



Regional Update EW 33, 2012

Influenza
(August 28, 2012 - 17 h GMT; 12 h EST)

PAHO interactive influenza data: http://ais.paho.org/phis/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 23, 2012, a total of 276 infections with influenza A (H3N2) variant (H3N2v) viruses have been reported in 10 states. Most of the cases were associated with swine exposure and 3 likely instances were associated to human-to-human transmission.
- 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 y el Salvador in co-circulation with influenza A (H3N2). Predominance of RSV in Nicaragua.
- In South America, the 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 the United States¹, 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), 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.

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

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 Peru², 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 Argentina³, at the national level, endemic channels showed that the number of ILI and pneumonia cases in EW 32 remained within the expected levels for this time of year. The number of SARI cases in EW 32 was lower than observed values 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 in EW 33, 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 Brazil⁴, in EW 33, the number of SARI cases continued to decrease since its peak in EW 26. Of the total SARI cases from EW 01 through EW 33 (n=15613), 22% were confirmed to be due to influenza virus, of which 70% were confirmed to be the influenza A(H1N1)pdm09 virus. In 2012 through EW 33, 1,268 SARI

deaths were reported (28% associated with an influenza virus, of which 85% 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 33 (n=1).

In Chile⁵, in EW 33 at the national level, no significant changes was observed in ILI activity in the last 3 EW remaining in the alert zone of the endemic channel (11.4/100,000 population). According to laboratory data at the national level, in the same week, among the samples analyzed (n=1156), the percent positivity for respiratory viruses was 32.1%, which was lower than the previous week, with a predominance of RSV (60.4%), unsubtype influenza A (14%) and parainfluenza (13.7%) among the positive samples. According to the SARI surveillance system, the proportion of hospitalizations reached a value of 4.8% in EW 32, which was slightly higher than the previous week. Since the beginning of the year, 81 SARI deaths have been reported and in 11 cases viral etiology was confirmed (8 of influenza A(H3N2), 1 unsubtype influenza A, 1 influenza B and 1 RSV). In this surveillance system and in this EW, 30 samples were tested with a percent positivity of 70%, with a predominance of RSV (11/21) and parainfluenza (5/21) among the positive samples. In Paraguay⁶, at the national level, in EW 33, no significant changes were observed in the proportion of ILI consultations (8%) with respect to previous EW. The same pattern was observed with the ILI rate for the same week (149/100,000 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%, 129/1840) did not show significant changes with respect to prior EW. Since the beginning of the year, a total of 168 SARI-deaths were reported of which 16 were due to influenza A(H1N1)pdm09, 8 due to RSV and 3 due to other viruses. For EW 33, all the tested samples (n=18) were negatives for respiratory viruses.

In Uruguay⁷, at the national level, in EW 34, in the SARI surveillance system, the proportion of hospitalizations and ICU admitted did not show significant changes with respect to prior EW. Slow decreasing trend since EW 27 remains for both indicators. Proportion of SARI-deaths did not show significant variations. In EW 29, percent positivity of respiratory viruses reaches the highest value in 2012 (54.8%), with predominance of influenza A(H3N2), influenza B and VSR. In EW 33, positivity of respiratory viruses was 20% (n=10) with just one case of influenza A with unavailable subtype currently.

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:

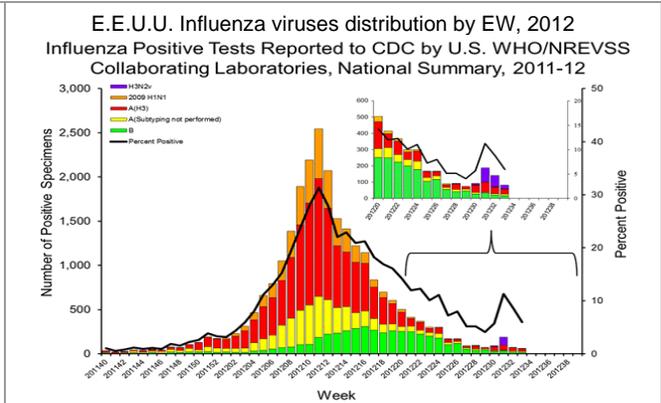
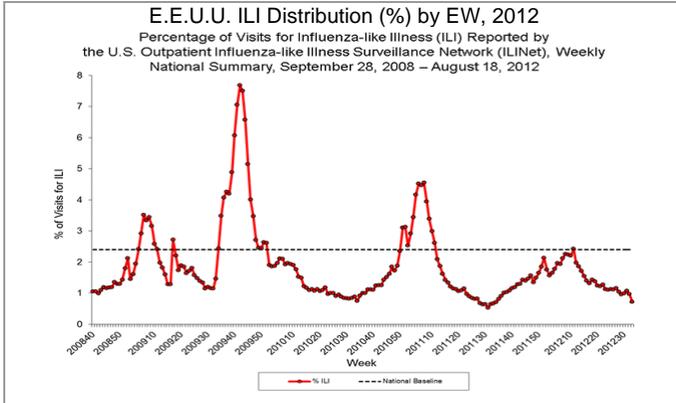
CASE	Inf A	Inf A pdm	H3	H1	H1pdm	B	RESULT
1	+	-	+	-	-	-	Influenza A(H3N2)
2	+	+	+	-	-	-	Influenza A(H3N2)v ¹
3	+	+	-	-	+	-	Influenza A (H1N1)pdm09
4	+	-	-	+	-	-	Influenza A(H1N1)
5	+	-	-	-	-	-	No subtype available ¹

¹ Send sample to CDC

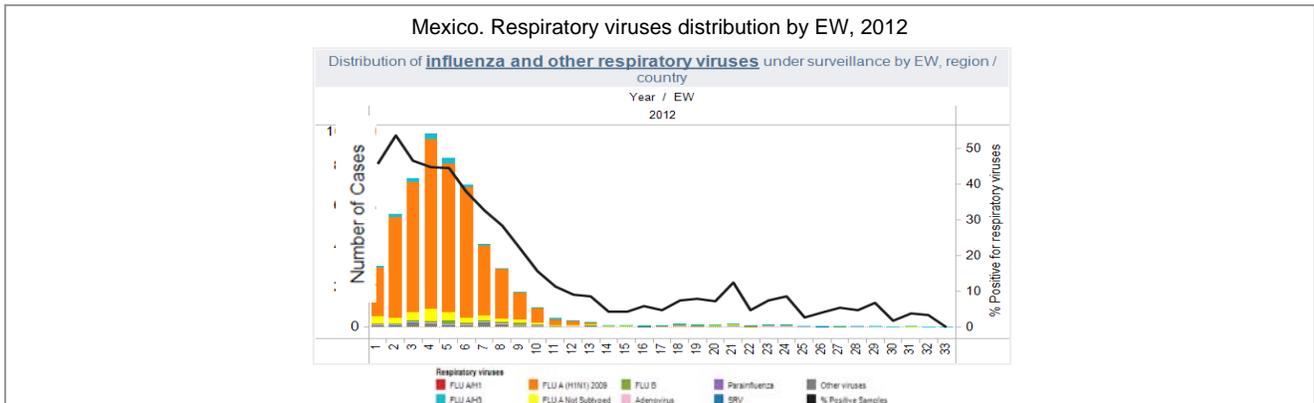
Graphs

North America

United States

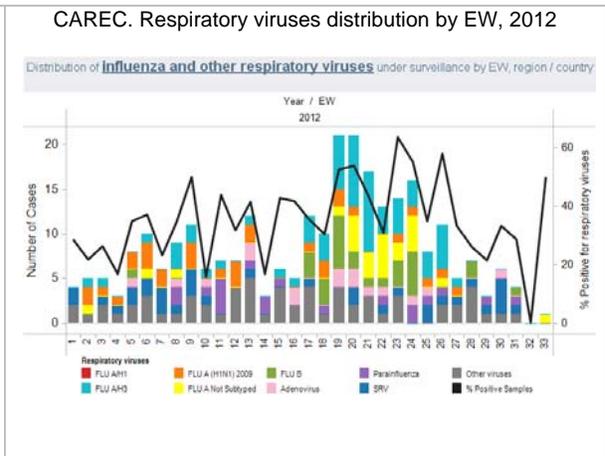
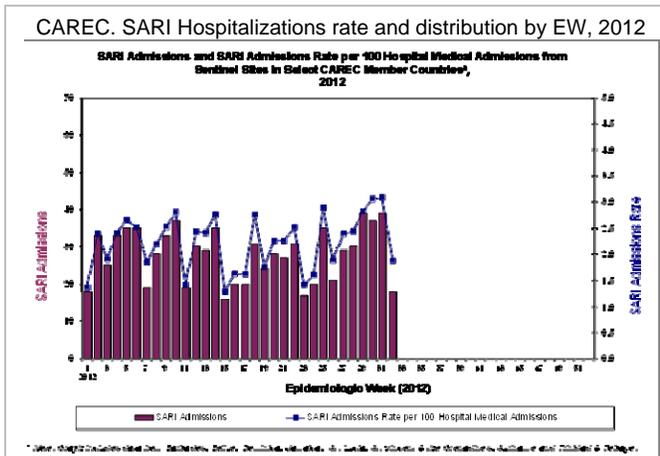


Mexico

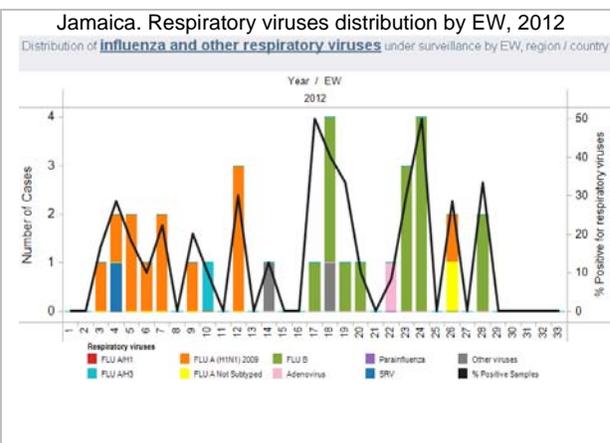
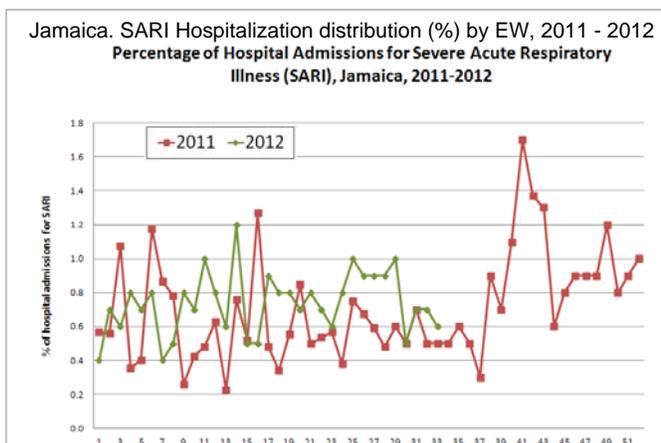


Caribbean

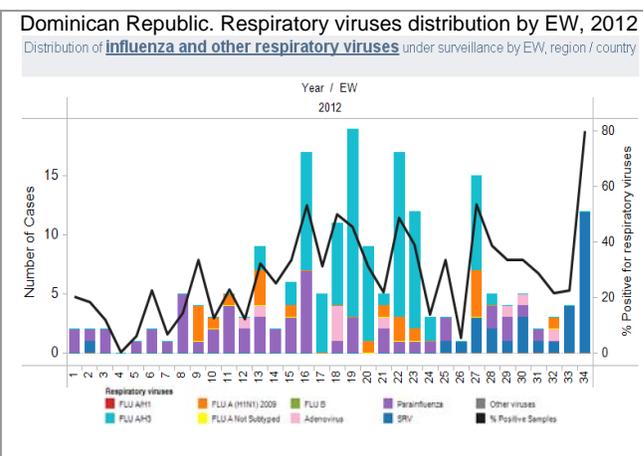
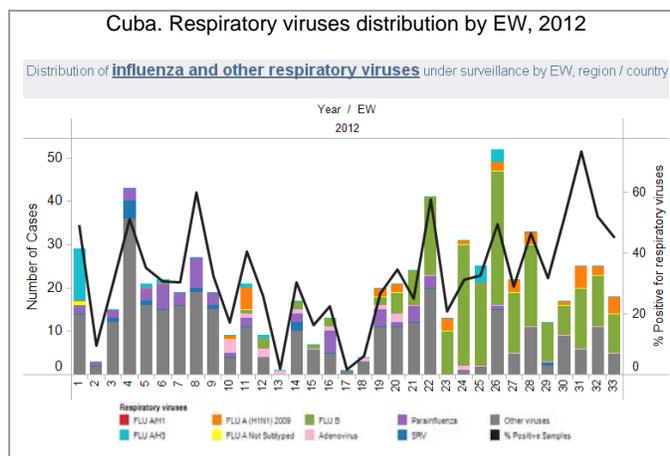
CAREC



Jamaica

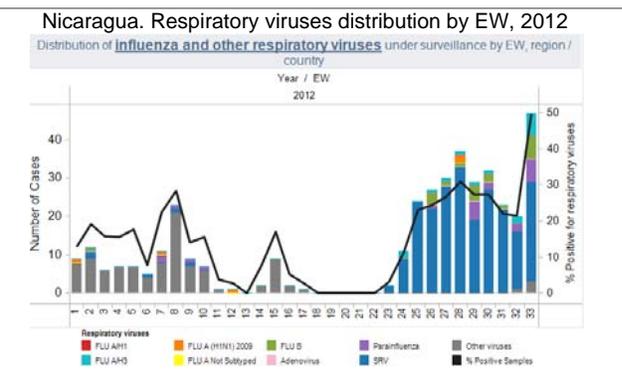
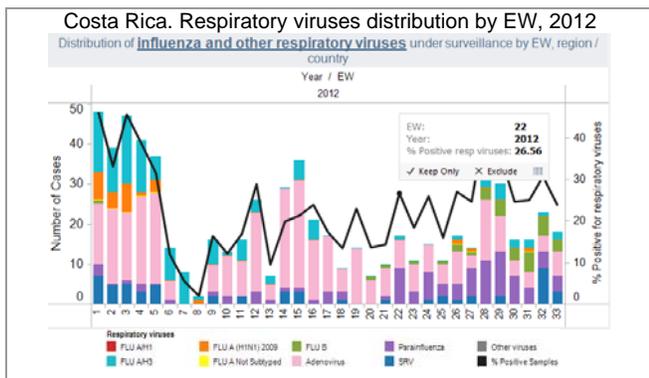


Cuba and Dominican Republic

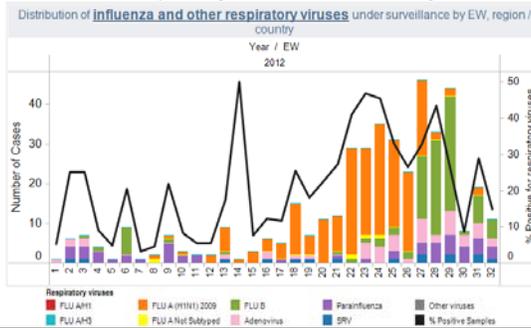


Central America

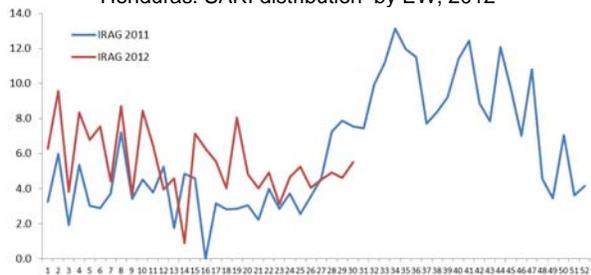
Costa Rica, Honduras, Nicaragua and El Salvador



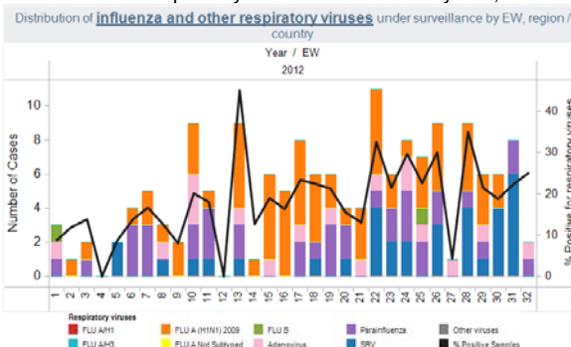
El Salvador. Respiratory viruses distribution by EW, 2012



Honduras. SARI distribution by EW, 2012



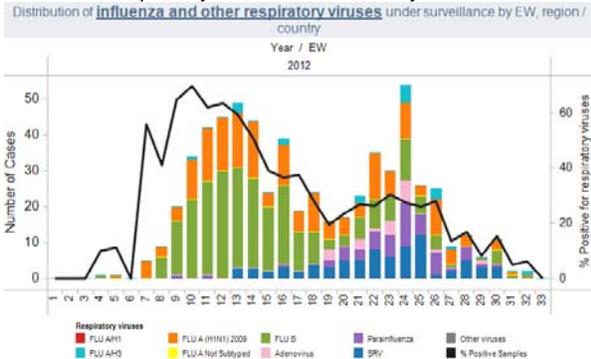
Honduras. Respiratory viruses distribution by EW, 2012



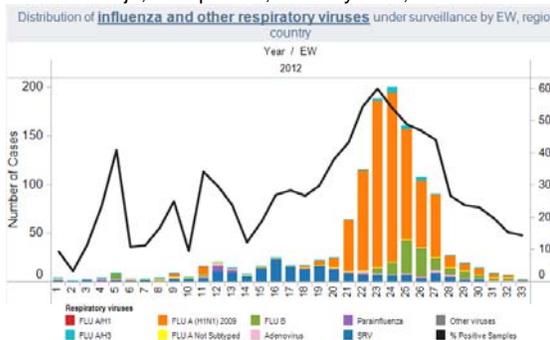
South America - Andean

Bolivia

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

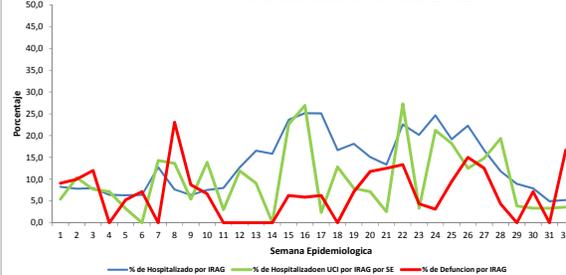


Respiratory viruses distribution by EW, 2012-La Paz, Oruro, Potosí, Tarija, Chuquisaca, Pando y Beni, INLASA

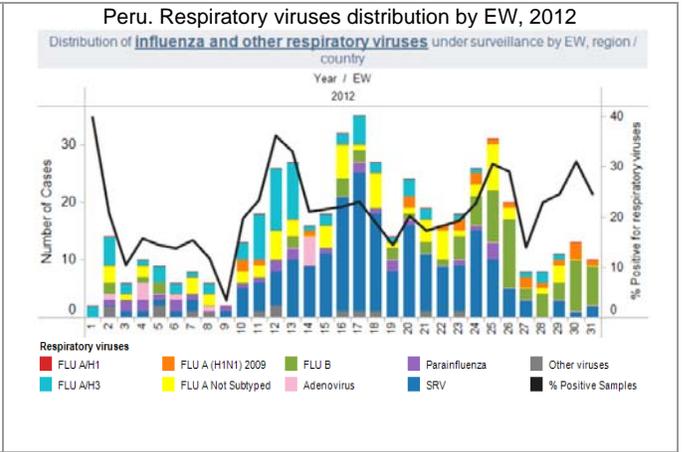
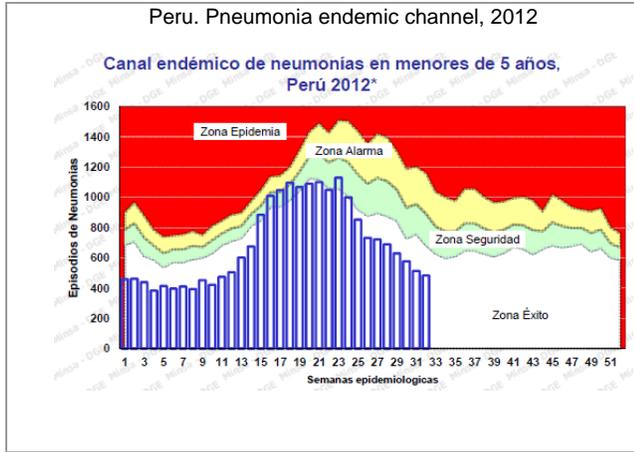


Bolivia. SARI cases distribution by EW, 2012

PROPORCIÓN DE HOSPITALIADOS, INGRESOS A UCI Y FALLECIDOS POR IRAG SEGUN SEMANA EPIDEMIOLOGICA, AÑOS 2012 (SE 1 a 33) UNIDAD DE EPIDEMIOLOGIA SEDES LA PAZ

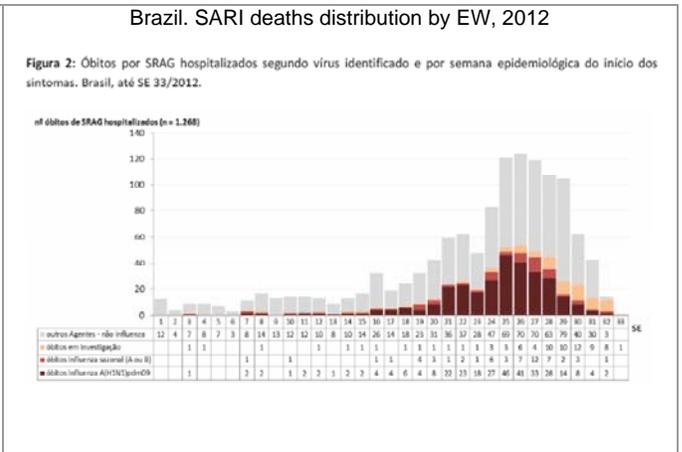
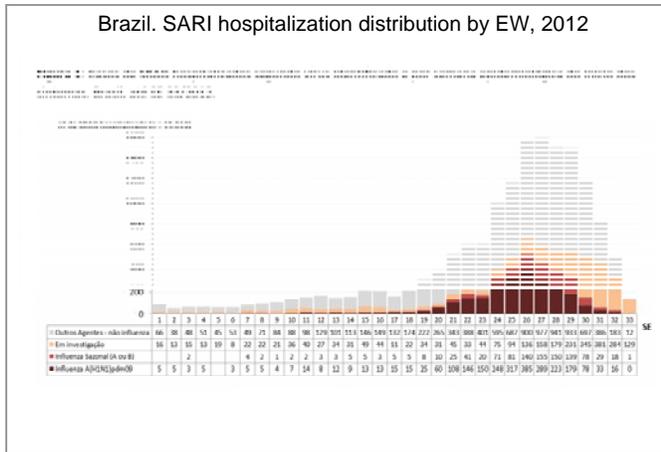


Peru

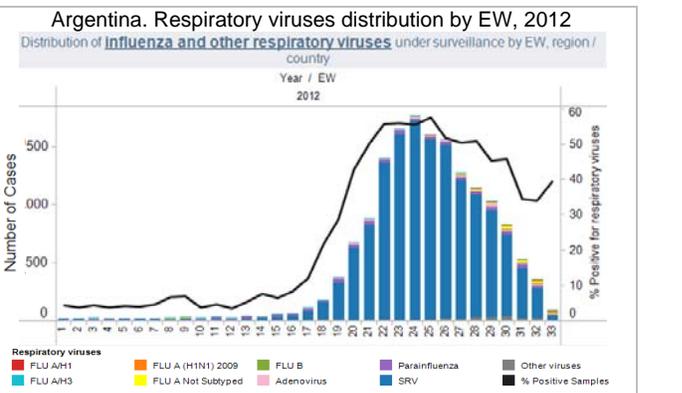
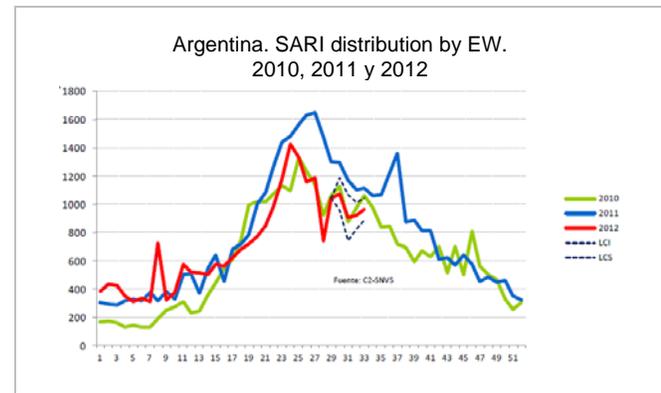


South America, Southern cone

Brazil

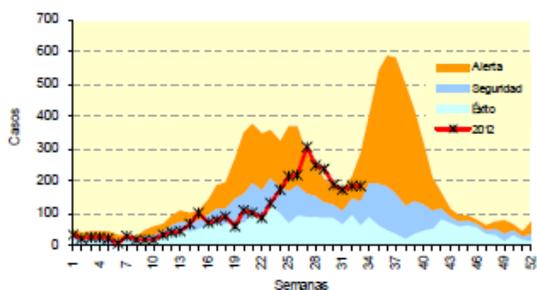


Argentina



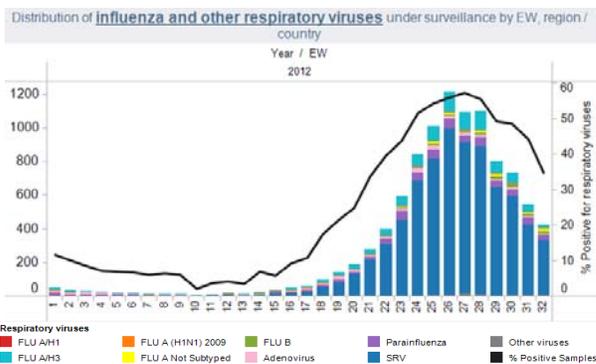
Chile

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)



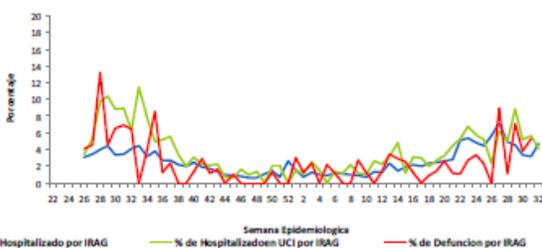
Fuente: Vigilancia Centinela ETI. EPIDEMIOLOGIA-MINSAL * Sin año 2009

Chile. Respiratory viruses distribution by EW, 2012

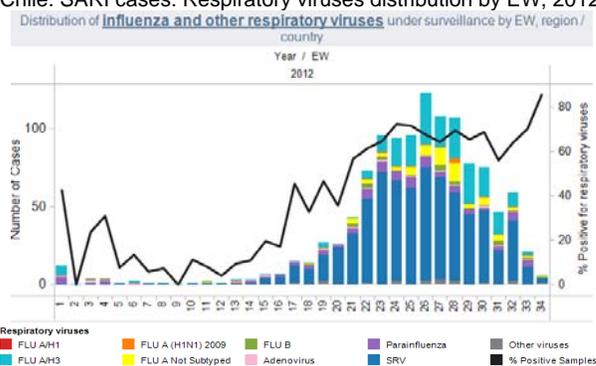


Chile. SARI cases (%) by EW, 2012

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



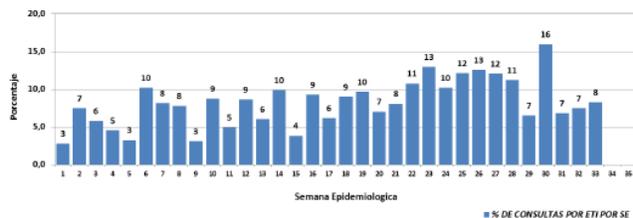
Chile. SARI cases: Respiratory viruses distribution by EW, 2012



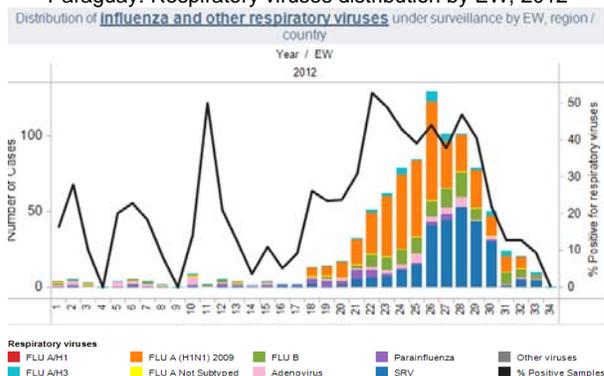
Paraguay

Paraguay. ILI consults (%) by EW, 2012

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

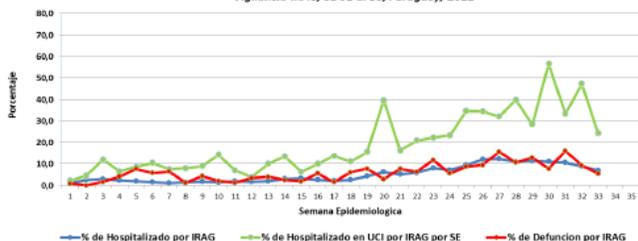


Paraguay. Respiratory viruses distribution by EW, 2012

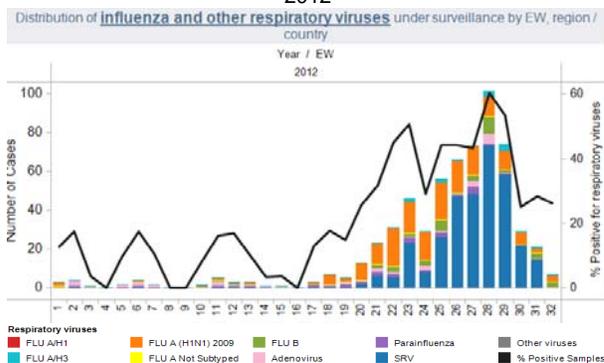


Paraguay. SARI cases (%) by EW, 2012

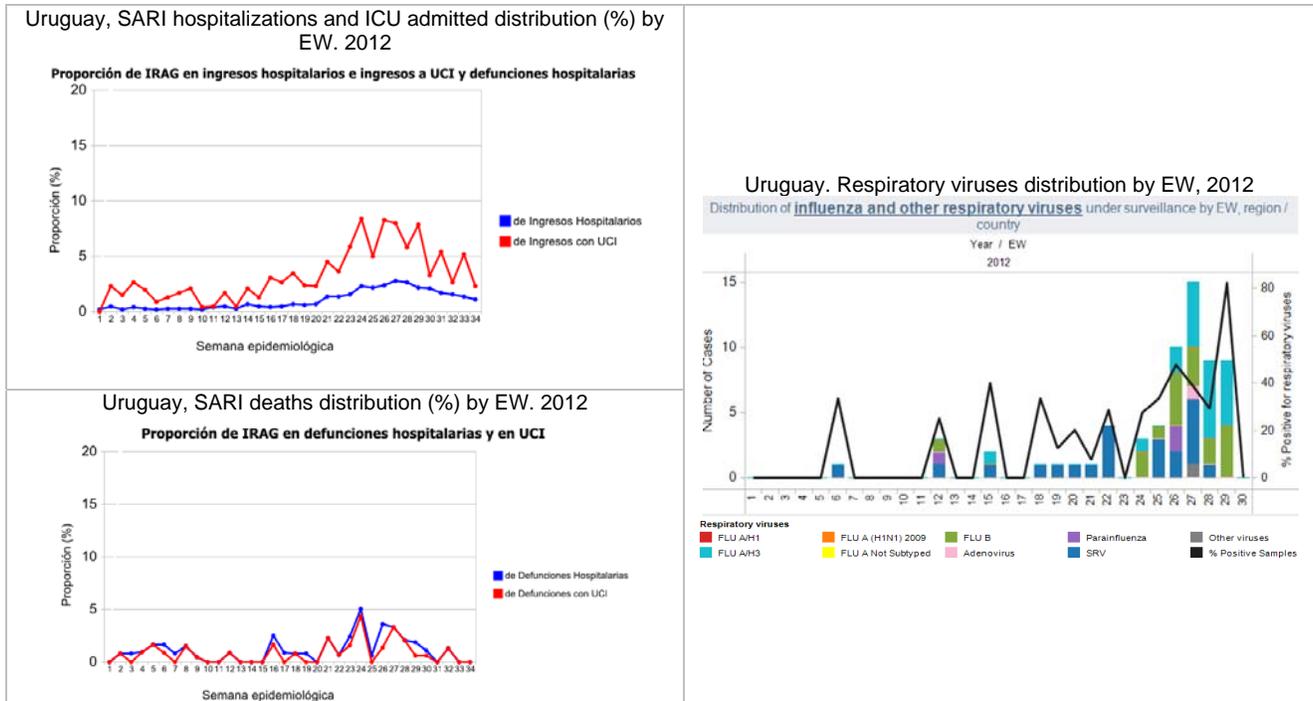
Proporción de Hospitalizados, Ingresos a UCI y Fallecidos por IRAG según semana epidemiológica, Vigilancia IRAG, SE 01 al 33, Paraguay, 2012



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



Uruguay



- 1 E.E.U.U. US Surveillance Summary. EW 33. Centers for Disease Control and Prevention
- 2 Peru. Sala de Situación de Salud. SE 33. Ministerio de Salud. Dirección General de Epidemiología
- 3 Argentina. Actualización situación de enfermedades respiratorias 2012. SE 34.
- 4 Brasil. Boletim Informativo SE 33. http://portalsaude.saude.gov.br/portalsaude/noticia/6184/785/boletim-informativo-_influenza.html
- 5 Chile. Informe de situación. SE 33. Available at: www.pandemia.cl
- 6 Paraguay. Boletín epidemiológico semanal SE 33. Available at: 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