



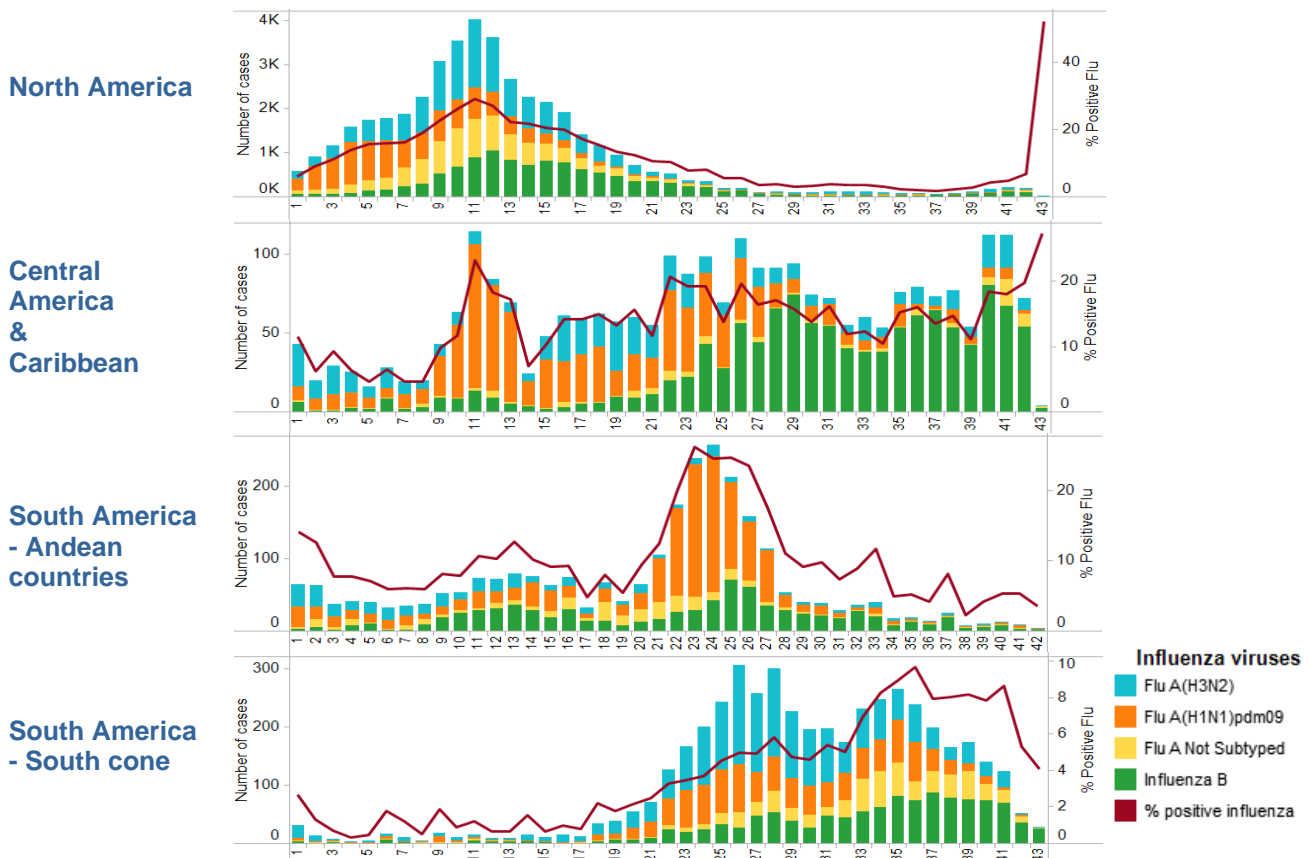
PAHO interactive influenza data: http://ais.paho.org/phis/viz/ed_flu.asp
 Influenza Regional Reports: www.paho.org/influenzareports

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.

1. WEEKLY SUMMARY

- **North America:** influenza activity remains low in the region. There was no novel influenza A virus infections in this EW. Influenza A(H3) (Canada, Mexico and United States), influenza A(H1N1)pdm09 (Canada) and influenza B (Mexico) were detected in the region, among influenza positive samples.
- **Central America and the Caribbean:** some countries reported high respiratory infection activity in this sub-region. In Guadalupe and Martinique, an epidemic of bronchiolitis was reported. High percentage of positive samples for respiratory viruses was reported in Costa Rica, Cuba, Jamaica and Nicaragua. Co-circulation of influenza B (CAREC, Costa Rica, El Salvador, Jamaica and Nicaragua), influenza A(H1N1)pdm09 (Jamaica, Costa Rica), influenza A(H3N2) (Barbados, Costa Rica and Nicaragua) was reported. Among other respiratory viruses, RSV remained as predominant circulating virus in several countries of the region.
- **South America:** Severe acute respiratory disease activity remains low and unchanged in the region. In Chile, ILI activity remained the alert zone in endemic channel. In the current EW, co-circulation of influenza B (Bolivia, Brazil, Chile), influenza A(H3) (Brazil and Bolivia) and influenza A(H1N1)pdm09 (Brazil) was observed among reported influenza detection. Among the other respiratory viruses, parainfluenza (Argentina, Chile and Perú) and RSV (Colombia) predominated.

2. THE AMERICAS: DISTRIBUTION OF INFLUENZA VIRUSES BY EW, 2012



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

North America

In Canada¹, in epidemiological week (EW) 42, 2012, influenza activity remained low and similar to the previous EW. In EW 42, the influenza-like illness (ILI) consultation rate increased (18/1,000 consultations) but was within expected levels for this time of year. In EW 42, among the total samples analyzed, the proportion of samples positive for influenza was low (0.9%); of the influenza cases, all were influenza A (47.1% influenza A(H3) and 5.9% influenza A(H1N1)pdm09). Concerning other respiratory viruses, the percent positive for rhinovirus increased and remained the highest (23.4%) as compared to other respiratory viruses.

In the United States², in EW 42, nationally, the proportion of ILI consultations (1.2%) was below the baseline (2.2%); and all 10 regions reported a proportion of outpatient visits for ILI below their region-specific baseline levels. Nationally, the proportion of deaths attributed to pneumonia and influenza for EW 42 (5.7%) was below the epidemic threshold for this time of year (6.3%). In EW 42, no influenza-associated pediatric deaths were reported. Among all samples tested during EW 42 (n=2,891), the percentage of samples positive for influenza (6.2%) increased as compared to the previous week. Nationally, among the positive samples, 58% were influenza A [among the subtyped influenza A viruses, 97.2% were influenza A(H3)]. No novel influenza A virus infections were reported during EW 42, and since July 12, 2012, a total of 310 infections with influenza A variant viruses (306 H3N2v viruses, 3 H1N2v viruses, and one H1N1v) have been reported from 10 states.

In México, according to laboratory data, in EW 43, 25 samples were tested showing a positivity to respiratory viruses of 52%. 10 positive samples associated to influenza B and 3 associated to influenza A(H3) were reported.

Caribbean

CAREC, in EW 42, received epidemiological information from 5 countries: Barbados, Belize, St. Vincent & the Grenadines, Trinidad and Tobago and Suriname. In EW 42, the proportion of severe acute respiratory infection (SARI) hospitalizations was 4.4% which is higher than what was reported during the prior week (3.2%). The SARI admission rate increased in 3 countries (Barbados, Belize and St. Vincent & the Grenadines). The highest rate of SARI was among children less than 6 months of age (17.6%). No SARI related deaths have been reported since EW 39, 2012. In the last 4 weeks (EW 39 to 42) the following viruses have been laboratory confirmed in CAREC member countries: influenza A(H1N1)pdm09 (Jamaica), influenza A(H3N2) (Barbados), influenza A not further typed (Barbados), influenza B (Barbados, and Jamaica), parainfluenza type 1 (Barbados) and respiratory syncytial virus (Barbados). To date in 2012, the overall percentage positivity for samples tested is 35%, with a 19% positivity for influenza.

In Cuba, in EW 42, according to laboratory data, the percentage of positive samples for influenza viruses was 1.5% among the tested samples (n=67) with only one influenza A not subtyped sample among the positives. RSV predominance was reported among the other respiratory viruses (43.3%).

In Jamaica for EW 42, the proportion of consultations for ARI was 10.2% (1.1% higher than the previous EW). The proportion of admissions due to SARI was 1.2 % (0.5% decrease when compared to the EW before). There was no SARI death reported for epidemiological week 42. According to laboratory data from EW 42, the percentage of positive samples for influenza virus was 44.4% among the tested samples (n=18). Influenza B was the only virus detected.

In the Dominican Republic, according to laboratory data from EW 43, among the samples analyzed (n=7), the percent positivity for respiratory viruses was 14,3% with only one adenovirus positive sample.

In French Guyana³, in EW 42, the number of ILI consultations has remained at a stable level, below the maximum level of expected cases. The circulation of other respiratory viruses different from influenza was reported.

In Guadeloupe, in EW 42, though the number of cases reported remained low and under the epidemic threshold, a separate epidemic of bronchiolitis was reported in the region.

In Saint-Martin and Saint-Barthélemy, in EW 42, the number of ILI cases reported remained low and below the epidemic threshold.

In Martinique, in EW42, the number of cases reported has been stable during the last three EWs. A separate epidemic for bronchiolitis was reported in the region in the beginning of October, peaking to five times the

number of expected cases in mid-October, and decreasing at the end of the month, but still high and above the expected amount for the season and reportedly the highest number in the past two years. RSV has sporadically circulated throughout the year, with a sharp increase in the recent weeks as well

Central America

In Costa Rica, in EW 42, according to laboratory data, among all samples tested (n=136), the percentage of positive samples for respiratory viruses (42.6%) remained similar to the previous EW. Among influenza viruses, influenza A was more prevalent than influenza B. Among the influenza A subtyped, mainly influenza A(H1N1)pdm09 was detected, followed by and influenza A(H3N2). Among other respiratory viruses, RSV increased in the last weeks, and showed its highest level of activity since the beginning of the year.

In El Salvador⁴, according to data provided by the Ministry of Health, nationally, in EW 43, the number of ARI cases was lower than the previous EWs, but higher as compared to the same period in 2011; and the number of pneumonia cases was lower than the previous EWs, and lower as compared to the same period in 2011. The highest percentage of cases was reported in the children 1-4 years old group. Regionally, the highest pneumonia incidence rates were observed in San Vicente, San Miguel y La Unión. According to laboratory data, through EW 42, of the total samples analyzed (n=39), the percentage of positive samples for respiratory viruses was 33%. Among the influenza viruses, influenza B has been the predominant virus in the last 3 months. Among the other respiratory viruses, adenovirus and parainfluenza were reported in the last weeks.

In Guatemala, according to laboratory data, in EW 41, of the total samples analyzed (n=21), the percentage of positive samples for respiratory viruses was 42.8%, associated mainly to the detection of RSV. Low circulation of influenza was observed.

In Honduras, according to laboratory data, in EW 42, of the total samples analyzed (n=8), the percentage of positive samples for respiratory viruses was 12%, with low detection of respiratory viruses, mainly RSV.

In Nicaragua, in EW 42, according to laboratory data, the percentage of positive samples for respiratory viruses was 50% among all samples tested (n=81), which was similar to the previous EW. Co-circulation of influenza A(H3N2) and influenza B have been reported in the last weeks. Detection of RSV has been decreasing since EW 33.

In Panama, in EW 42, according to laboratory data, of the total samples analyzed (n=48), the percentage of positive samples for respiratory viruses was 64.6%, mainly associated to RSV. During the last weeks, low influenza activity was reported.

South America – Andean

In Santa Cruz, Bolivia, according to data from CENETROP in EW 42, only one sample was positive (influenza A H3N2) among the 20 tested samples for respiratory viruses. In the Department of Santa Cruz, the proportion of SARI hospitalizations was 12%, which was lower than the value observed in the previous EW; and one SARI-death was reported in this EW. In the Department of La Paz, according to INLASA laboratory data, in EW 42, 4 positive samples (2 for influenza B and 2 for influenza A H3N2) were reported among 26 tested samples. In La Paz, the proportion of SARI-hospitalizations reached 6.1%, with no significant changes with respect to the previous EW and no SARI-deaths were reported in this EW.

In Colombia, at the national level, the proportion of SARI hospitalizations showed an increase in the last 3 EWs, reaching 20.4% in EW 42. According to laboratory data from the national laboratory (INS) which includes data from the Departments of Antioquia, Bogota and Nariño, in EW 41 percent of positive samples for respiratory viruses was 8.5% among tested samples (n=47), with no significant change with respect to previous EW and with predominance of RSV (4/4) among the positive samples.

In Ecuador, according to laboratory data at the national level, in EW 42, low percentage of positivity (8.2%) among the 49 tested samples was reported, as it was in last EWs, but higher than previous EW. According to the SARI surveillance system from sentinel units, the proportion of hospitalizations (2%) in EW 41 showed no significant changes with respect to previous EW and no SARI-deaths were reported in this EW.

In Peru, at the national level and in EW 41, the cumulative number of pneumonias in children under 5 years reached a rate of 88.5/10,000 population remaining in the safety zone of endemic channel. At subnational level, in Department Madre de Dios, pneumonia reports in children under 5 years old remain in epidemic zone of endemic channel but with a rate significantly lower than what was reported in previous EW. According to laboratory data, in EW 42, at the national level, the percentage of positive samples for

respiratory viruses among samples tested (n=75) was 9.3%, which was lower with respect to previous EW, with a predominance of parainfluenza virus (71%) among the positive samples.

South America –Southern Cone & Brazil

In Argentina⁵, at the national level, the SARI surveillance estimation of cases for EW 42 remained under the reported values for 2010 and 2011. At the sub-national level, some provinces like Formosa and Tucumán showed cumulative rates higher than the expected values for the period. According to laboratory data in EW 42, the percentage of positive samples for respiratory viruses was 24.2% with no significant changes with respect to the previous EWs, among the analyzed samples (n=211) with a predominance of parainfluenza (31%) among the positive samples.

In Brazil⁶, in EW 42, the percentage of positivity for influenza viruses was 20.37% among the tested samples (n=162), which was lower as compared to the previous EW and with detection of influenza A(H3) (17/33), influenza A(H1N1)pdm09 (14/33) and influenza B (2/33) among the positive samples.

In Chile, in EW 42, at the national level, ILI activity was 9.0/100,000 population with no significant change with respect to previous EW and remaining in the alert zone of the endemic channel. According to laboratory data, at the national level and in EW 42, the percentage positivity for respiratory viruses was 17.2% among the tested samples (n=697), with no significant change with respect to previous EW, and with a predominance of parainfluenza (29%) and influenza B (20%). In SARI surveillance, the proportion of hospitalizations, UCI admitted and SARI-deaths continue to decrease.

In Paraguay, in EW 42, the national ILI rate (100.2/100,000 population) and the proportion of ILI consultations (5%) in sentinel units showed no significant changes as compared to the previous EW. According to laboratory data in EW 42 at the national level, 49 samples were tested for respiratory viruses with percentage of positive samples of 10.2%, which was lower with respect to previous EW. In the SARI surveillance system in sentinel units, the proportion of hospitalizations for EW 42 was 5.1%, with no significant change with respect to the previous EW. No SARI-death was reported for this EW.

In Uruguay⁷, at the national level, in EW 43, in the SARI surveillance system, the proportion of hospitalizations and ICU admissions did not show significant changes with respect to prior EWs. No SARI-deaths were reported in the same EW.

4. SPECIAL TOPICS:

Update of human infection with avian influenza A(H5N1) virus

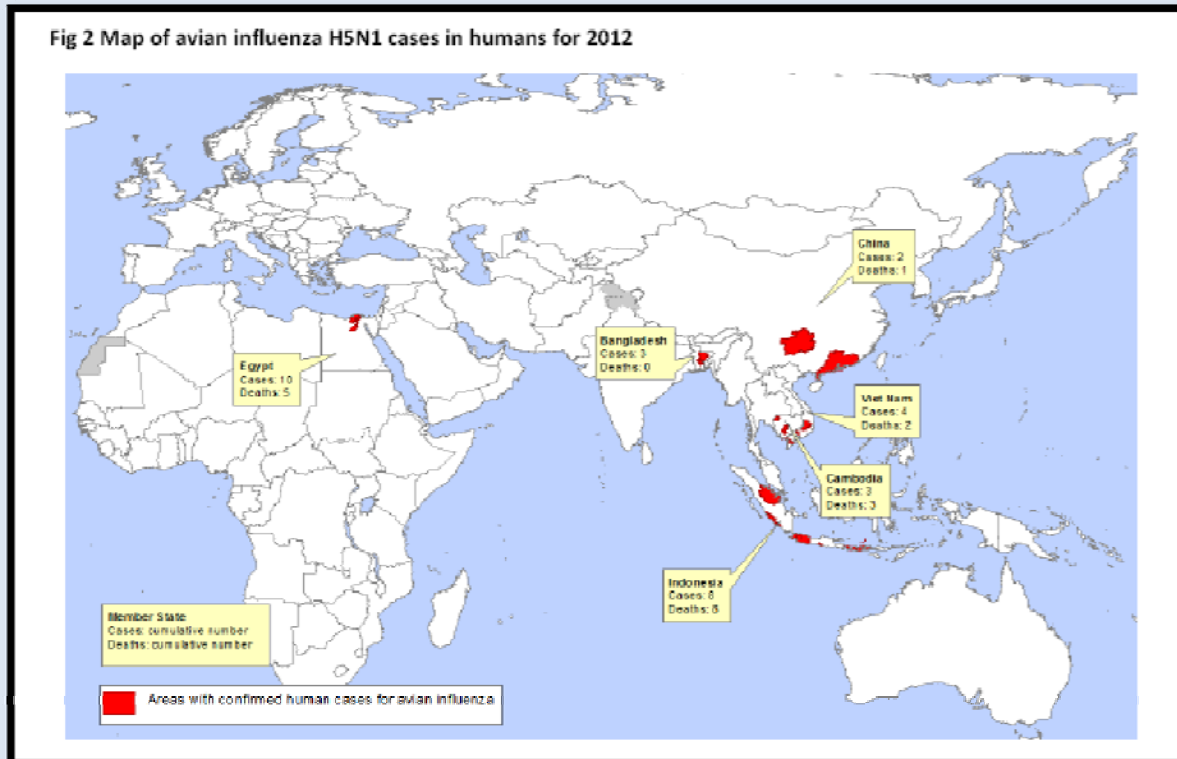
Source: WHO. Influenza at the human-animal interface. Summary and assessment as of 1 October 2012.

Available at:

http://www.who.int/influenza/human_animal_interface/Influenza_Summary_IRA_HA_interface_01Oct12.pdf

From 2003 through 1 October 2012, 608 laboratory-confirmed human cases with avian influenza A(H5N1) virus infection have been officially reported to WHO from 15 countries, of which 359 died.

Since January 2012, 30 human cases of influenza A(H5N1) virus infection have been reported to WHO.



Influenza A(H5N1) vaccine

Due to the highly pathogenic nature of the virus, new vaccines are being developed for influenza A (H5N1). On the WHO web page, the most up to date review has been published* of the influenza A(H5N1) activity and characterization, as well as the current status of development for candidate vaccine viruses for pandemic preparedness purposes. Comparisons of the candidate vaccine viruses with respect to antigenicity and their relationship to newly emerging viruses are ongoing and are reported periodically by WHO.

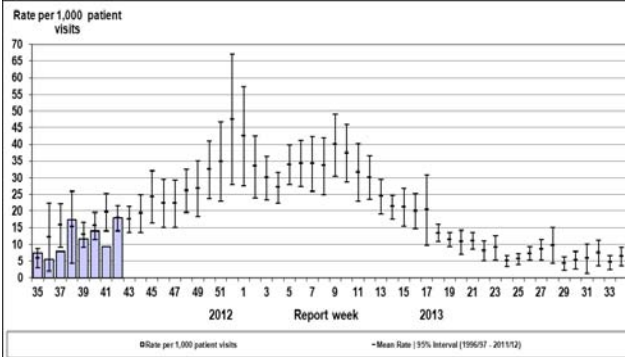
* http://www.who.int/influenza/vaccines/virus/characteristics_virus_vaccines/en/index.html

4. GRAPHS

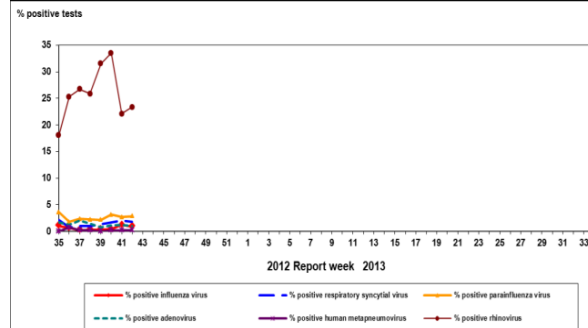
North America

Canada

Canada. ILI rate distribution by SE, 2012-2013



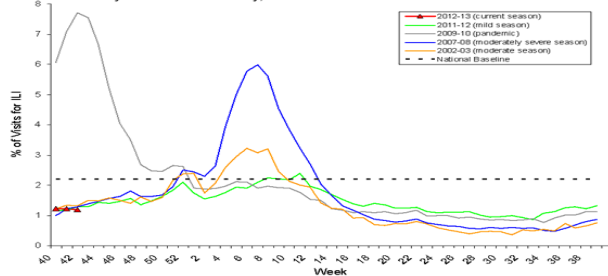
Canada. Positive samples for respiratory viruses by SE, 2011-12 2012-2013



United States

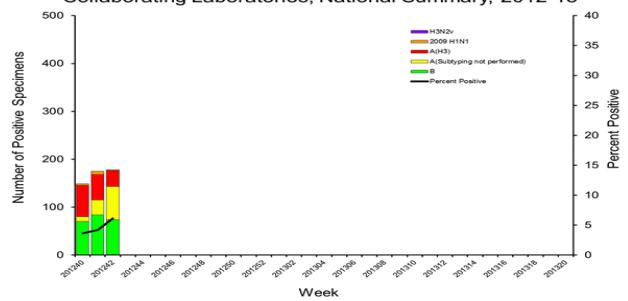
E.E.U.U. ILI Distribution (%) by EW, 2012

Percentage of Visits for Influenza-like Illness (ILI) Reported by the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), Weekly National Summary, 2012-13 and Selected Previous Seasons



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

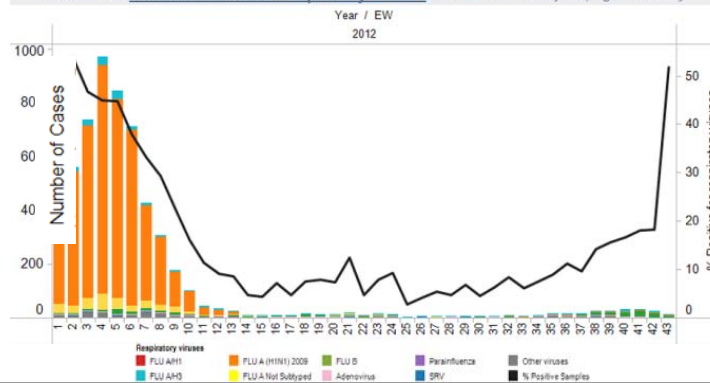
Influenza Positive Tests Reported to CDC by U.S. WHO/NREVSS Collaborating Laboratories, National Summary, 2012-13



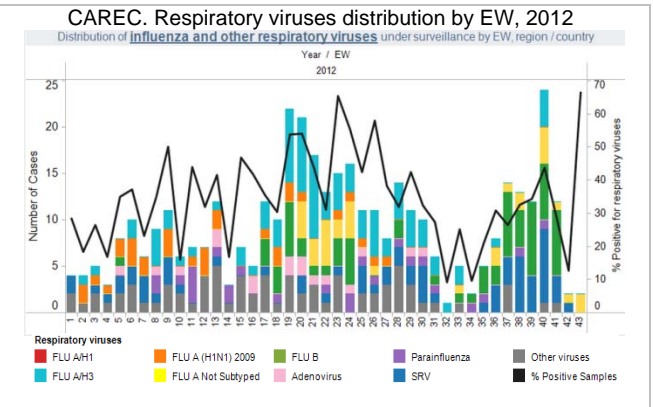
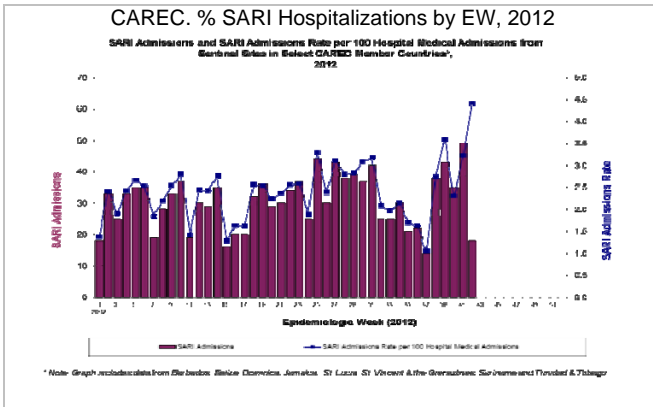
Mexico

Mexico. Respiratory viruses distribution by SE, 2012

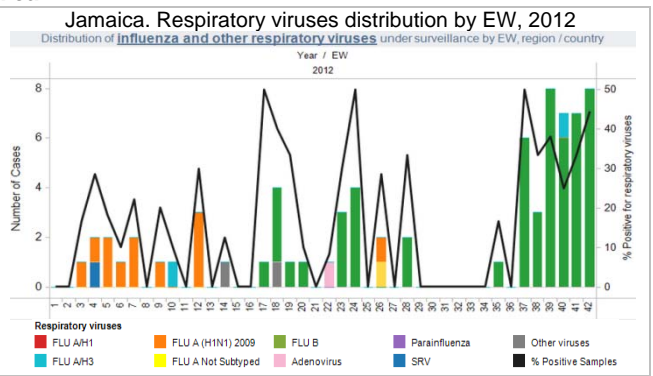
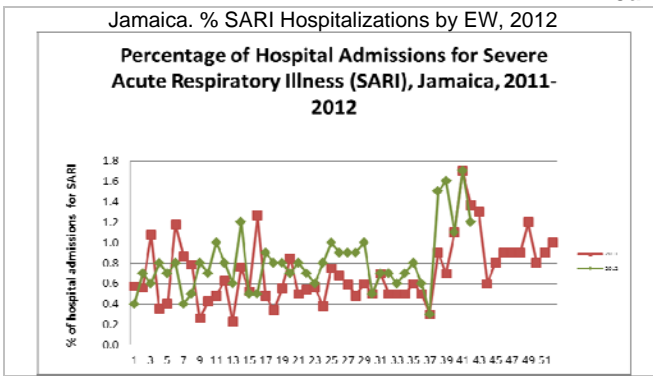
Distribution of influenza and other respiratory viruses under surveillance by EW, region / country



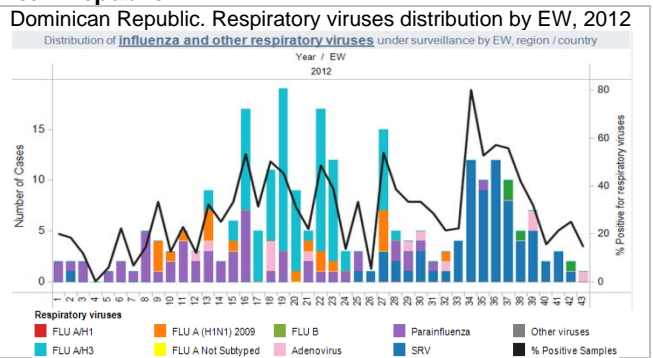
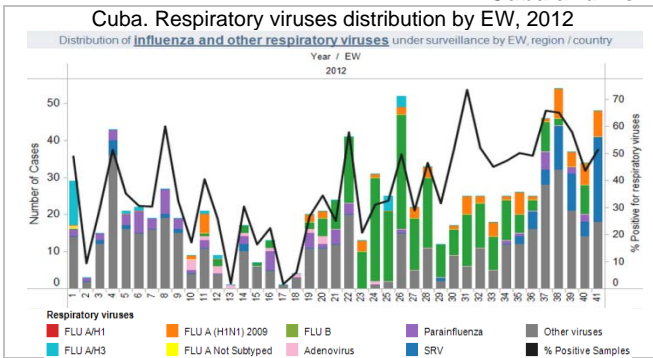
CAREC



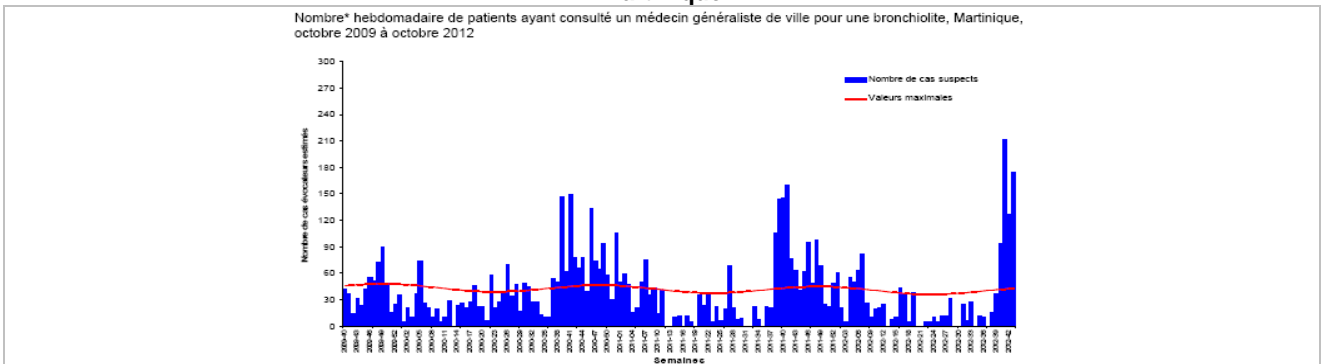
Jamaica



Cuba and Dominican Republic

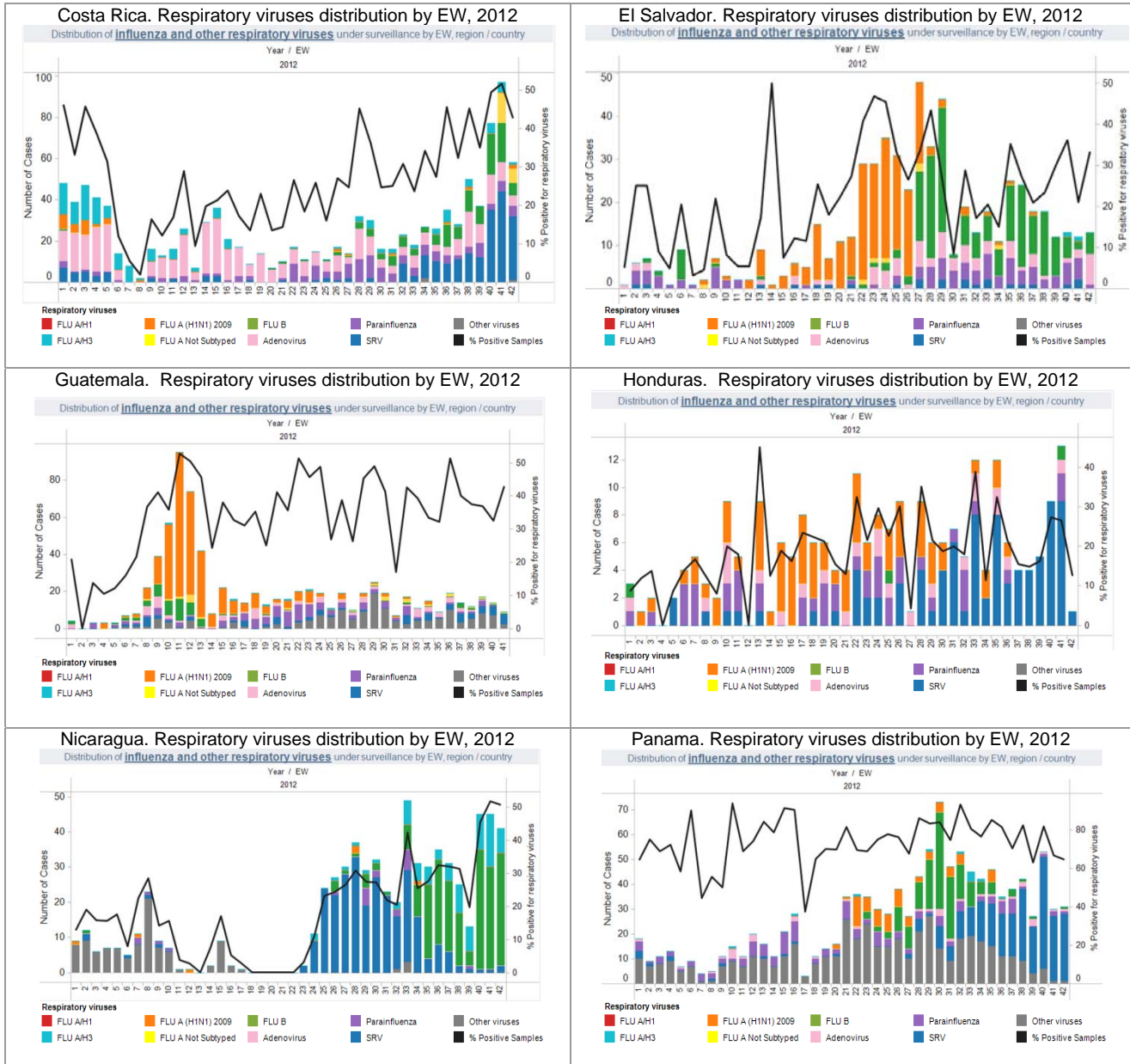


Martinique



Central America

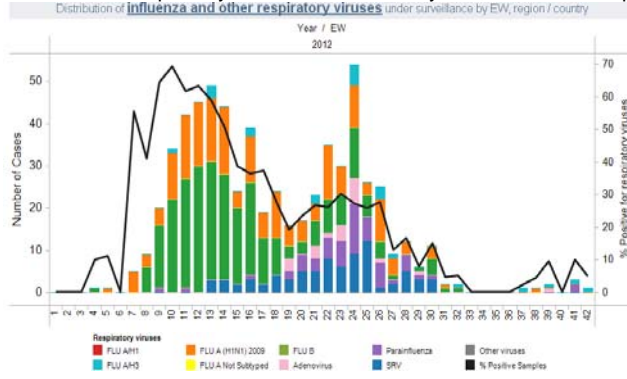
Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama



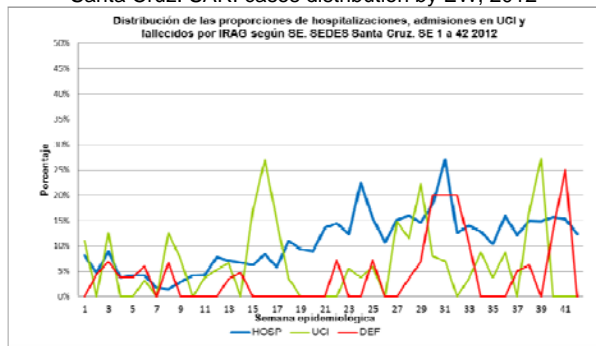
South America - Andean

Bolivia

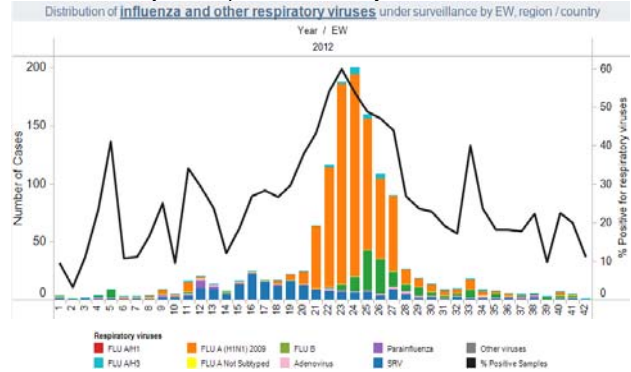
Santa Cruz. Respiratory viruses distribution by EW, 2012-Cenetro



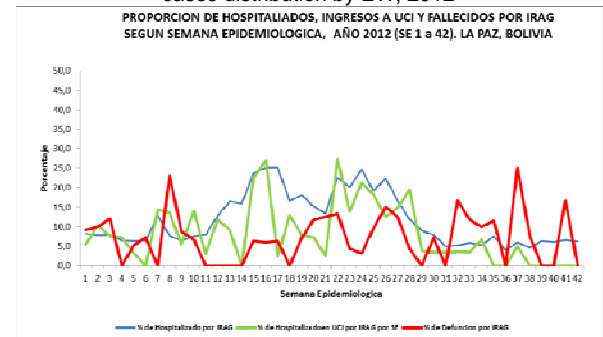
Santa Cruz. SARI cases distribution by EW, 2012



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

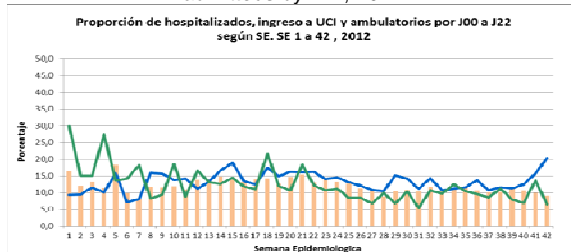


La Paz, Oruro, Potosí, Tarija, Chuquisaca, Pando y Beni. SARI cases distribution by EW, 2012

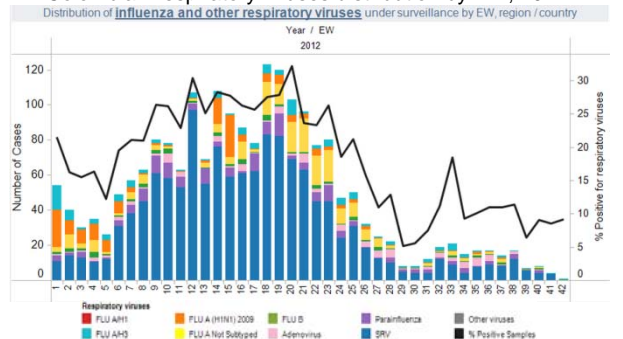


Colombia

Colombia. Proportion of ambulatory, Hospitalizations and ICU admitted by EW, 2012

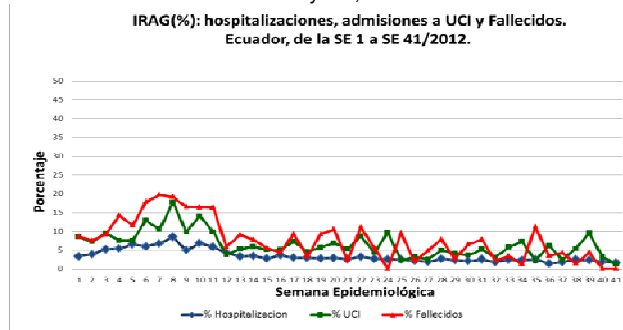


Colombia. Respiratory viruses distribution by EW, 2012

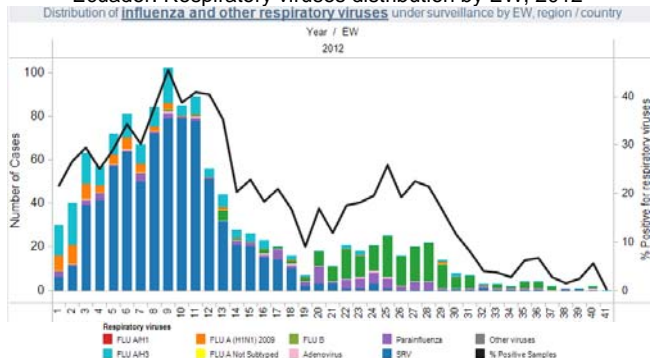


Ecuador

Ecuador. Proportion of SARI Hospitalizations, ICU admitted and deaths by SE, 2012

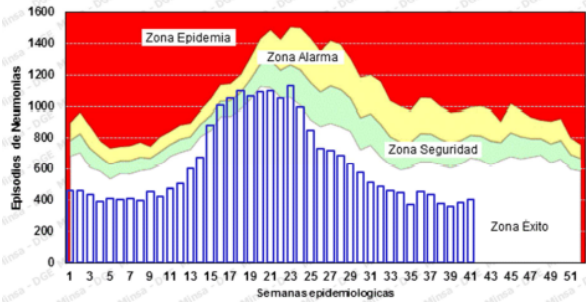


Ecuador. Respiratory viruses distribution by EW, 2012

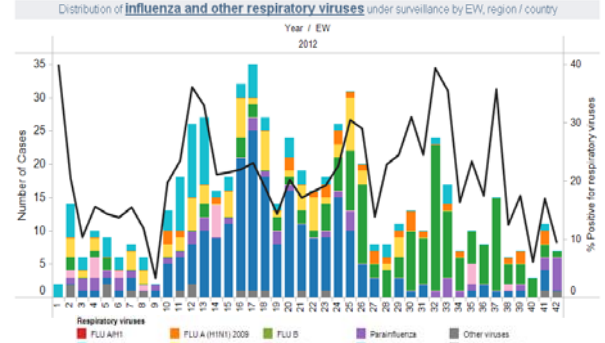


Peru

Peru. Endemic channel of pneumonia, 2012
Canal endémico de neumonías en menores de 5 años, Perú 2012*



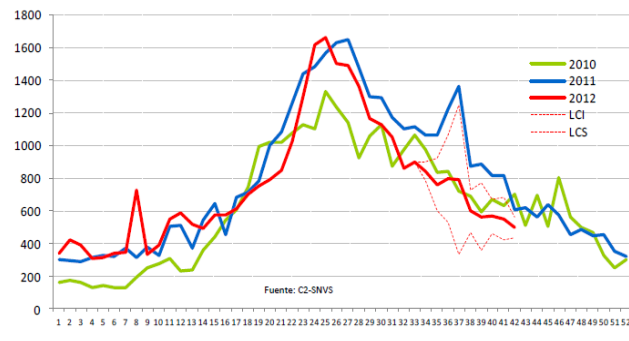
Perú. Respiratory viruses distribution by EW, 2012



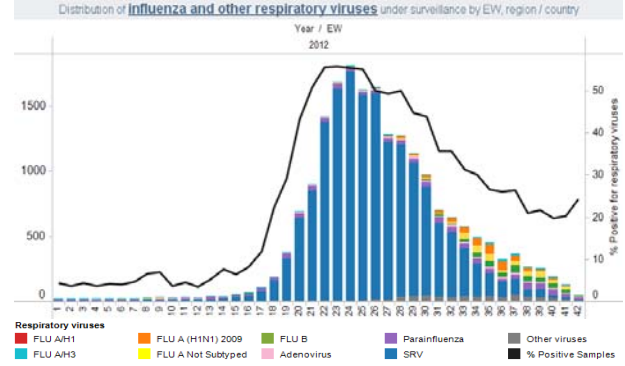
South America, Southern cone

Argentina

Argentina. SARI Hospitalizations distribution by EW, 2010 - 2012

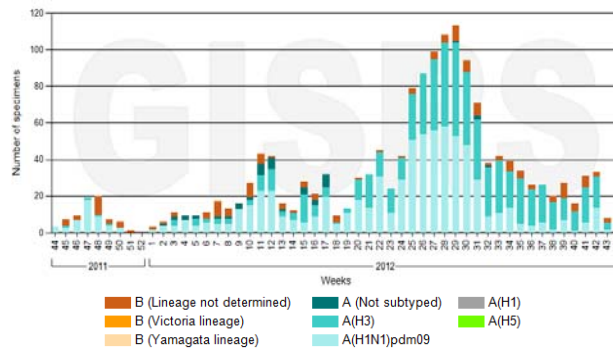


Argentina. Respiratory viruses distribution by EW, 2012



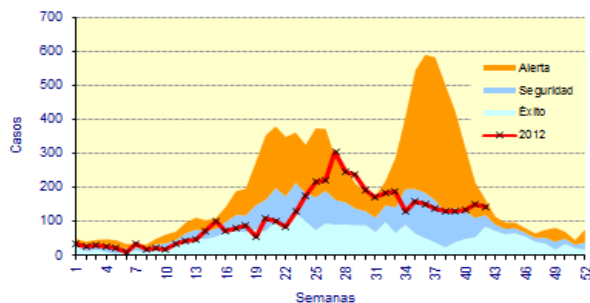
Brazil

Brazil. Influenza viruses distribution by EW, 2011 - 2012



Chile

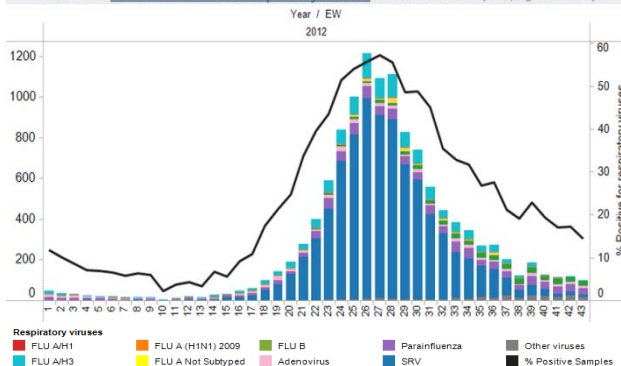
Chile. ETI endemic channel, 2012
Canal endémico de Enfermedad Tipo Influenza según semana epidemiológica 2006-2011*, Chile, 2012 (Semana 1-42)



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

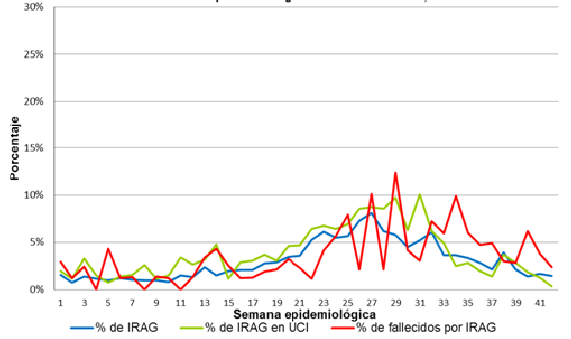
Chile. Respiratory viruses distribution by EW, 2012

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



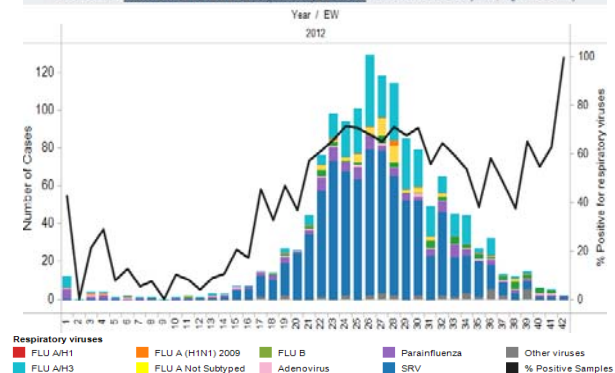
Chile. SARI Hospitalizations distribution by EW, 2010 - 2012

Distribución de las proporciones de hospitalizaciones, admisiones en UCI y fallecidos por IRAG según SE. Chile. SE 1 a 42, 2012



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

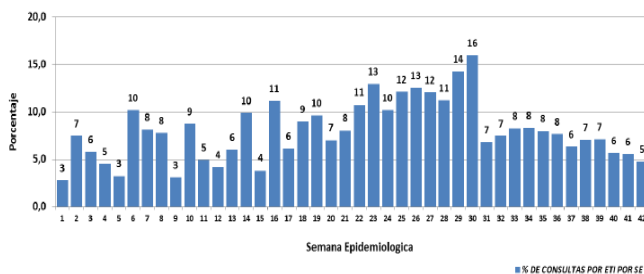
Distribution of influenza and other respiratory viruses under surveillance by EW, region / country



Paraguay

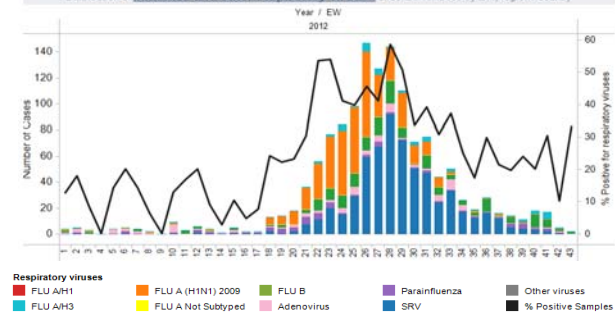
Paraguay. ILI consultations (%) by EW, 2012

Proporción de consultas por ETI según semana epidemiológica del 1 al 42 Paraguay, 2012



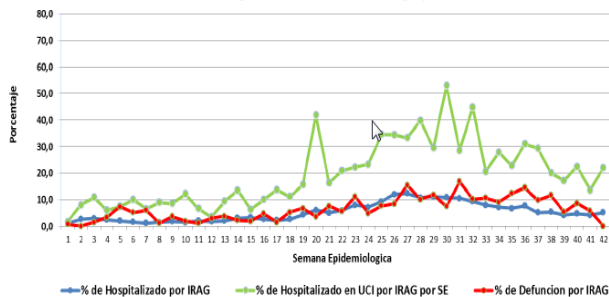
Paraguay. Respiratory viruses distribution by EW, 2012

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



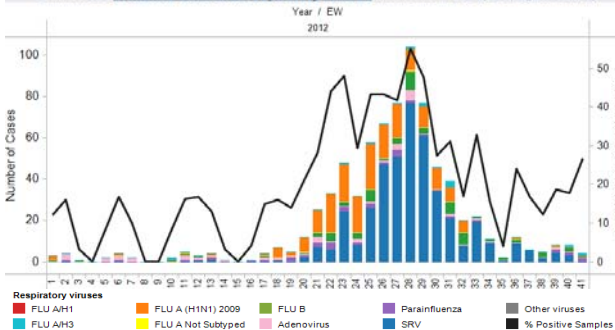
Paraguay. SARI cases (%) by EW, 2012

Proporción de Hospitalizados, Ingresos a UCI y Fallecidos por IRAG según semana epidemiológica, Vigilancia IRAG, SE 01 al 42, Paraguay, 2012

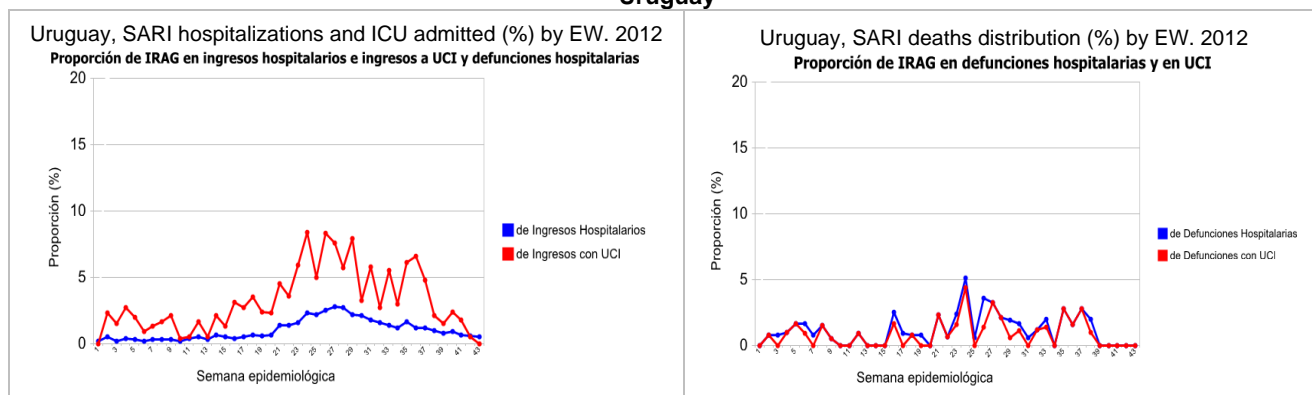


Paraguay. SARI Cases: Respiratory viruses distribution by EW, 2012

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



Uruguay



1 FluWatch Report. EW 42. Available at <http://www.phac-aspc.gc.ca/fluwatch/>

2 US Surveillance Summary. EW 42. Centers for Disease Control and Prevention

3 Surveillance de la bronchiolite, Le point épidémiologique — N° 03 / 2012. Institut de Veille Sanitaire (10/31/2012)

4 El Salvador. Boletín epidemiológico SE 42 de 2012. MINSAL.

5 Argentina. Actualización situación de enfermedades respiratorias 2012. SE 42.

6 Brazil. Influenza Laboratory Surveillance Information from GISRS. Available in:

<http://gamapserver.who.int/gareports/Default.aspx?ReportNo=1>

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