



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 September 6th, 2012, a total of 296 infections with influenza A (H3N2) variant (H3N2v) viruses have been reported in 10 states, with one death reported. Also in the U.S. 3 cases with influenza A(H1N2) variant (H1N2v) have been reported.
- 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 Jamaica, El Salvador and Nicaragua and influenza A(H1N1)pdm09 in Cuba and French Guiana. Increased detection of RSV continues in the last weeks in Cuba, Dominican Republic, Guatemala and Honduras.
- In South America, severe acute respiratory disease activity remains with decreasing trend (Argentina, Bolivia and Paraguay). Co-circulation of influenza viruses was observed with varying prevalence. Among the other respiratory viruses predominance of RSV was observed.

Epidemiologic and virologic influenza update

North America

In the United States¹ in EW 35, 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 35 (5.6%) was below the epidemic threshold for this time of year (6.5%). In EW 35, no pediatric deaths associated with influenza were reported. Among all samples tested during EW 35 (n=1075), the percentage of samples positive for influenza (2.98%) decreased as compared to the previous week. Nationally, among the positive samples, 81.3% were influenza A [among the subtyped influenza A viruses, mainly influenza A(H3)]. From July 12 through September 6, 2012, a total of 296 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 [102], Pennsylvania [11], West Virginia [3], and Wisconsin [18]). So far during the current outbreaks, 16 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. Three infections with influenza A (H1N2) variant (H1N2v) virus have been detected in Minnesota in patients who became ill after contact with swine. One patient was hospitalized, but all have recovered from their illness. Confirmatory testing at CDC identified H1N2v with the matrix gene from the influenza A(H1N1)pdm09 virus in specimens collected from all three patients. Although cases of H1N2v have been detected previously, the current cases mark the first reports of H1N2v with the matrix gene from the 2009 H1N1 virus.

In Mexico, according to laboratory data, in EW 35, of the samples analyzed (n=21), no respiratory viruses were detected.

Caribbean

CAREC, in EW 35, received epidemiological information from 7 countries: Barbados, Belize, Dominica, Jamaica, St. Lucia, St. Vincent & the Grenadines and Trinidad and Tobago. In EW 35, the proportion of severe acute respiratory infection (SARI) hospitalizations was 1.6% which is lower than what was seen in the prior week (2.1%). The SARI rate decreased or remained the same in 6 of 7 countries that reported data in EW 35. No SARI-related deaths were reported in EW 35. In the last 4 weeks (EW 32 to 35) the following viruses have been laboratory confirmed in CAREC member countries: influenza B (Barbados, Dominica &

Jamaica), and SRV (Barbados). To date in 2012, the overall percentage positivity for samples tested is 35%, with 18% positivity for influenza.

In French Guiana, up to the EW 35, according to data provided by the Interregional Cell of Epidemiology of the French Antilles-Guyana (Cellules interrégionales d'épidémiologie, Cire Antilles-Guyana), the weekly number of influenza-like illness (ILI) continued to decrease since EW 31, confirming the end of the epidemic. In total, 18,750 ILI consultations have been estimated in this epidemic that lasted 24 weeks from the beginning of February to mid-July. According to data provided by the Institute Pasteur of Guyana, during the epidemic, among the total samples tested (n=125), the percentage of positive samples for respiratory viruses was 51%, showing a co-circulation of virus influenza A(H1N1)pdm2009, influenza A(H3N2) and influenza B. Influenza B has been the predominant virus since July.

In Jamaica for epidemiological week 35, sentinel site data showed that the proportion of consultations for Acute Respiratory Illness (ARI) was 3.5% which was 0.5% higher than the previous week. The proportion of admissions due to Severe Acute Respiratory Illness (SARI) was 0.8%; a 0.1% increase when compared to the week before. There were no SARI deaths reported for EW 35 and one case of Influenza B was detected in EW 35.

In Cuba, according to laboratory data in EW 35, among the samples tested (n=52), the percent of positive samples for respiratory viruses was 50% and the percent of positive samples for influenza was 21%, among all samples analyzed. Influenza A(H1N1)pdm09, Influenza B, parainfluenza, RSV and other viruses had been detected.

In the Dominican Republic, according to laboratory data from EW 36, among the samples analyzed (n=21), the percent positivity for respiratory viruses was 57% with no detection of influenza viruses this week. RSV has been the predominant virus detected in the last 3 weeks.

Central America

In El Salvador², according to data provided by the Ministry of Health, in EW 35, the numbers of ARI and pneumonia cases were slightly lower than the previous EW and remained within the expected level for this time of year. In terms of age, the highest proportion of ARI and pneumonias were reported in children less than 5 years of age. In the regional level, the departments of San Salvador and San Vicente reported ARI level above their epidemic threshold. 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%, being influenza B the predominant virus, followed by parainfluenza, adenovirus, and RSV.

In Guatemala, according to laboratory data, in EW 35, among all samples tested (n=34), the percentage of positive samples to respiratory viruses was of 35%, similar to the previous week. Influenza A not subtyped and RSV were the predominant viruses in circulation.

In Honduras, according to laboratory data, in EW 35, among all samples tested (n=13), only 3 samples were positive to respiratory viruses. Influenza A(H1N1)pdm09 and RSV have been the predominant viruses in the last weeks.

In Nicaragua, in EW 35, according to laboratory data, even though the percentage of positive samples for respiratory viruses remained similar to the previous weeks, a progressive increase of influenza B in the last 3 weeks was reported, with co-circulation of influenza A(H3N1). In EW 35, among all samples tested (n=83), the percentage of positive samples to influenza was 26.5%, which was higher than the previous week (12.8%).

In Panama, in EW 35, according to laboratory data, among all samples tested (n=28), the percentage of positive samples for respiratory viruses was 78%, predominating RSV. Among influenza viruses, influenza B has been the predominant influenza virus circulating during the last 10 weeks, with decreasing trend since its peak in EW 30.

South America – Andean

In Santa Cruz, Bolivia, according to data from CENETROP laboratory, in EW 35, no positive samples were detected for respiratory viruses among the 20 tested samples. In Santa Cruz, a decreasing trend was observed, reaching 6.6% 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 23.8% in EW 35 among the 21 tested samples with predominance of influenza B (3/5) among the positive samples. In La Paz, in EW 35, a slight increase in the proportions of hospitalizations (8.5%) was observed as compared to previous week. . 3 SARI-deaths were reported this week.

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>

In Colombia, according to laboratory data, in EW 35, among all samples tested (n=17), the percentage of positive samples to respiratory viruses was of 11.7%, being detected RSV. No influenza viruses were detected.

In Ecuador, according to laboratory data, nationally and in EW 35, the percentage of positive samples for respiratory viruses among samples tested for SARI surveillance (n=36) was 11% with a predominance of influenza B (3/4) among the positive samples.

In Peru, according to laboratory data, nationally and in EW 35, among tested samples (n=43), the percentage of positive samples for respiratory viruses among samples tested was 23.3%, higher than previous week, with predominance of influenza B virus (5/10).

South America –Southern Cone

In Argentina³, at the national level, endemic channels showed that the number of ILI and pneumonia cases in EW 35 remained with a decreasing trend but in safety zone. The number of SARI cases in EW 35 was lower than the observed in 2010 and 2011. At the sub-national level, provinces of San Luis (Cuyo region), Tucuman (Norwestern region), Santa Cruz and Río Negro (Southern region) continued to report higher SARI rates than what was expected for this time of the year. According to laboratory data, the percentage of positive samples for respiratory viruses was lower than the previous EW, reaching 25.3% among the analyzed samples (n=487) with a predominance of influenza B (25%) and influenza A(H1N1)pdm09 (21%) among the positive samples.

In Chile, according to laboratory data, nationally and in EW 35, positivity percentage to respiratory viruses was of 26.5% among the tested samples, which was lower than the previous week, with a predominance of RSV (58.5%), parainfluenza (11%) influenza A(H3N2) (9%) and influenza B virus (8.7%) among the positive samples. According to the SARI surveillance system, in the current EW, 36 samples were tested showing a positivity to respiratory viruses of 50% with predominance of RSV (78%) among the positive samples.

In Paraguay⁴, at the national level, in EW 35, the proportion of ILI consultations (8%) showed no significant changes with respect to previous EW. The ILI rate (129.6/100,000 population) showed a decreasing trend in the last 7 EWs. According to lab data, at the national level in EW 35, , the percentage of positive samples to respiratory viruses was 21.6% among all the samples tested (n=51), with no significant changes as compared to the prior EW and with predominance of RSV (7/11) among the positive samples. In the SARI surveillance system, the proportion of hospitalizations (5.8%, 107/1850) remained with decreasing trend. Since the beginning of the year, a total of 189 SARI-deaths were reported of which 18 were due to influenza A(H1N1)pdm09, 10 due to RSV and 3 due to other viruses. For EW 35, among the samples analyzed from SARI cases (n=10), just one positive sample was founded, it was positive to RSV.

In Uruguay⁵, at the national level, in EW 36, in the SARI surveillance system, the proportion of hospitalizations did not show significant changes with respect to prior EW while ICU admissions showed a slight increase.

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:

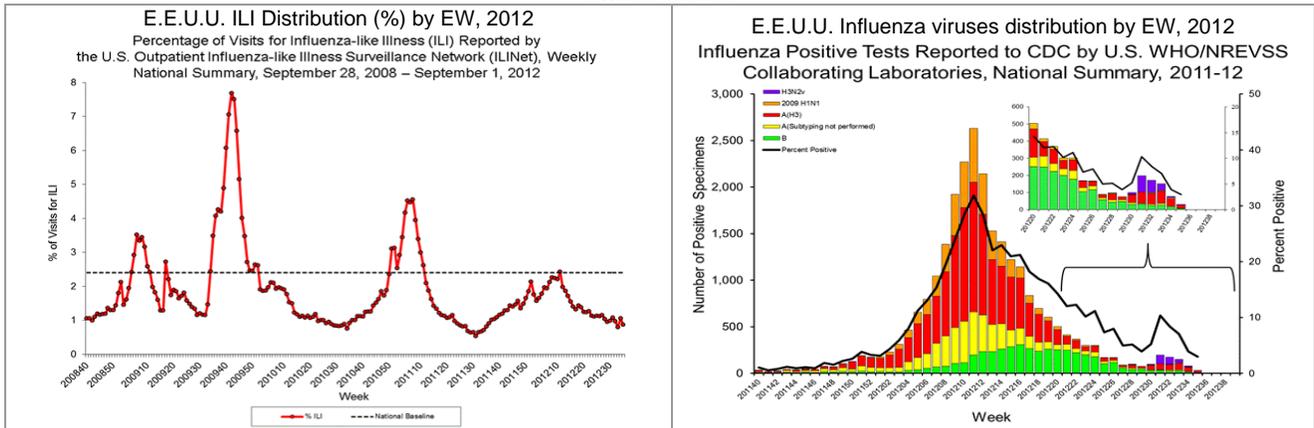
| CASE | Inf A | Inf A pdm | H3 | H1 | H1pdm | B | RESULT |
|------|-------|-----------|----|----|-------|---|-----------------------------------|
| 1 | + | - | + | - | - | - | Influenza A(H3N2) |
| 2 | + | + | + | - | - | - | Influenza A(H3N2)v ¹ |
| 3 | + | + | - | - | + | - | Influenza A (H1N1)pdm09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

¹ Send sample to CDC

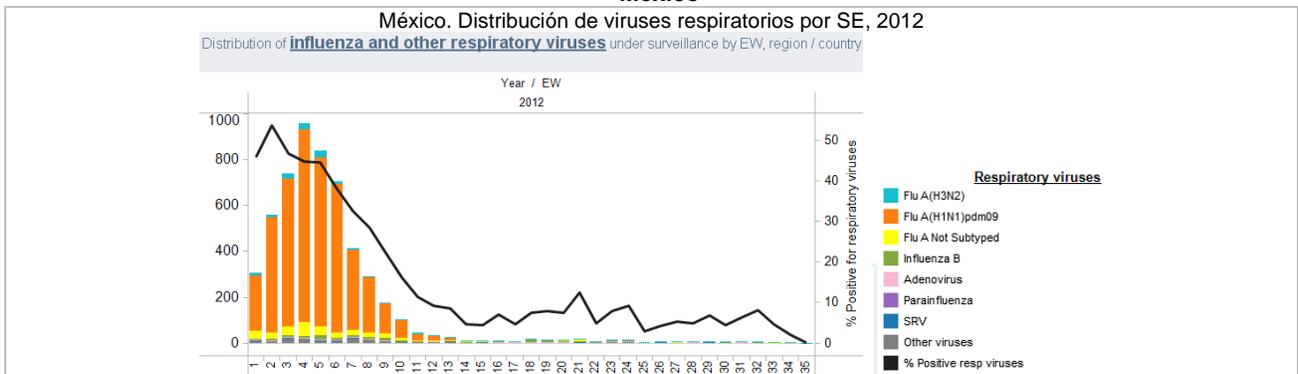
Graphs

North America

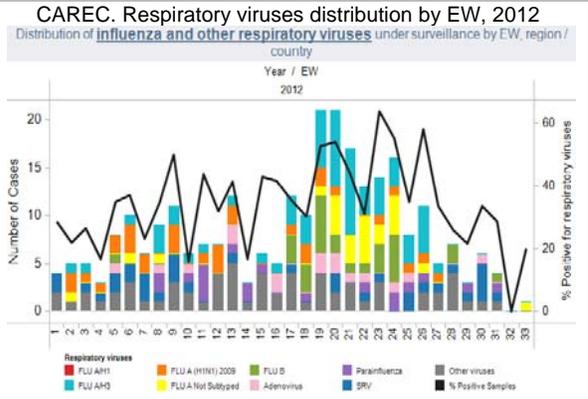
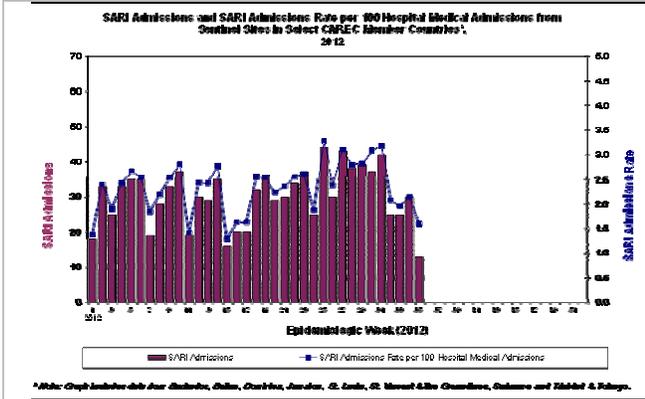
United States



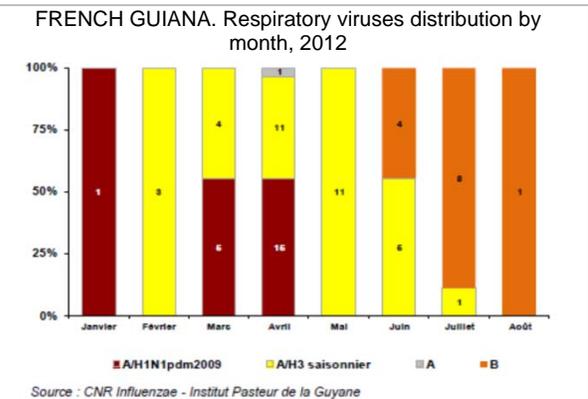
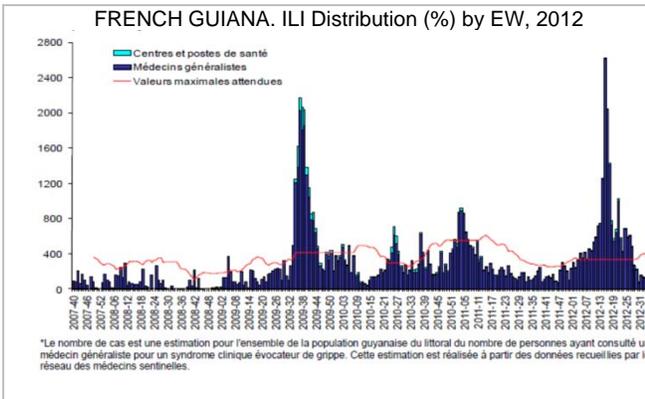
México



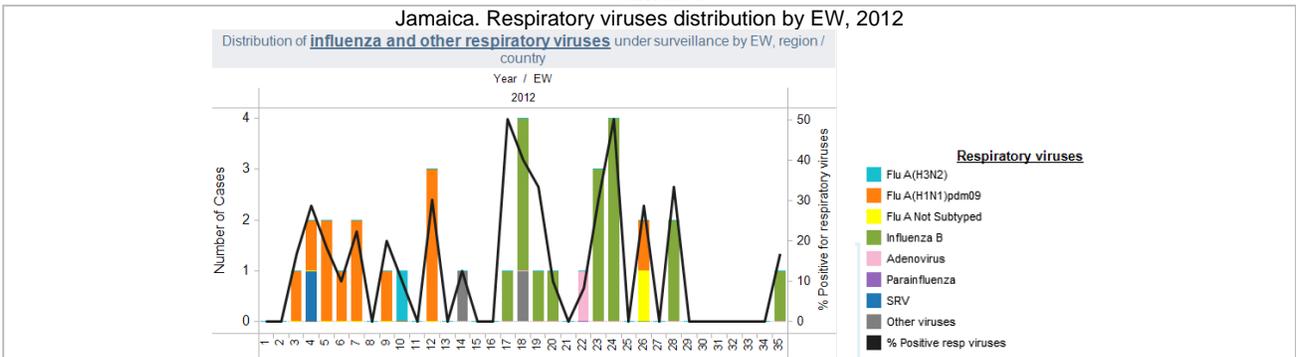
CAREC



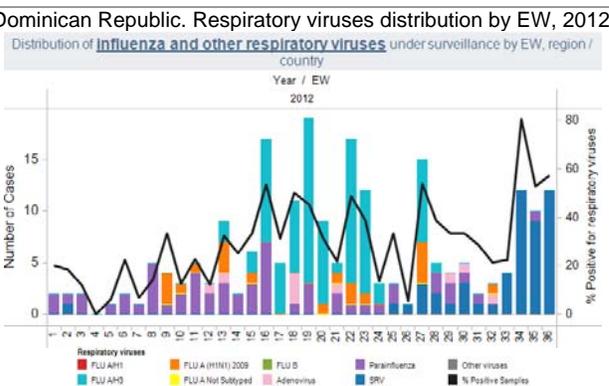
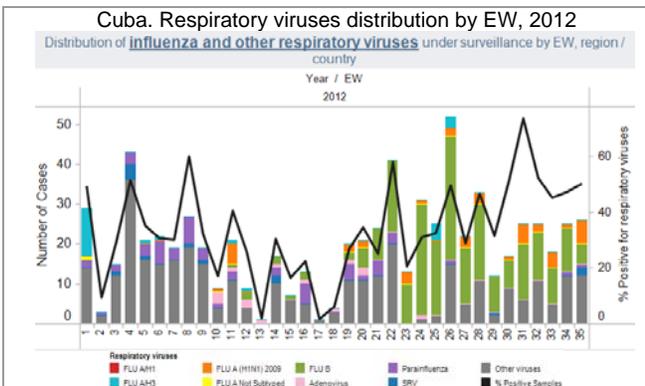
French Guiana



Jamaica

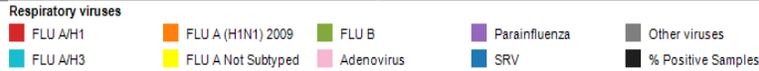
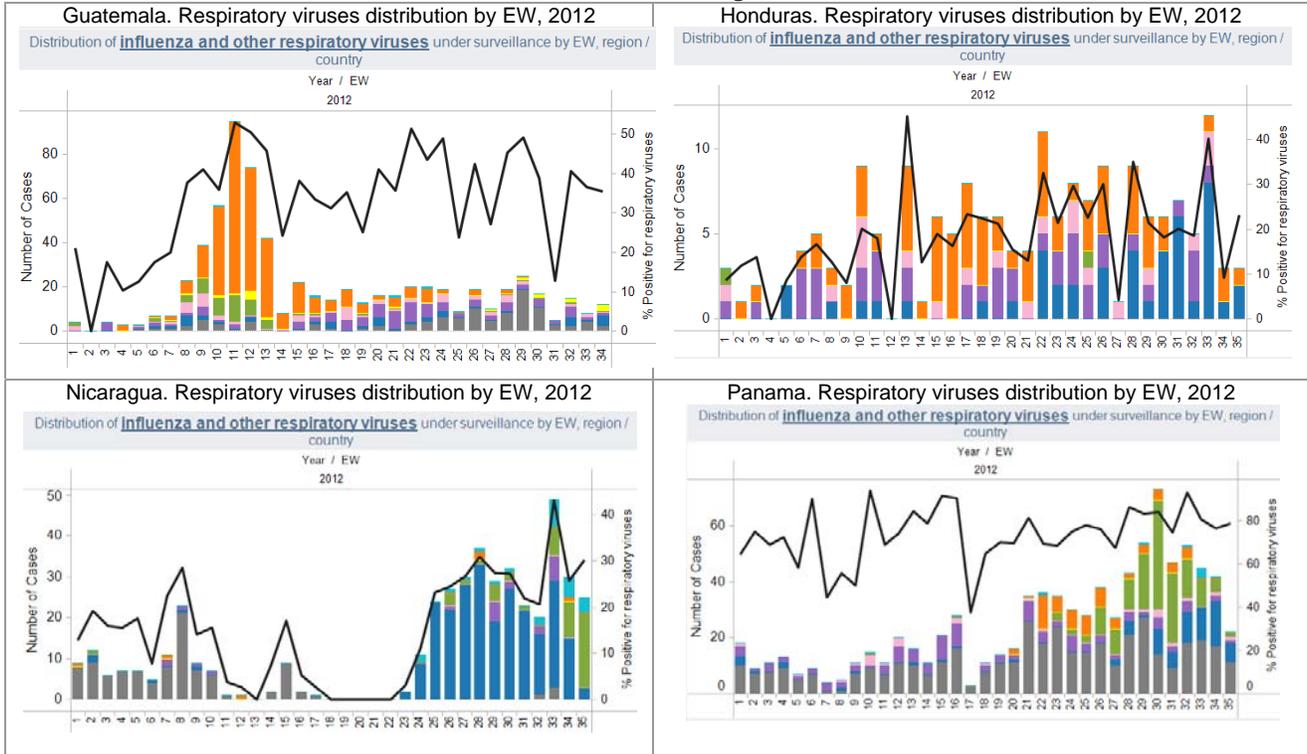


Cuba and Dominican Republic

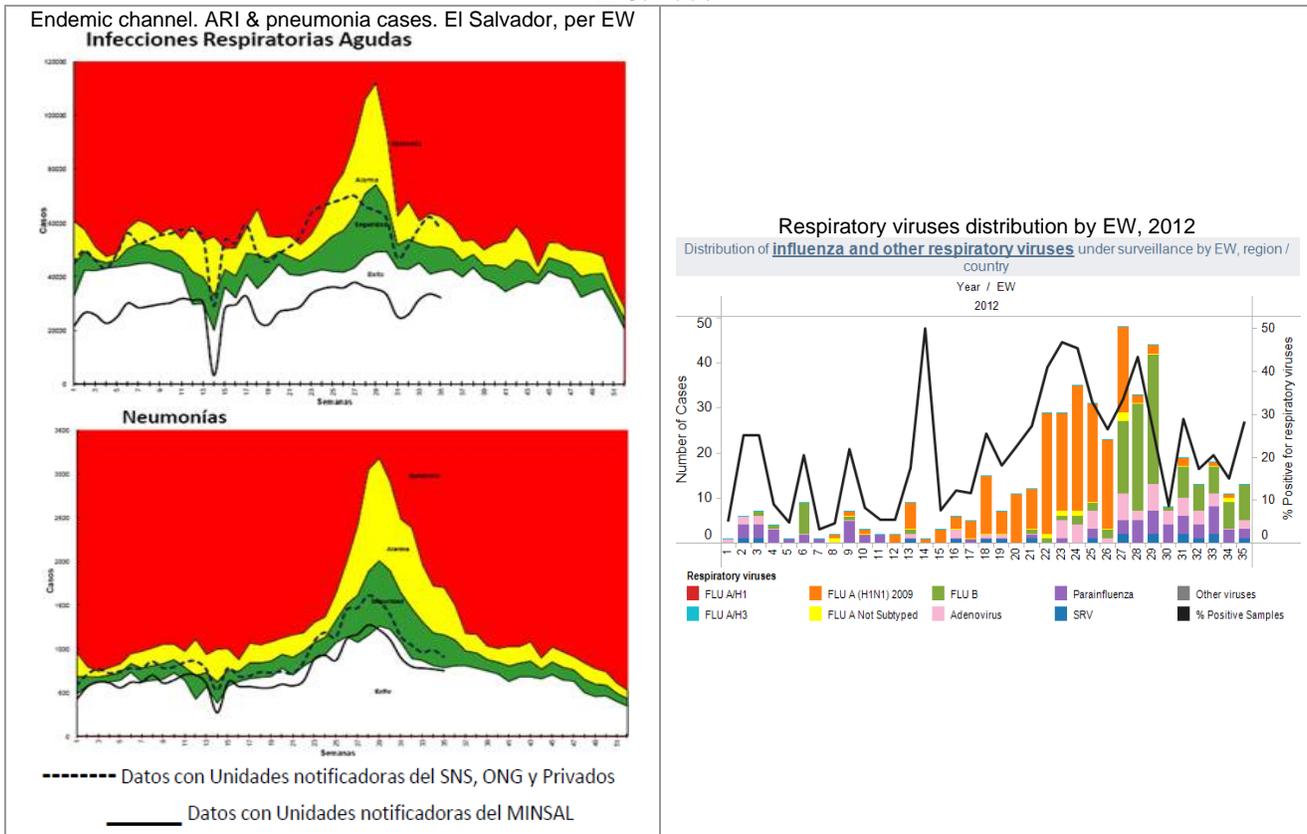


Central America

Guatemala, Honduras, Nicaragua and Panama



El Salvador



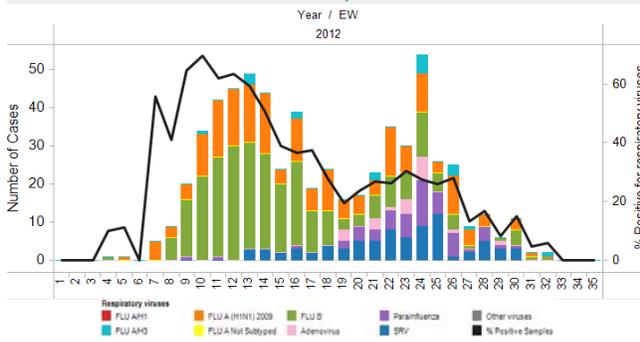
----- Datos con Unidades notificadoras del SNS, ONG y Privados
 _____ Datos con Unidades notificadoras del MINSAL

South America - Andean

Bolivia

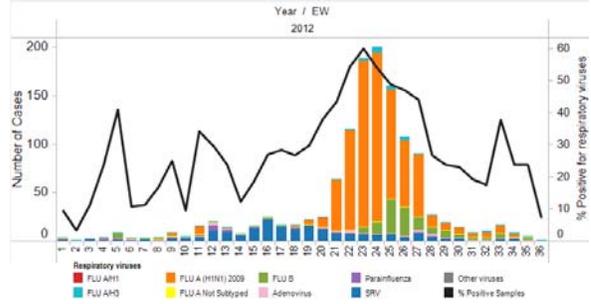
Santa Cruz. Respiratory viruses distribution by EW, 2012-Cenetro

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



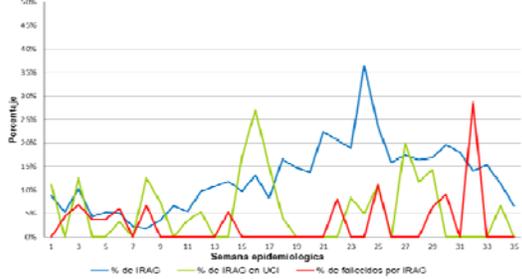
Respiratory viruses distribution by EW, 2012-La Paz, Oruro, Potosí, Tarija, Chuquisaca, Pando y Beni, INLASA

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



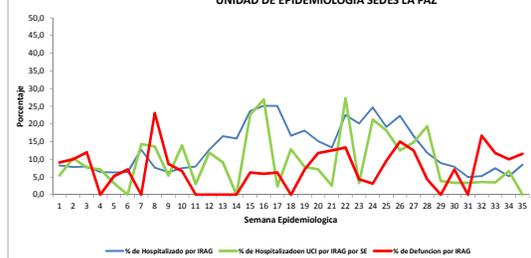
Santa Cruz. SARI cases distribution by EW, 2012

Distribución de las proporciones de hospitalizaciones, admisiones en UCI y fallecidos por IRAG según SE. SEDES Santa Cruz. SE 1 a 35, 2012



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

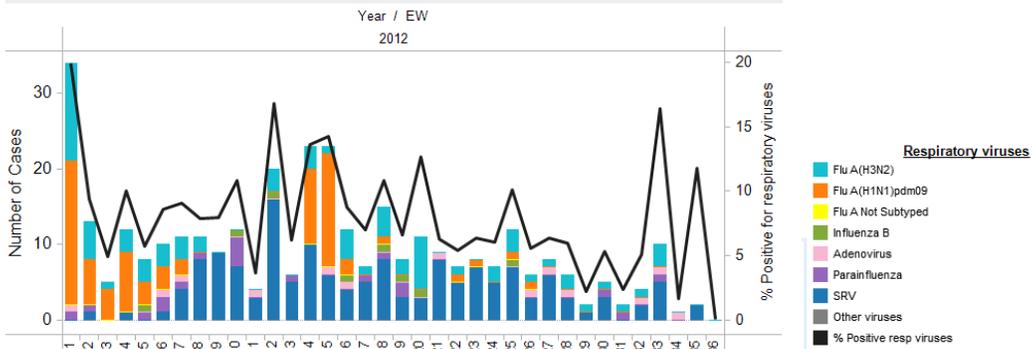
PROPORCIÓN DE HOSPITALIZADOS, INGRESOS A UCI Y FALLECIDOS POR IRAG SEGUN SEMANA EPIDEMIOLOGICA, AÑO 2012 (SE 1 a 35) UNIDAD DE EPIDEMIOLOGIA SEDES LA PAZ



Colombia

Colombia. Respiratory viruses distribution by EW, 2012

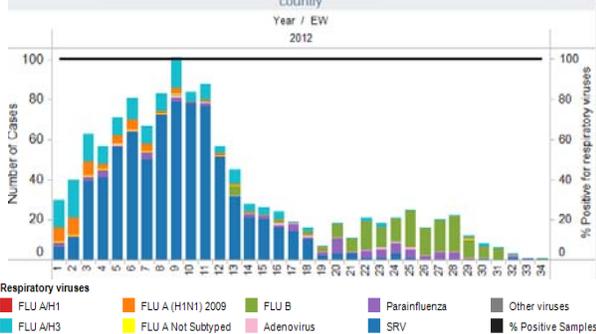
Distribution of **influenza and other respiratory viruses** under surveillance by EW, region / country



Ecuador and Peru

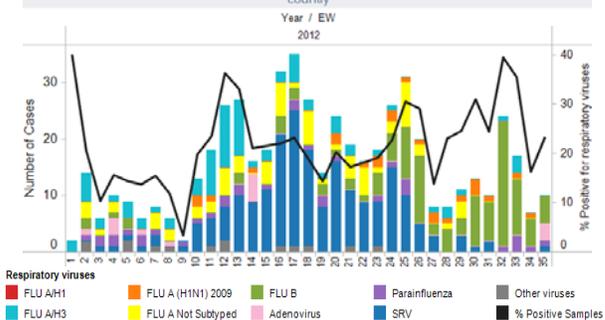
Ecuador. Respiratory viruses distribution by EW, 2012

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



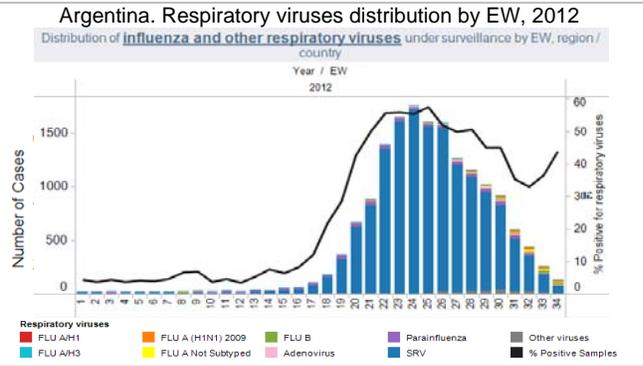
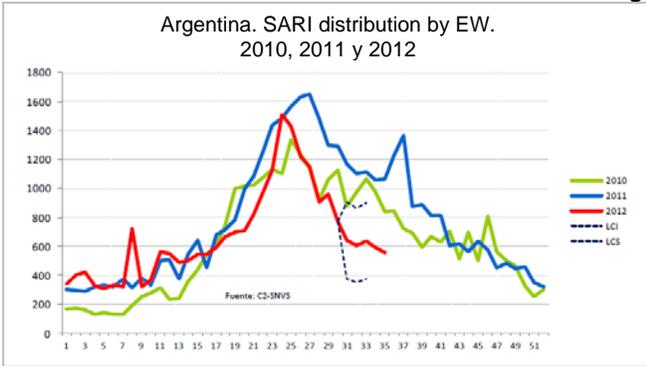
Peru. Respiratory viruses distribution by EW, 2012

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

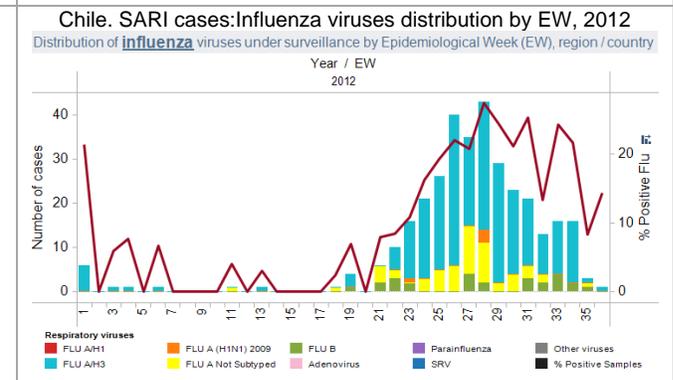
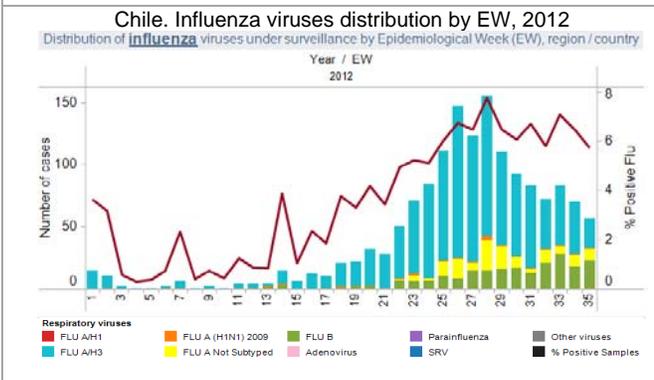
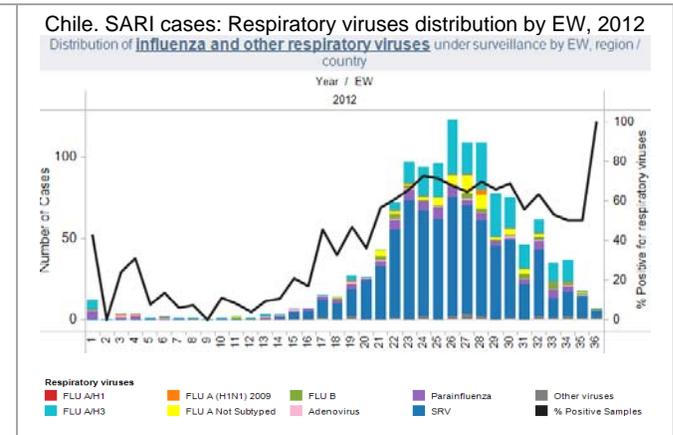
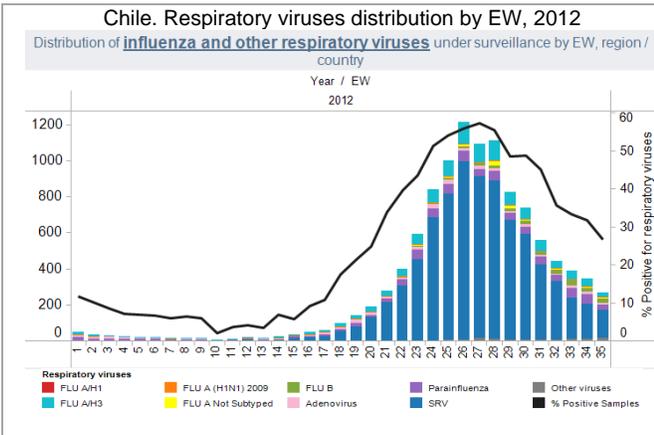


South America, Southern cone

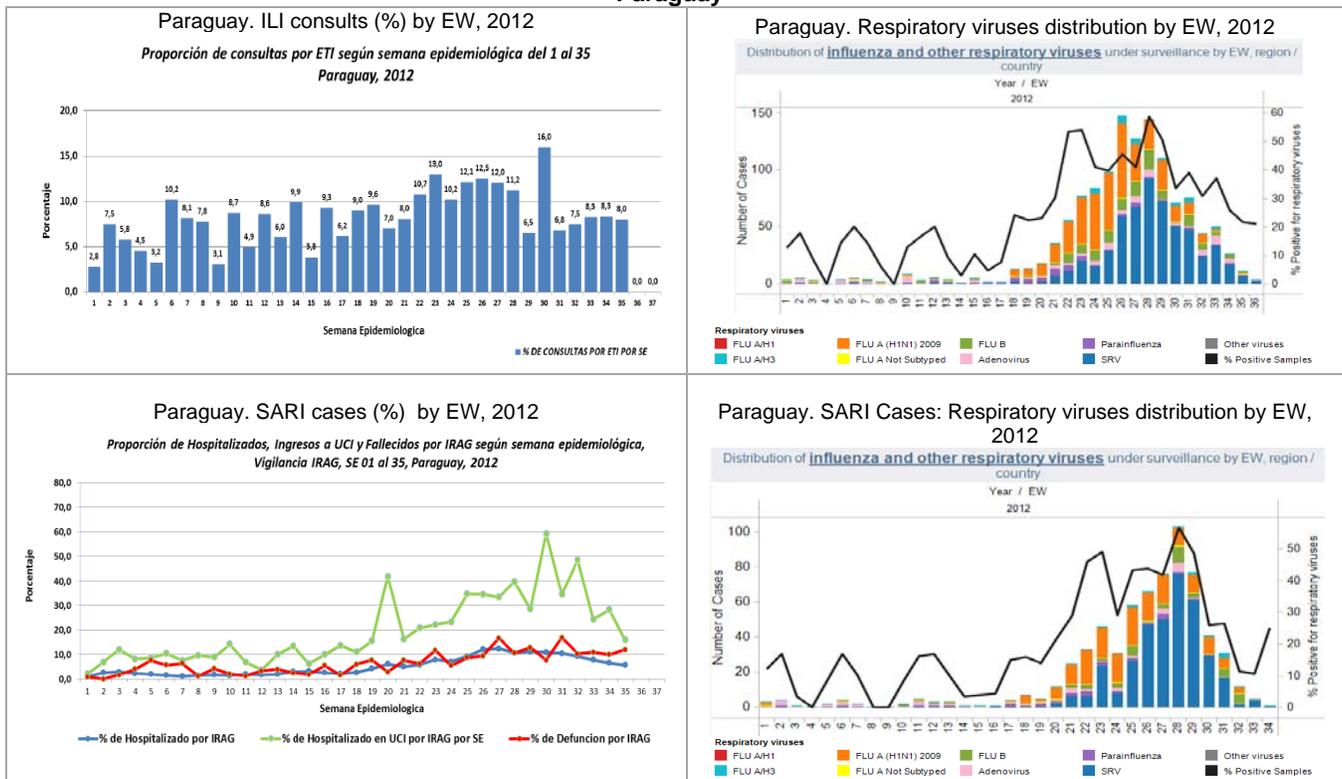
Argentina



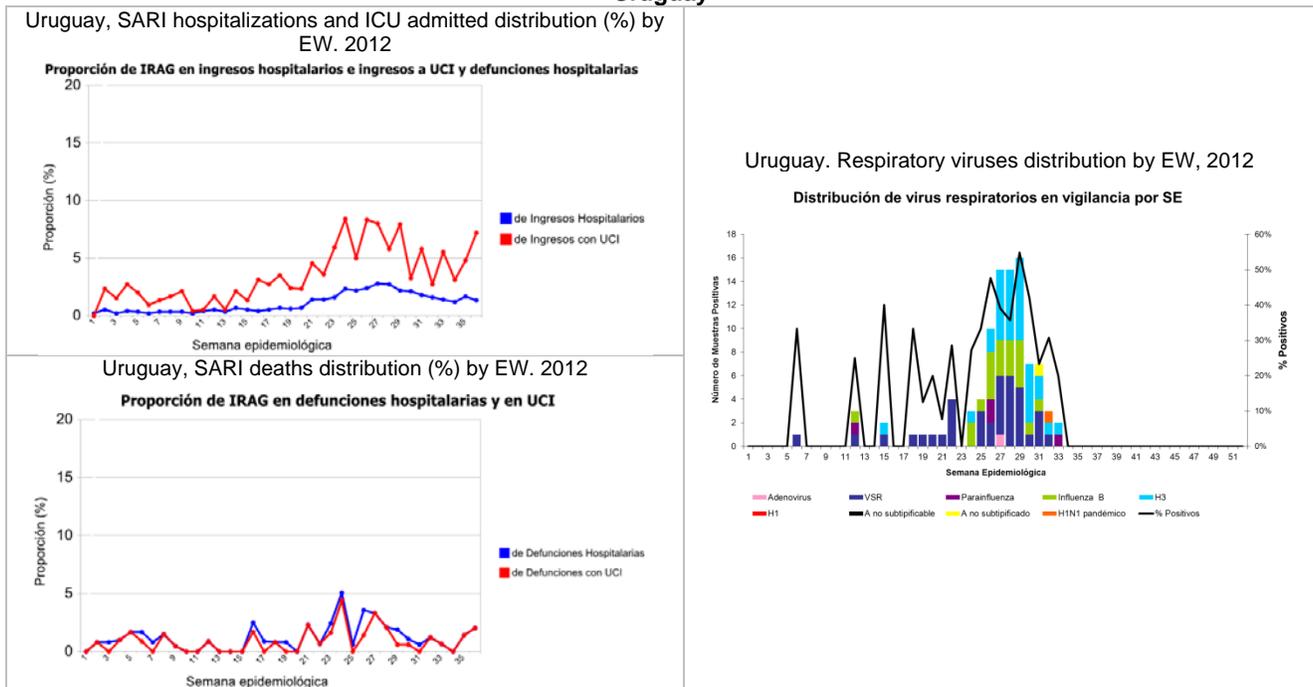
Chile



Paraguay



Uruguay



1 US Surveillance Summary. EW 35. Centers for Disease Control and Prevention

2 El Salvador. Boletín epidemiológico SE 35 de 2012. MINSAL.

3 Argentina. Actualización situación de enfermedades respiratorias 2012. SE 35.

4 Paraguay. Boletín epidemiológico semanal SE 35. Available at:

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

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