



PAHO interactive influenza data: http://ais.paho.org/phip/viz/ed_flu.asp
Influenza Regional Reports: 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 30, 2012, a total of 288 infections with influenza A (H3N2) variant (H3N2v) viruses have been reported in 10 states. So far during the current outbreaks, 15 confirmed cases have been hospitalized as a result of their illness; one death has occurred.
- In Central America and the Caribbean, activity of respiratory diseases remains low. Co-circulation of different respiratory viruses was reported. Among influenza viruses, influenza B predominated in Cuba, Costa Rica, El Salvador and Nicaragua and influenza A(H1N1)pdm09 in Honduras. Increased detection of RSV was reported in the last weeks in Costa Rica, Dominican Republic, Honduras and Nicaragua.
- In South America, acute respiratory disease activity remains low (Bolivia) or decreasing (Argentina, Brazil, Chile, Peru and Paraguay). Co-circulation of influenza viruses was observed with varying prevalence.

Epidemiologic and virologic influenza update

North America

In Canada¹, in epidemiological weeks (EW) 33 and 34, 2012, influenza activity remained low. In EWs 33 and 34, the influenza-like illness (ILI) consultation rate was within the expected levels for this time of year. In EWs 33 and 34, among the total samples analyzed, the proportion of samples positive for influenza was low (0.2%) and a total of four influenza cases were detected of which 50% were influenza A viruses (one A(H3) and one A(H1N1)pdm09) and 50% were influenza B viruses. Concerning other respiratory viruses, the percent positive for rhinovirus remained the highest (EW 34: 20.2%) as compared to other respiratory viruses. Among the samples tested for resistance to oseltamivir (n=1,479), no resistant cases have been detected.

In the United States², in EW 34, nationally, the proportion of ILI consultations (0.9%) was below the baseline (2.4%). Nationally, the proportion of deaths attributed to pneumonia and influenza for EW 33 (5.6%) was below the epidemic threshold for this time of year (6.5%). In EW 34, no pediatric deaths associated with influenza were reported. Among all samples tested during EW 34 (n=1160), the percentage of samples positive for influenza (3.97%) decreased 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(H3)]. From July 12 through August 30, 2012, a total of 288 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[2], Ohio [101], Pennsylvania [7], West Virginia [3], and Wisconsin [15]). So far during the current outbreaks, 15 confirmed cases have been hospitalized as a result of their illness; one death has occurred. The vast majority of cases have been associated with swine exposure though 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.

Caribbean

CAREC[1], in EW 34, received epidemiological information from 5 countries: Dominica, Jamaica, St. Lucia, St. Vincent & the Grenadines, Suriname and Trinidad and Tobago. In EW 34, the proportion of severe acute

^[1] Includes Barbados, Belize, Dominica, Jamaica, St Vincents and the Grenadines, St Lucia, Suriname and Trinidad and Tobago

respiratory infection (SARI) hospitalizations was 1.6% which is lower than what was seen in the prior week (1.9%). In the last 4 weeks (EW 31 to 34) the following viruses have been laboratory confirmed: respiratory syncytial virus (Barbados), parainfluenza (St. Vincent and the Grenadines), 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 34, the proportion of consultations for Acute Respiratory Illness (ARI) was 3.0% which was 0.5% lower than the previous week. The proportion of admissions due to SARI was 0.7%; a 0.1% increase when compared to the week before. There were no SARI deaths reported for EW 34.

In Cuba, according to laboratory data in EW 34, among the samples analyzed (n=53), the percent positivity for respiratory viruses was 47% and the percent positivity for influenza, among all samples analyzed, was 23%. 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 35, among the samples analyzed (n=19), the percent positivity for respiratory viruses was 53% with no detection of influenza viruses this week. RSV has been the predominant virus detected in the last 3 weeks.

Central America

In Costa Rica, in EW 34, according to laboratory data, among all samples tested (n=79), the percentage of positive samples for respiratory viruses was 34.2%, which was higher than the previous week (23.7%). RSV, adenovirus, parainfluenza, and influenza B were detected.

In El Salvador³, according to data provided by the Ministry of Health, in EW 34, a total of 59,907 cases of ARI were reported, which was higher than the previous EW (n=57,834). Also, 934 cases of pneumonias were reported, which was lower than previous EW (n=956). In terms of age, the highest proportion of ARI and pneumonias were reported in children less than 5 years of age. According to laboratory data, through EW 35, of the total of samples analyzed (n=46), the percentage of positive samples for respiratory viruses was 28.3%, with influenza B, parainfluenza, adenovirus, and RSV detected.

In Guatemala, according to laboratory data, in EW 33, among all samples tested (n=18), the percentage of positive samples to respiratory viruses was of 22.2%, lower than the previous EW (37.1%), being detected adenovirus, SRV and parainfluenza.

In Honduras, according to laboratory data, in EW 34, among all samples tested (n=19), the percentage of positive samples for respiratory viruses was of 15.8%, which was lower than the previous EW (40%), with influenza A(H1N1)pdm09 and RSV detected.

In Nicaragua, in EW 34, according to laboratory data, among all samples tested (n=108), the percentage of positive samples for respiratory viruses was 26.9%, which was lower than the previous week (43%). RSV, influenza B, influenza A(H3N2) and influenza A(H1N1)pdm09 were detected.

In Panama, in EW 32, according to laboratory data, among all samples tested (n=20), the percentage of positive samples for respiratory viruses was 75%, which was lower than the previous week (85.7%). RSV, parainfluenza, influenza A(H3N2) and other respiratory viruses were detected.

South America – Andean

In Santa Cruz, Bolivia, according to data from CENETROP laboratory, for EW 34, no positive samples were detected for respiratory viruses among the 17 tested samples. In Santa Cruz, hospitalizations showed an increasing percentage from EW 18 through EW 26 (associated with RSV circulation in children less than 2 years group of age). A decreasing trend was observed currently, reaching 7% in the current EW with no SARI-deaths being reported. According to INLASA laboratory, viral circulation from La Paz, Oruro, Potosí, Tarija, Pando, Beni and Chuquisaca showed a percentage of positive samples of 30% in EW 34 among the 10 tested samples. Influenza A(H1N1)pdm09 and influenza (H3N2) were detected. In La Paz, SARI surveillance in EW 34 showed that the proportions of

Update:
WHO recommendations for the viruses to be used in the 2012 Southern Hemisphere Influenza Vaccine: epidemiology, antigenic and genetic characteristics of influenza A(H1N1)pdm09, A(H3N2) and B influenza viruses collected from February to September 2011."
<http://dx.doi.org/10.1016/j.vaccine.2012.07.089>

hospitalizations (5%) and SARI admitted in ICU (3.3%) remained similar to the previous week. No SARI-deaths were reported this week.

In Ecuador, viral circulation showed a decreasing trend since EW 27, reaching positivity of 2.9 % among the SARI tested samples (n=34) in EW 34 and with just one positive sample—an influenza B virus.

In Peru⁴, at the national level, in 2012 through EW 33, the number of pneumonias in children under 5 years of age reached a rate of 77.3/10,000 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 channel. According to laboratory data at the national level, in EW 34, among the samples analyzed (n=43), the percent positivity for respiratory viruses was 16.3%, which was lower than previous EW, with a predominance of influenza B virus (5/7).

South America – Brazil and Southern Cone

In Argentina⁵, at the national level, endemic channels showed that the number of ILI and pneumonia cases in EW 34 remained within the expected levels for this time of year. The number of SARI cases in EW 34 was similar to what was observed in 2010 and 2011. At the sub-national level, the Northwestern provinces, Cuyo and Southern provinces continued to report higher SARI 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 39.5% among the analyzed samples (n=223), which was higher than value in prior EW, with a predominance of RSV (52%) and influenza A(H1N1)pdm09 (25%) among the positive samples.

In Brazil⁶, in EW 34, the number of SARI cases continued to decrease since its peak in EW 26. Of the total SARI cases from EW 01 through EW 34 (n=16373), 22% were confirmed to be due to influenza virus, of which 69.5% were confirmed to be the influenza A(H1N1)pdm09 virus. In 2012 through EW 31, 1,349 SARI deaths were reported (28% associated with an influenza virus, of which 84% were associated with the influenza A(H1N1)pdm09 virus) mainly in the Southern and Southeastern regions, since EW 25, there has been a decreasing trend through EW 34 (n=1).

In Chile⁷, in EW 34 at the national level, ILI activity decreased as compared to the previous week, reaching the safety zone of the endemic channel (7.2/100,000 population). According to laboratory data at the national level, in the same week, among the samples analyzed (n=1063), the percent positivity for respiratory viruses was 31.2%, which was lower than the previous week, with a predominance of RSV (57%), parainfluenza (15.4%) and unsubtype influenza A (10%) among the positive samples. According to the SARI surveillance system, the proportion of hospitalizations reached a value of 3.7% in EW 33, which was lower than the previous week. Since the beginning of the year, 91 SARI deaths have been reported and in 15.2%, viral etiology was confirmed with predominance of influenza A(H3N2) (9/14) among the positive samples. In this surveillance system and in this EW, 38 samples were tested with a percent positivity of 81.6%, which was higher than the previous EW with a predominance of RSV (34%) and influenza A(H3N2) (26%) among the positive samples.

In Paraguay⁸, at the national level, in EW 34, the proportion of ILI consultations (8%) showed a decrease with respect to previous EW. The same pattern was observed with the ILI rate for the same week (146.7/100,000 population). According to lab data, at the national level in EW 33, the percent positivity was 9.3% among tested samples (n=97), with no significant changes during last three weeks and with predominance of RSV (5/10) among the positive samples. In the SARI surveillance system, the proportion of hospitalizations (7%, 111/1606) did not show significant changes with respect to prior EW. Since the beginning of the year, a total of 178 SARI-deaths were reported of which 18 were due to influenza A(H1N1)pdm09, 8 due to RSV and 4 due to other viruses. For EW 33, among the samples analyzed from SARI cases (n=48), the percent positivity for respiratory viruses was 10.4%, with a predominance of RSV among the positive samples.

In Uruguay⁹, at the national level, in EW 35, in the SARI surveillance system, the proportion of hospitalizations and ICU admissions did not show significant changes with respect to prior EW. Slow decreasing trend since EW 27 persisted for both indicators. The proportion of SARI-deaths did not show significant variations. In EW 29, the percent positivity for respiratory viruses reached the highest value in 2012 (54.8%), with predominance of influenza A(H3N2), influenza B and RSV. In EW 33, the positivity of respiratory viruses was 20% (n=10) with just one case of influenza A(H3N2) detected.

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 ¹
3	+	+	-	-	+	-	Influenza A (H1N1)pdm09
4	+	-	-	+	-	-	Influenza A(H1N1)
5	+	-	-	-	-	-	No subtype available ¹

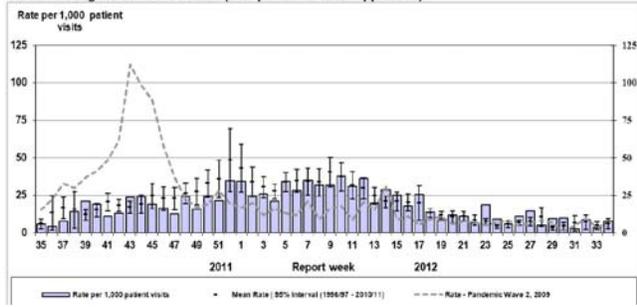
¹ Send sample to CDC

Graphs

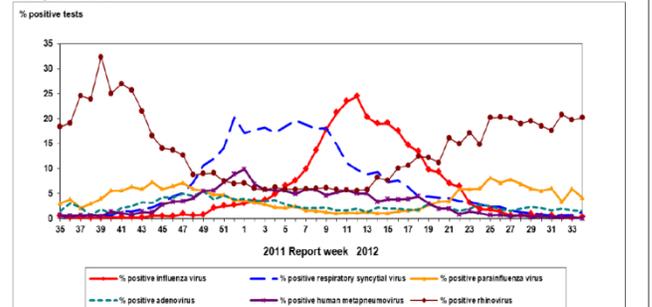
North America

Canada

Tasa de consulta por ETI (x 1,000), 2011-12
 Figure 7. Influenza-like illness (ILI) consultation rates, Canada, by report week, 2011-2012 compared to 1996/97 through to 2010/11 seasons (with pandemic data suppressed)



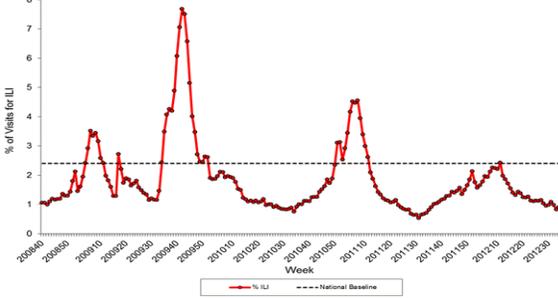
Positive samples for respiratory viruses, 2011-12
 Figure 5. Percent positive influenza tests, compared to other respiratory viruses, Canada, by reporting week, 2011-2012



United States

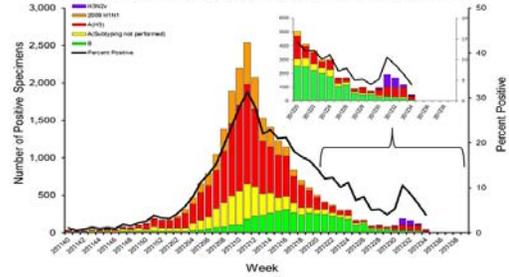
E.E.U.U. ILI Distribution (%) by EW, 2012

Percentage of Visits for Influenza-like Illness (ILI) Reported by the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), Weekly National Summary, September 28, 2008 – August 25, 2012



E.E.U.U. Influenza viruses distribution by EW, 2012

Influenza Positive Tests Reported to CDC by U.S. WHO/NREVSS Collaborating Laboratories, National Summary, 2011-12

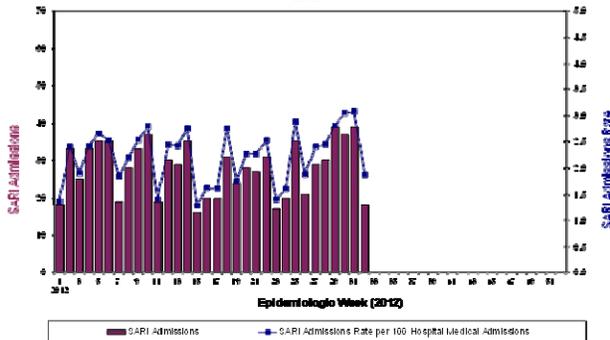


Caribbean

CAREC

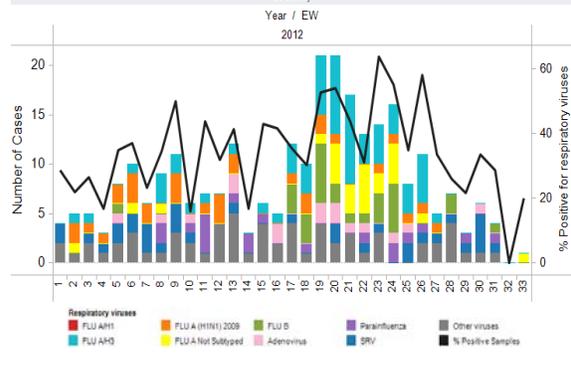
CAREC. SARI Hospitalizations rate and distribution by EW, 2012

SARI Admissions and SARI Admissions Rate per 100 Hospital Medical Admissions from Sentinel Sites in Select CAREC Member Countries*, 2012



CAREC. Respiratory viruses distribution by EW, 2012

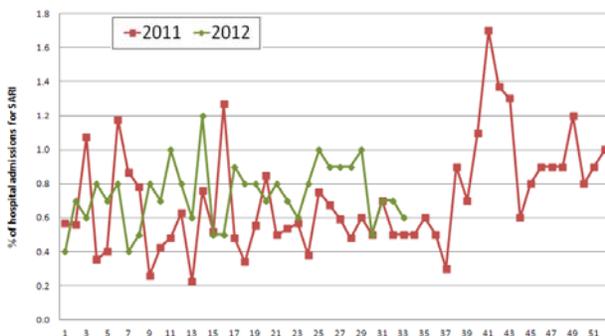
Distribution of influenza and other respiratory viruses under surveillance by EW, region / country



Jamaica

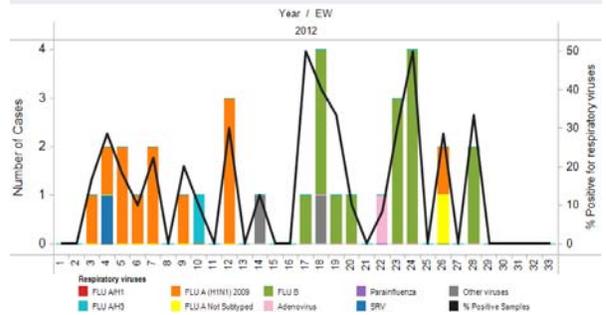
Jamaica. SARI Hospitalization distribution (%) by EW, 2011 - 2012

Percentage of Hospital Admissions for Severe Acute Respiratory Illness (SARI), Jamaica, 2011-2012

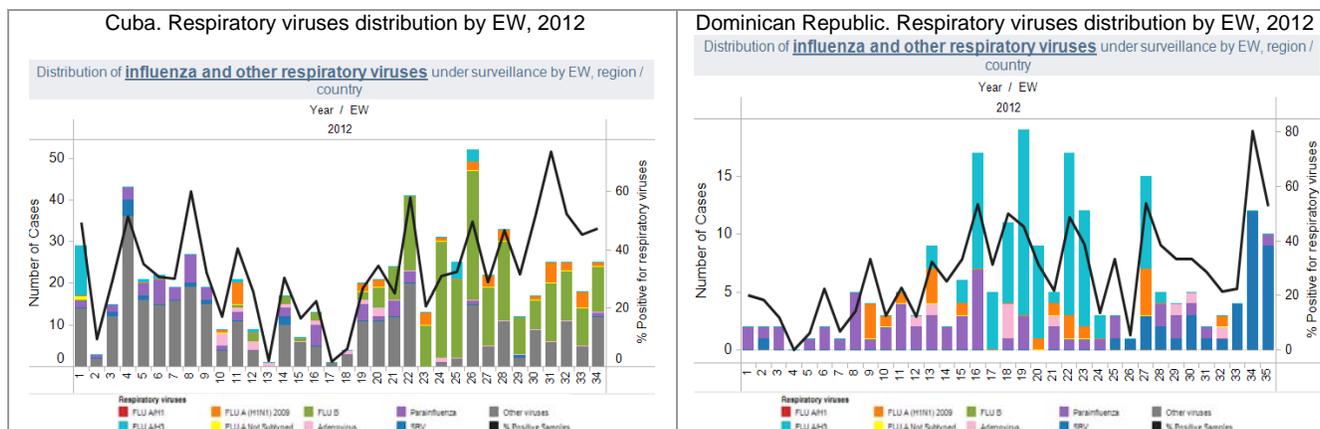


Jamaica. Respiratory viruses distribution by EW, 2012

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

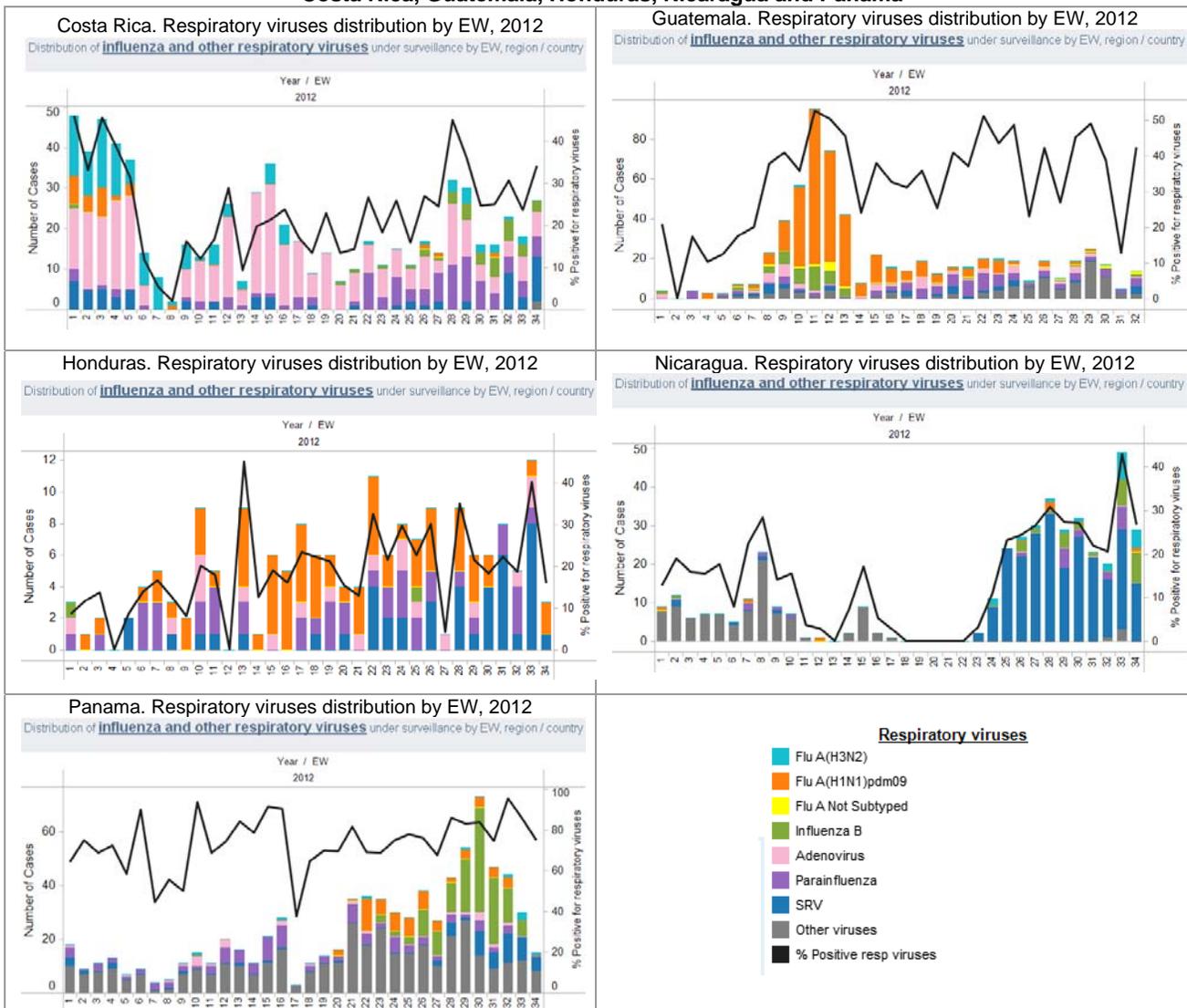


Cuba and Dominican Republic



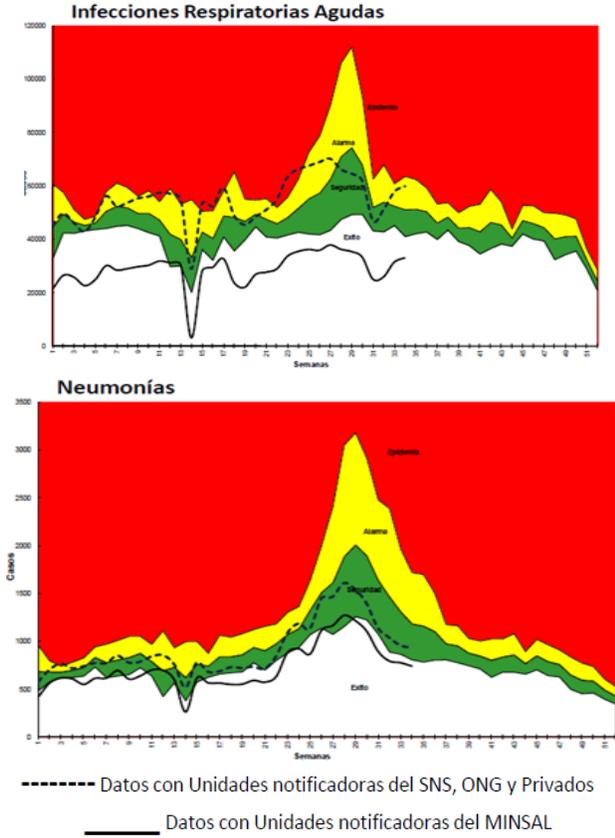
Central America

Costa Rica, Guatemala, Honduras, Nicaragua and Panama

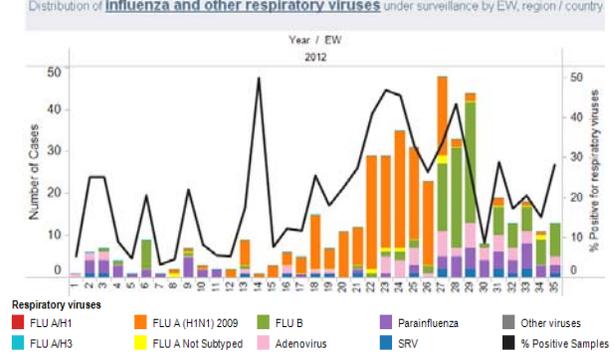


El Salvador

Endemic channel. ARI & pneumonia cases. El Salvador, per EW



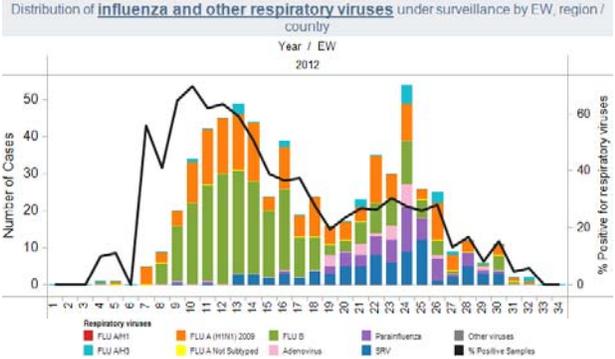
Respiratory viruses distribution by EW, 2012



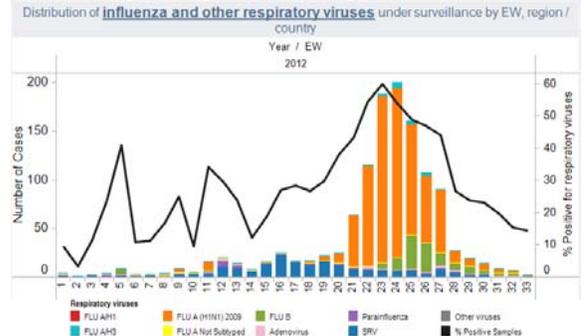
South America - Andean

Bolivia

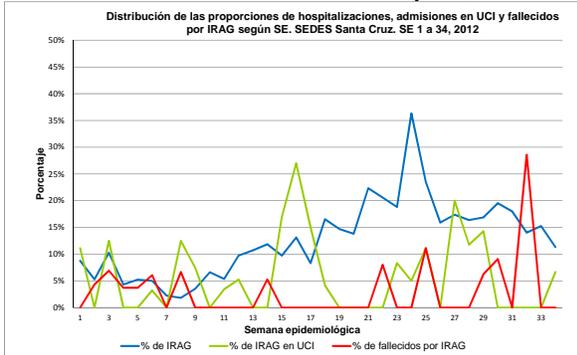
Santa Cruz. Respiratory viruses distribution by EW, 2012-Centrop



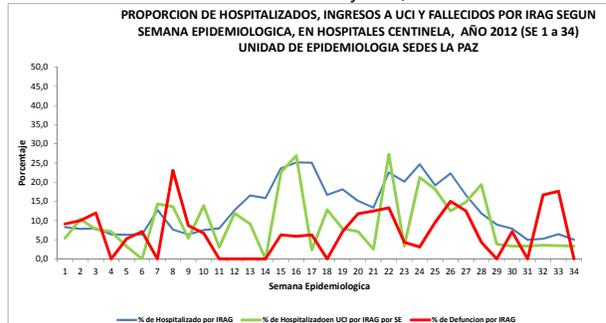
Respiratory viruses distribution by EW, 2012-La Paz, Oruro, Potosí, Tarija, Chuquisaca, Pando y Beni, INLASA



Santa Cruz. SARI cases distribution by EW, 2012



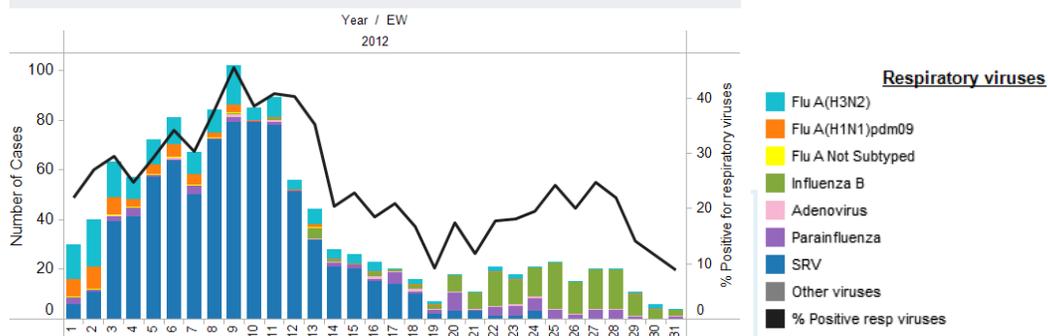
La Paz, Oruro, Potosí, Tarija, Chuquisaca, Pando y Beni. SARI cases distribution by EW, 2012



Ecuador

Ecuador. Respiratory viruses distribution by EW, 2012

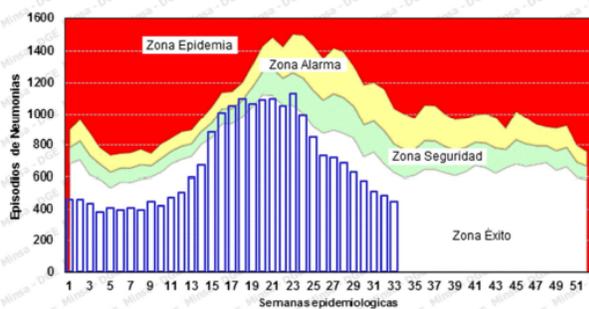
Distribution of **influenza and other respiratory viruses** under surveillance by EW, region / country



Peru

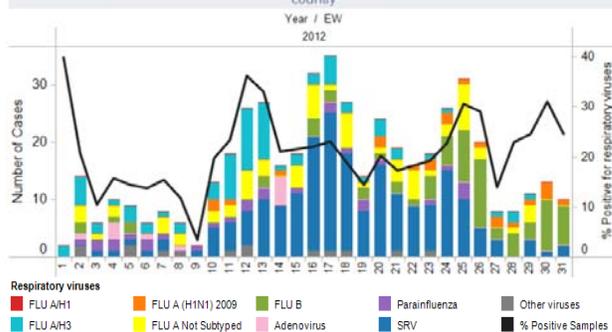
Peru. Pneumonia endemic channel, 2012

Canal endémico de neumonías en menores de 5 años, Perú 2012*



Peru. Respiratory viruses distribution by EW, 2012

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

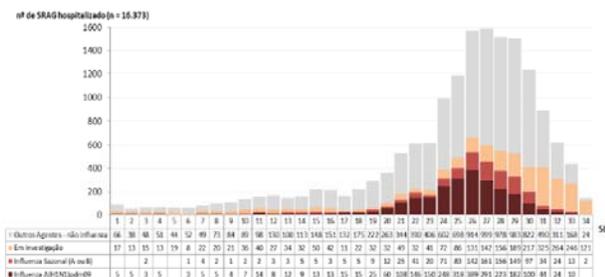


South America, Southern cone

Brazil

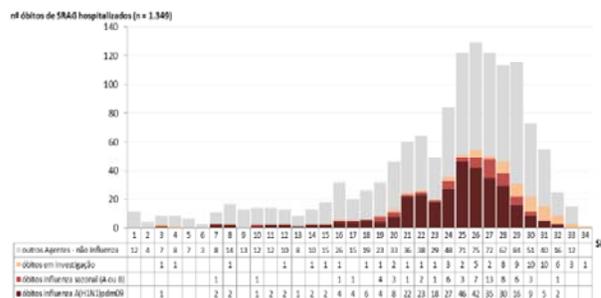
Brazil. SARI hospitalization distribution by EW, 2012

Figura 1: Casos de SRAG hospitalizados segundo vírus identificado e por semana epidemiológica do início dos sintomas. Brasil, até SE 34/2012.

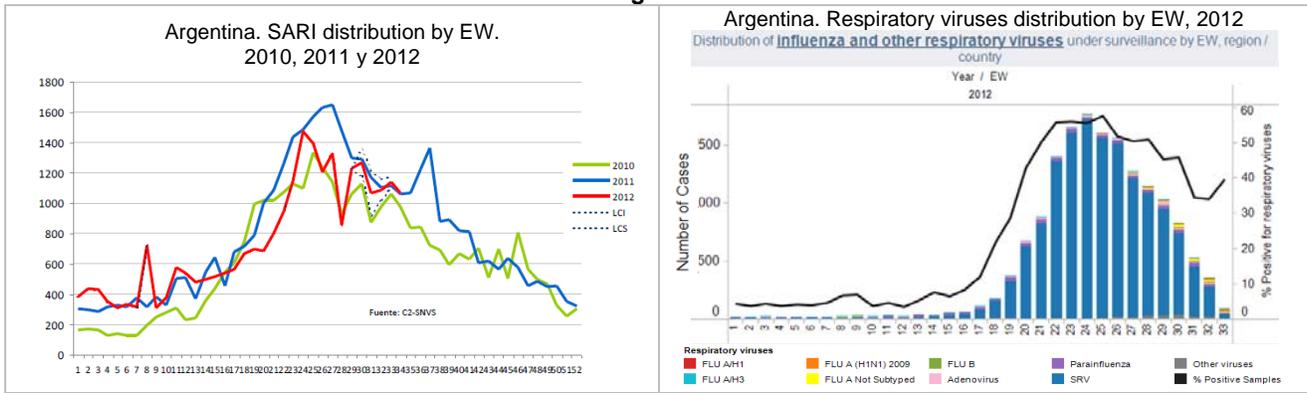


Brazil. SARI deaths distribution by EW, 2012

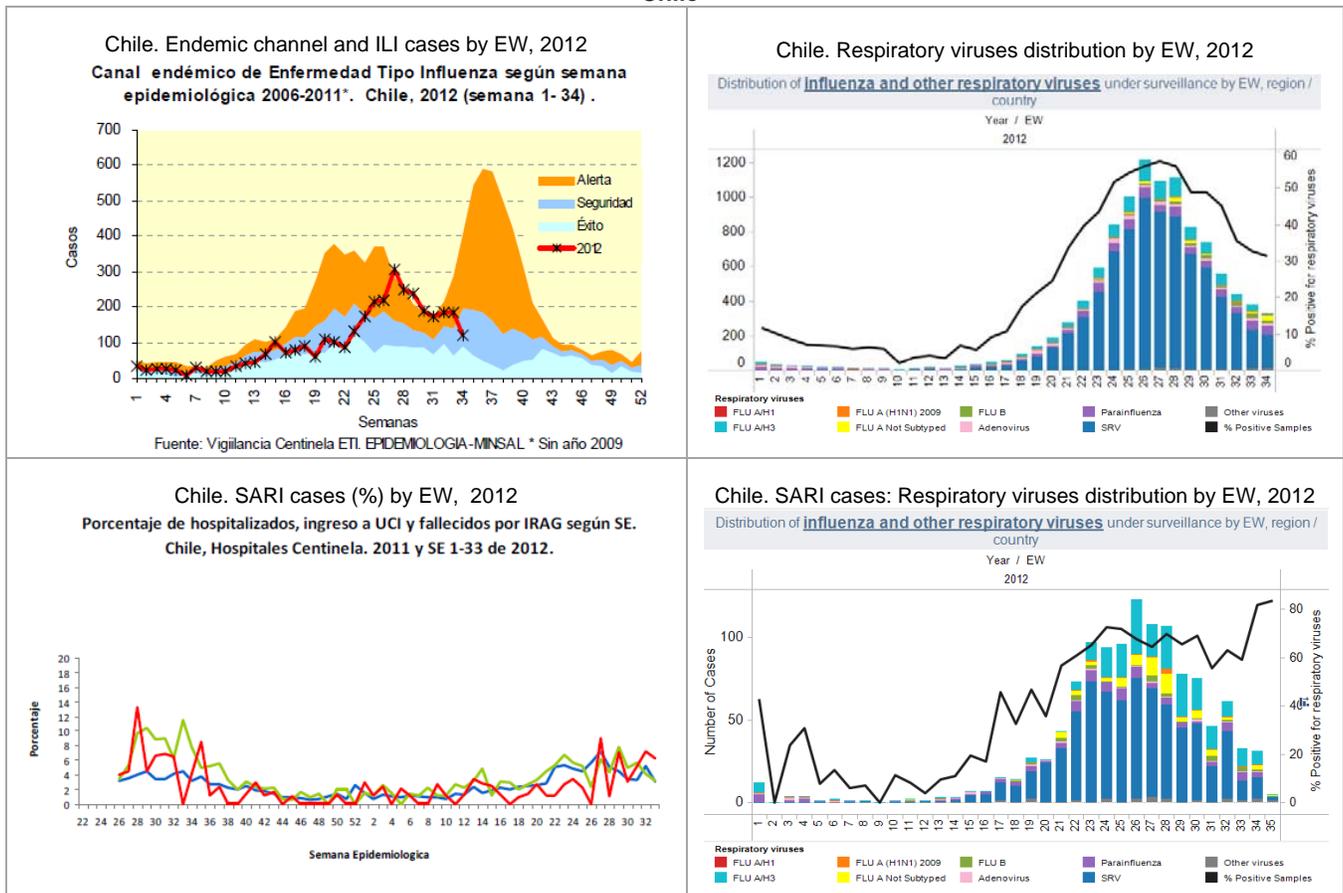
Figura 2: Óbitos por SRAG hospitalizados segundo vírus identificado e por semana epidemiológica do início dos sintomas. Brasil, até SE 34/2012.



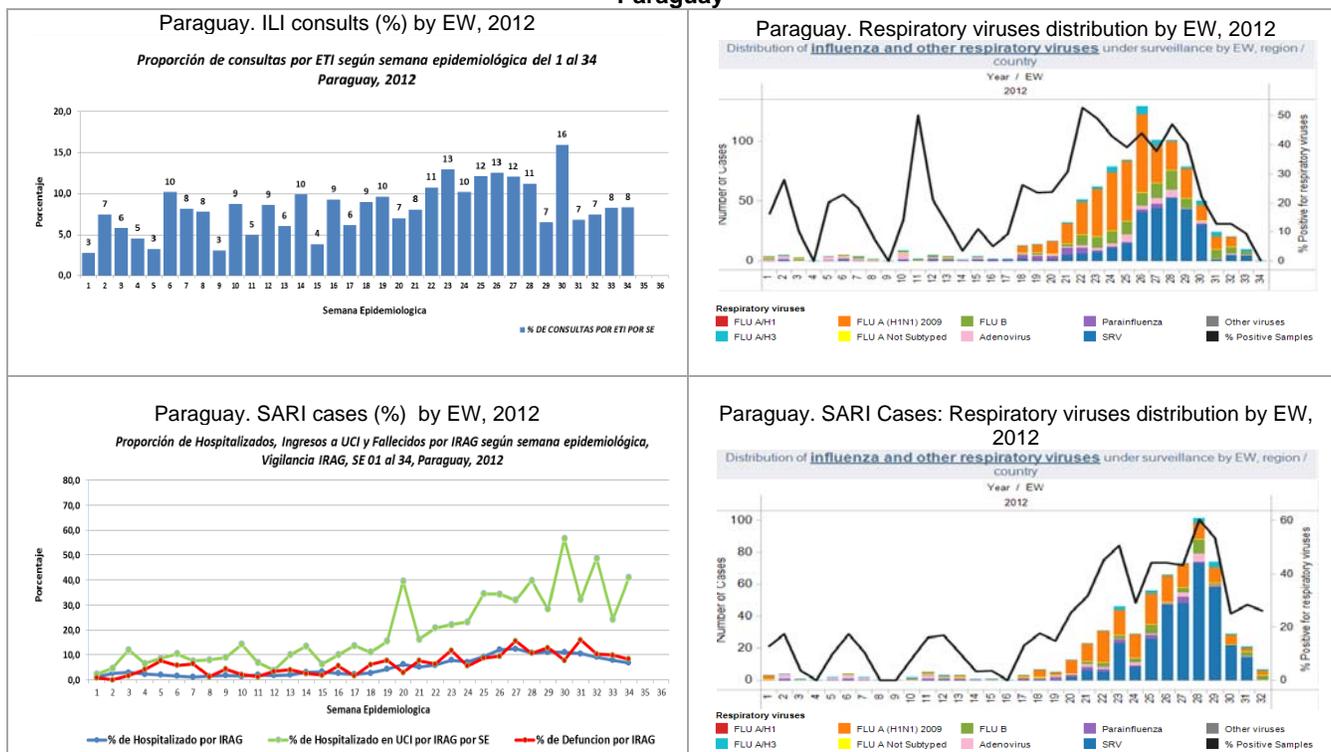
Argentina



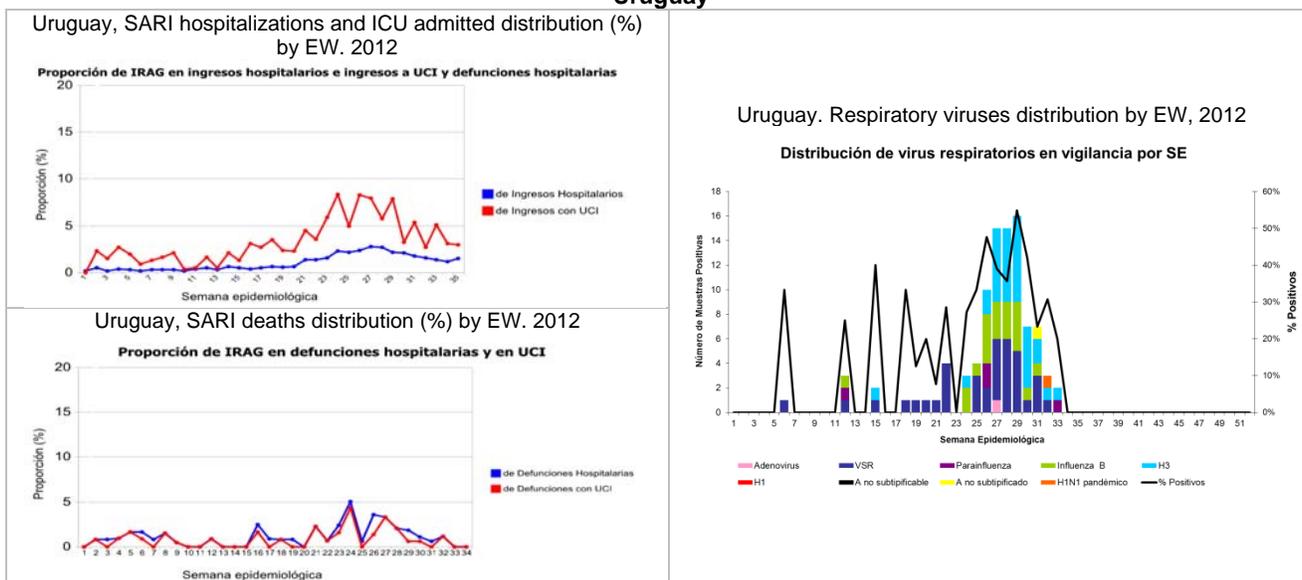
Chile



Paraguay



Uruguay



1 FluWatch Report. EW 34. Available at <http://www.phac-aspc.gc.ca/fluwatch/>

2 US Surveillance Summary. EW 34. Centers for Disease Control and Prevention

3 El Salvador. Boletín epidemiológico SE 34 de 2012. MINSAL.

4 Peru. Sala de Situación de Salud. SE 33. Ministerio de Salud. Dirección General de Epidemiología

5 Argentina. Actualización situación de enfermedades respiratorias 2012. SE 34.

6 Brasil. Boletim Informativo SE 34. http://portalsaude.saude.gov.br/portalsaude/noticia/6184/785/boletim-informativo-_influenza.html

7 Chile. Informe de situación. SE 34. Available at: www.pandemia.cl

8 Paraguay. Boletín epidemiológico semanal SE 34. Available at: http://www.vigisalud.gov.py/index.php?option=com_phocadownload&view=category&id=18:vigilancia-eti-e-irag-ano-2011&Itemid=86

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