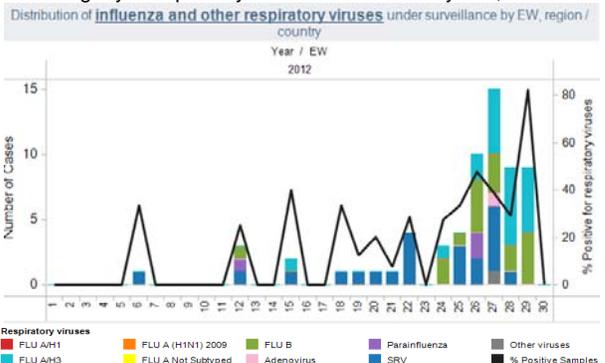


Uruguay, SARI deaths distribution (%) by EW. 2012

Proporción de IRAG en defunciones hospitalarias y en UCI



Uruguay. Respiratory viruses distribution by EW, 2012



1 E.E.U.U. US Surveillance Summary. EW 33. Centers for Disease Control and Prevention

2 Peru. Sala de Situación de Salud. SE 31. Ministerio de Salud. Dirección General de Epidemiología

3 Argentina. Actualización situación de enfermedades respiratorias 2012. SE 31.

4 Brasil. Boletim Informativo SE 31. [http://portalsaude.saude.gov.br/portalsaude/noticia/6184/785/boletim-informativo\\_-\\_influenza.html](http://portalsaude.saude.gov.br/portalsaude/noticia/6184/785/boletim-informativo_-_influenza.html)

5 Chile. Informe de situación. SE 31. Available at: [www.pandemia.cl](http://www.pandemia.cl)

6 Paraguay. Boletín epidemiológico semanal SE 31. Available at:

[http://www.vigisalud.gov.py/index.php?option=com\\_phocadownload&view=category&id=18:vigilancia-eti-e-irag-ano-2011&Itemid=86](http://www.vigisalud.gov.py/index.php?option=com_phocadownload&view=category&id=18:vigilancia-eti-e-irag-ano-2011&Itemid=86)

7 Uruguay. Generador de gráficos de la división de epidemiología, Dirección General de Salud – Ministerio de Salud Pública