

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

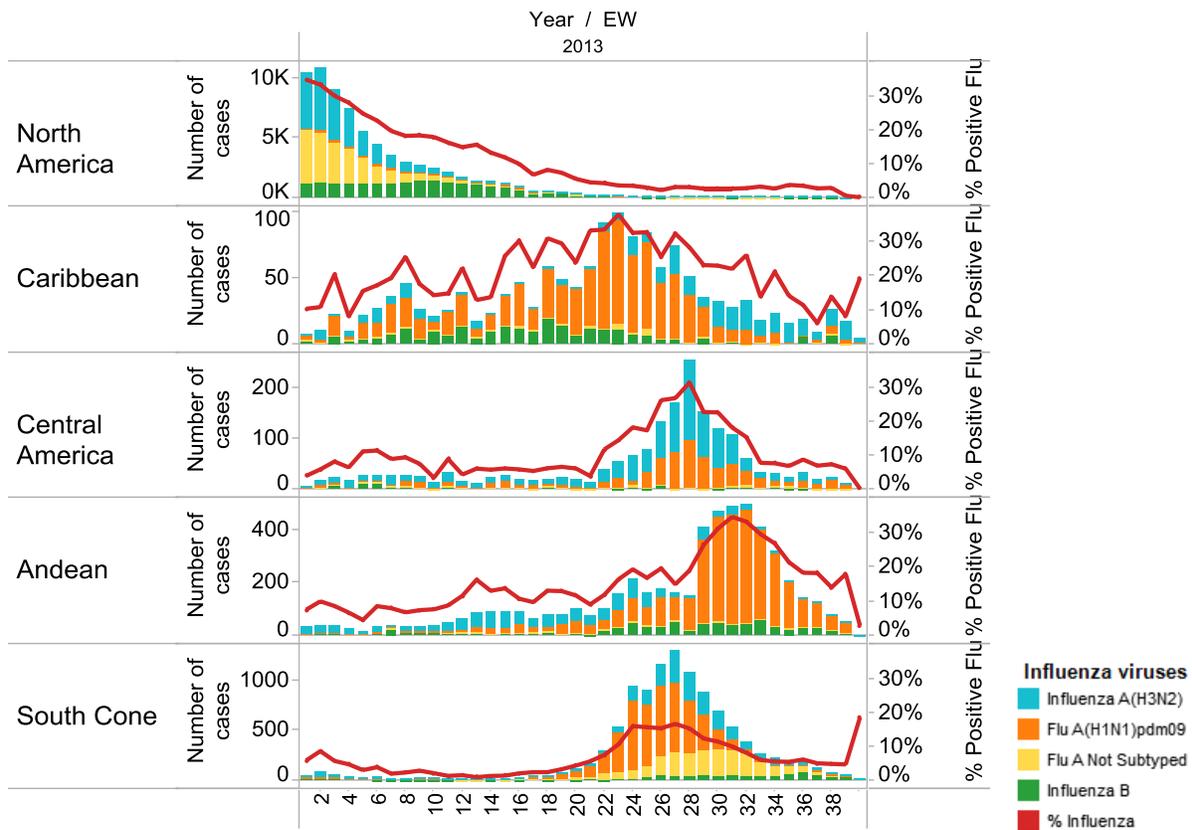
The information presented in this update is based on data provided by Ministries of Health and National Influenza Centers of Member States to the Pan American Health Organization (PAHO) or from updates on the Member States' Ministry of Health web pages.

WEEKLY SUMMARY

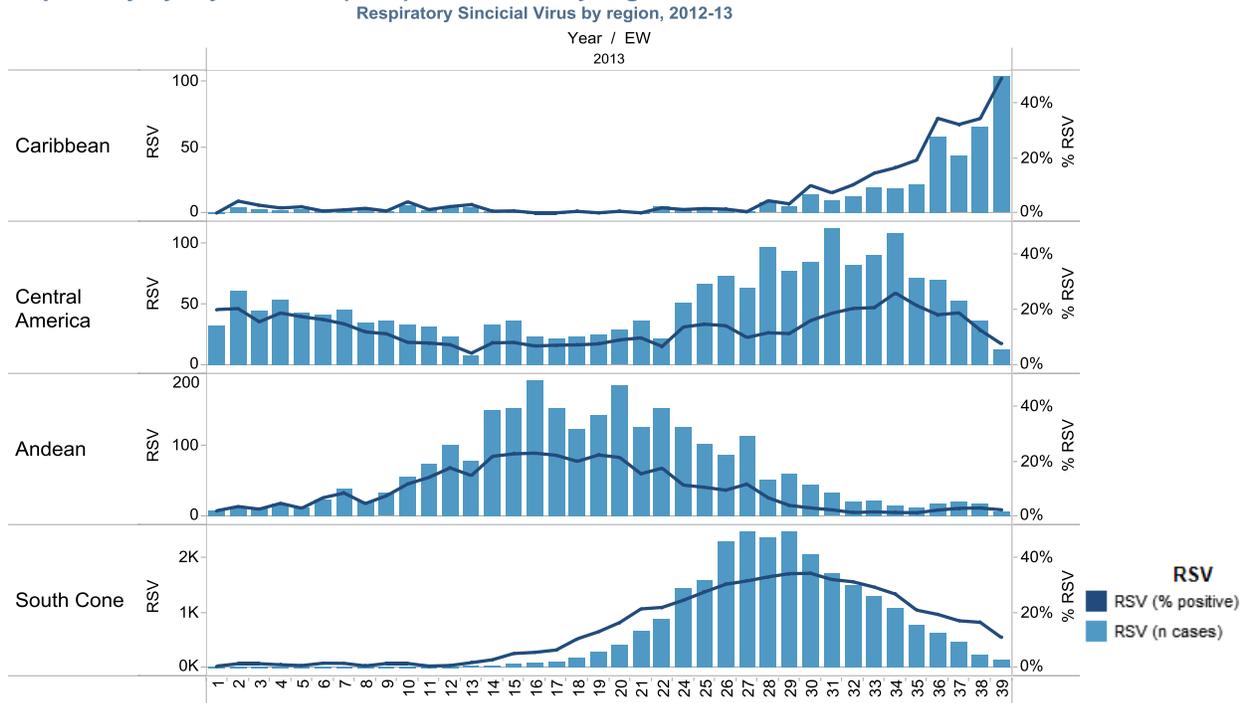
- **North America:** Influenza activity in the United States remained low while respiratory virus activity in Mexico showed increasing trends. In the United States, 20 cases of variant influenza infections have been reported this summer (18 A(H3N2v) and 2 A(H1N1v)). All of these infections have been associated with prolonged exposure to pigs and no ongoing human-to-human transmission has occurred.
- **The Caribbean and Central America:** While most of the acute respiratory infection indicators remain stable in this sub-region, there has been increased RSV activity in Cuba. RSV is the predominant virus circulating in some countries (Costa Rica, Guatemala, El Salvador and Panama), but it is within the expected levels for this time of year. Similarly, in the previous weeks there has been increased detection of influenza A(H1N1)pdm09 in some Caribbean islands.
- **South America – Andean Countries:** Acute respiratory virus activity continued its decreasing trend after a high influenza activity in July and August. Currently, co-circulation of influenza A(H1N1)pdm09 and influenza B was reported in Bolivia, Ecuador and Peru.
- **South America - South Cone and Brazil:** Acute respiratory virus activity was within the expected level for this time of year in all countries except Paraguay where ILI activity was high. Currently, co-circulation of influenza B and A(H3N2) continues in most of the countries of this sub-region. RSV continues decreasing, even though it is still the predominant virus in Chile and Argentina.

Influenza circulation by region. 2013

Distribution of influenza viruses by region, 2012-13



Respiratory syncytial virus (RSV) circulation by region. 2013



ACRONYMS

ARI	Acute respiratory infection
CARPHA	Caribbean Public Health Agency
CENETROP	Centro de Enfermedades Tropicales (Santa Cruz, Bolivia)
EW	Epidemiological Week
ILI	Influenza-like illness
INLASA	Instituto Nacional de Laboratorios de Salud (La Paz, Bolivia)
INS	Instituto Nacional de Salud
ORV	Other respiratory viruses
SARI	Severe acute respiratory infection
SEDES	Servicio Departamental de Salud (Bolivia)
ICU	Intensive Care Unit
RSV	Respiratory Syncytial Virus

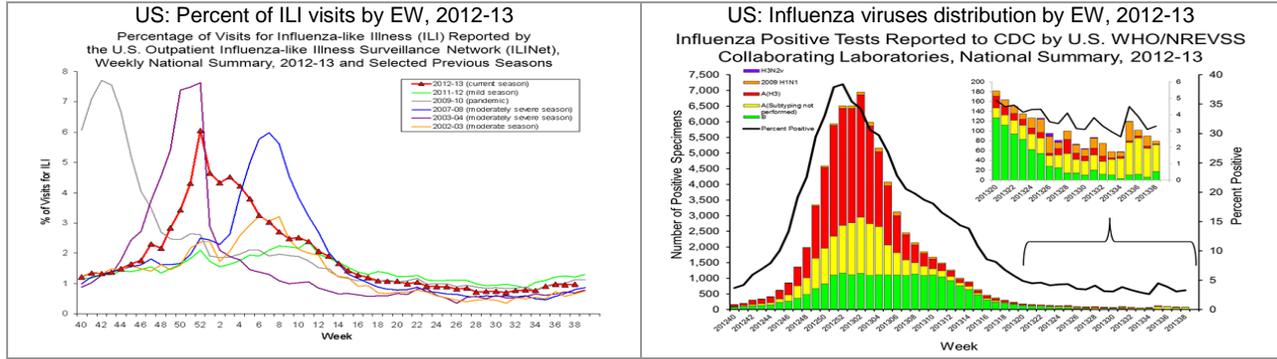
EPIDEMIOLOGIC AND VIROLOGIC UPDATE OF INFLUENZA & OTHER RESPIRATORY VIRUSES BY COUNTRY

North America:

In the United States¹ during EW 38, influenza activity remained low with 1.0% of outpatient visits associated with ILI and 5.7% of deaths associated with pneumonia and influenza. No influenza-associated pediatric deaths were reported during EW 37. Based on laboratory data for EW 38, 2,393 samples were analyzed, of which 3.3% were positive for influenza. Among the positive samples (n=79), 78.5% were influenza A (of which 88.7% were not subtyped and 9.7% were A(H1N1)pdm09) and 21.5% were influenza B. No new novel influenza A infections were reported during EW 38. There have been a total of 18 H3N2v infections (Illinois: 1, Indiana: 14, Michigan: 2, Ohio: 1) and 2 H1N1v infections (Arkansas: 2) reported this summer. There has been one hospitalization associated with an H3N2v infection, and no deaths have occurred. All 20 cases have reported close contact with swine in the week prior to illness onset, and no ongoing human-to-human transmission has been identified.

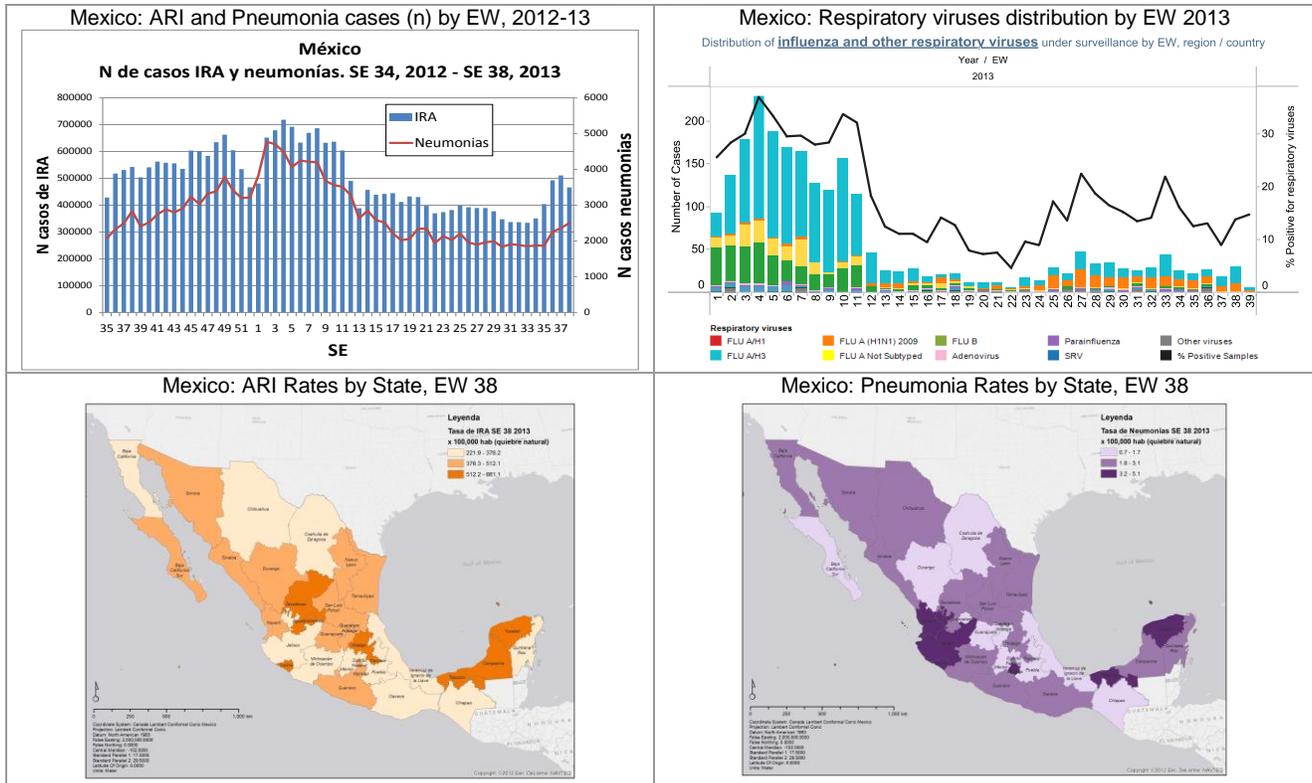
¹ USA: CDC FluView report. EW 38. Available at: <http://www.cdc.gov/flu/weekly/>

United States



In Mexico², during EW 38 the number of ARI and pneumonia cases decreased by 8.7% and 6.1%, respectively, compared to the previous week. The highest levels of ARI activity were reported in Campeche, Zacatecas and Hidalgo and the highest levels of pneumonia activity were reported in Jalisco, Tabasco, Colima and Morelos. According to laboratory data from EW 38-39, 252 samples were tested, of which 13.9% were positive for influenza. Among the positives, 97.1% were influenza A (61.8% were A(H3N2) and 35.3% were A(H1N1)pdm09) and 2.9% were influenza B.

Mexico



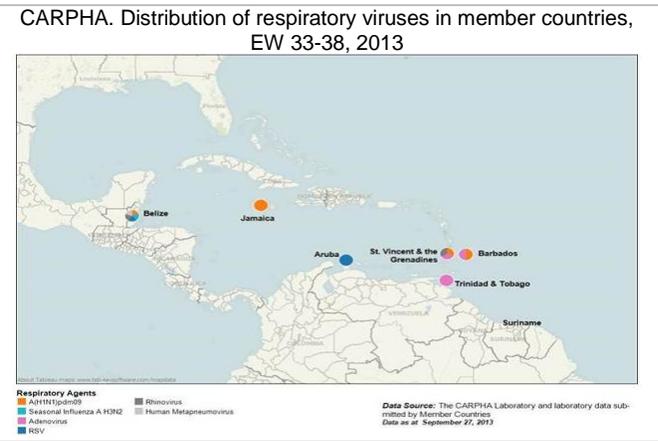
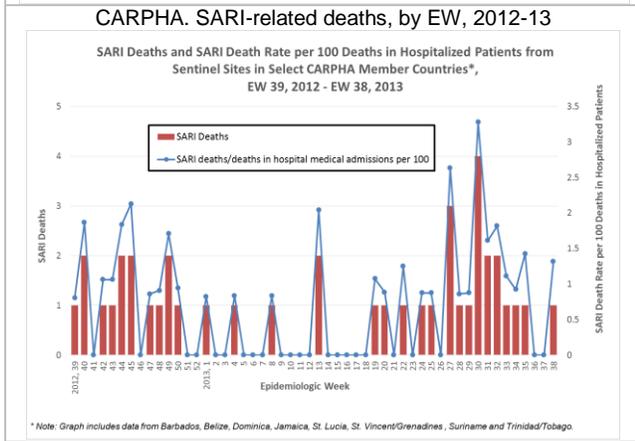
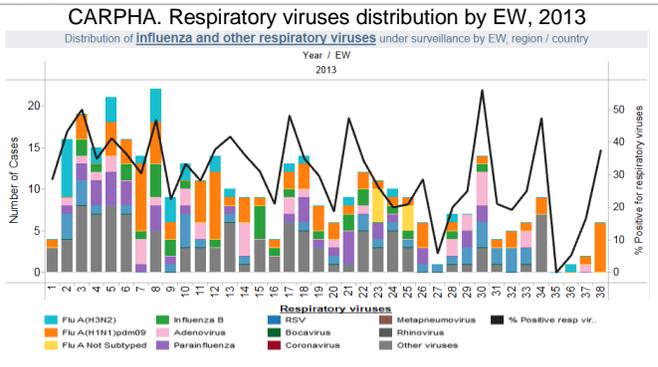
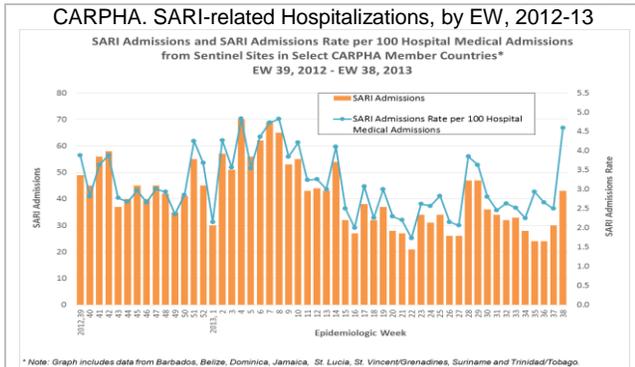
Caribbean

CARPHA³ received weekly SARI/ARI data from three countries for EW 38: Barbados, Belize and Jamaica. During EW 38, the proportion of SARI-associated hospitalizations was 4.6%, with the highest proportion of SARI admissions occurring in children 6 months to 4 years of age (15.9% of admissions). One SARI-associated death was reported by Barbados. For cases with dates of onset between EW 33-38, the following viruses were laboratory confirmed in member countries: influenza A(H1N1)pdm09 (Barbados, Belize, Jamaica, St. Vincent and the Grenadines); influenza A(H3N2) (Belize), adenovirus (Barbados, St. Vincent and the Grenadines, Trinidad and Tobago); human metapneumovirus (Belize), rhinovirus (Belize, St. Vincent and the Grenadines); RSV (Aruba, Belize). According to CARPHA laboratory data for EW 1-38, 30.7% of samples tested were positive for at least one respiratory virus.

² México. Dirección General de Epidemiología. Información epidemiológica. SE 38.

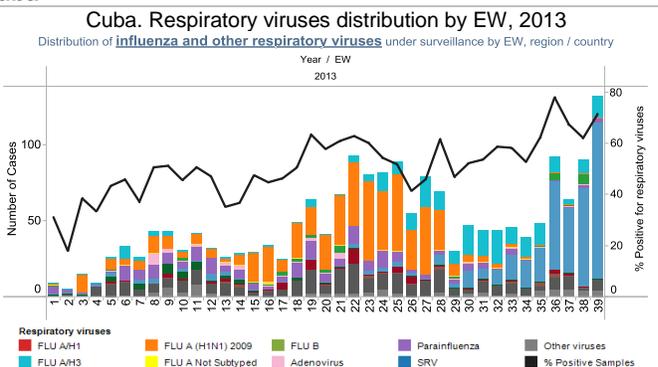
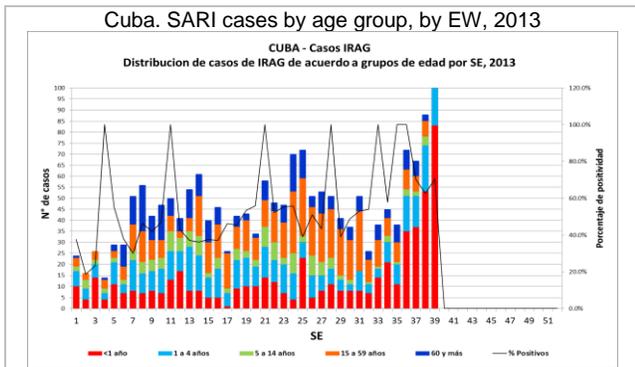
³ Caribbean Public Health Agency (CARPHA) EW 38

CARPHA



In Cuba during EW 39, the number of SARI-associated hospitalizations increased compared to the previous EW and children less than one year of age comprised the largest proportion of these cases. Four SARI-associated deaths were reported during this period and all were negative for respiratory viruses. According to national laboratory data for EW 36-39, 543 samples were analyzed, of which 69.6% were positive for a respiratory virus and 9.0% were positive for influenza. RSV continued as the predominant circulating virus (71.2% of the positives). Among influenza viruses, 100% were A(H3N2).

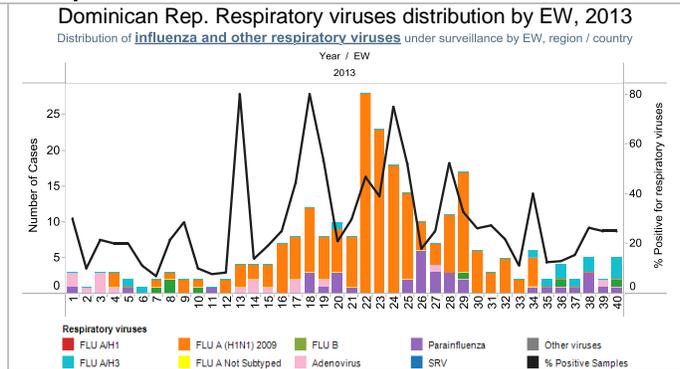
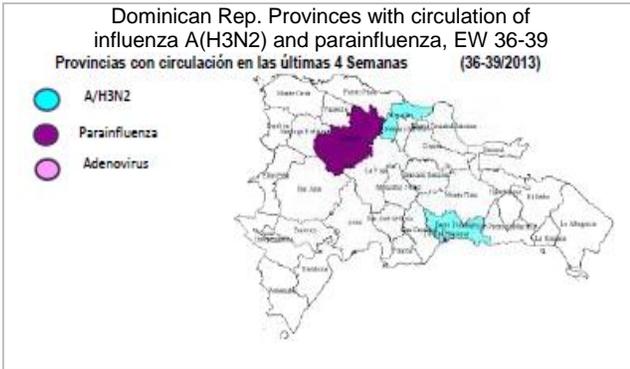
Cuba



In the Dominican Republic⁴, the cumulative ILI rate for EW 1-39 was 1,324 per 10,000 inhabitants, and is 15% less than what was reported for the same period in 2012. During the same period, 1,289 SARI cases were reported through sentinel surveillance, of which 11 were reported during EW 39. There were no SARI-associated deaths reported during EW 39; there have been 27 SARI-associated deaths reported this year (compared to 5 in 2012). According to laboratory data for EW 36-39, 71 samples were analyzed, of which 18.3% were positive for a respiratory virus and 8.5% were positive for influenza. Among positive influenza samples, 83.3% were influenza A (100% were influenza A(H3N2)) and 16.7% were influenza B. Among other respiratory viruses, parainfluenza (46.2% of positive samples) predominated.

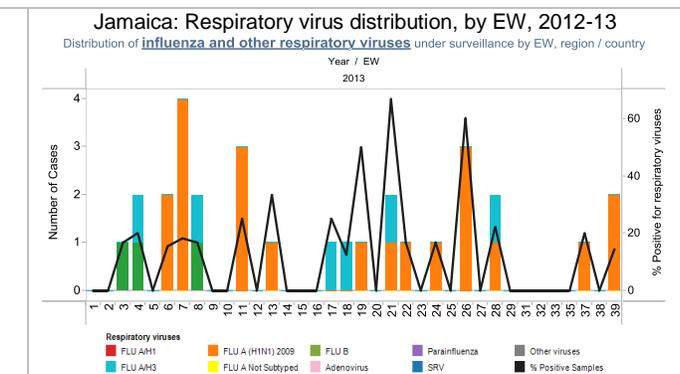
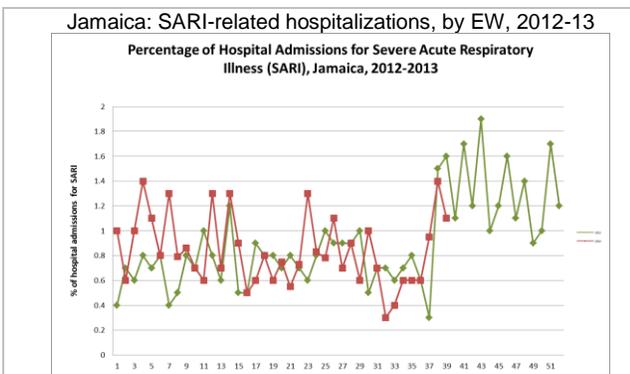
⁴ República Dominicana. Dirección Nacional de Vigilancia Epidemiológica. Boletín Semanal SE 39.

Dominican Republic



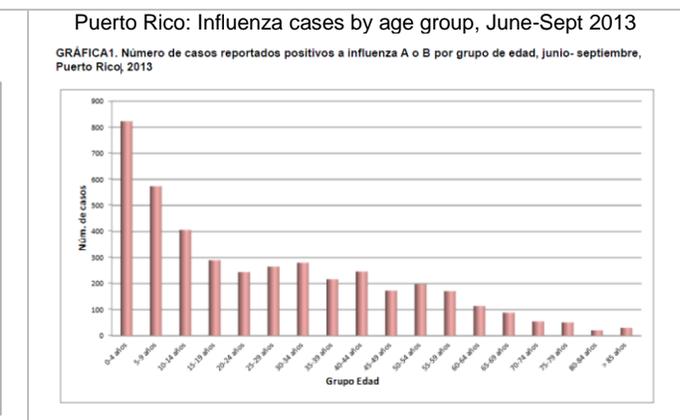
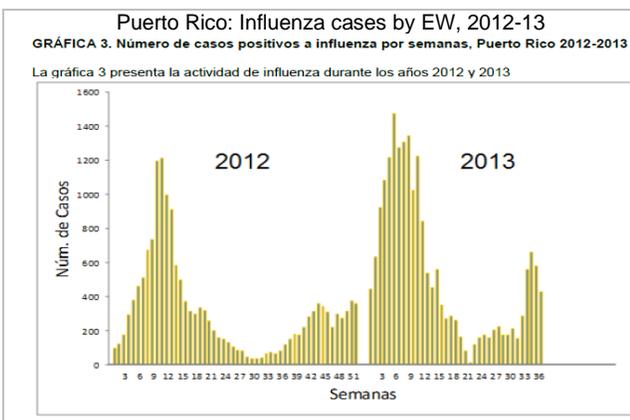
In Jamaica, based on sentinel surveillance data for EW 39, the proportion of ARI-associated consultations was 5.7%, a 1.6% increase from the previous EW. The proportion of SARI-associated hospitalizations was 1.1%, a 0.3% decrease compared to the previous week. No SARI-associated deaths were reported during this period. According to laboratory data from EW 39, 14 samples were tested, of which 14.3% were positive for a respiratory virus. Among the positive samples, influenza A(H1N1)pdm09 was the only virus detected.

Jamaica



In Puerto Rico⁵, during EW 37, 427 cases of influenza were reported, of which 98.1% were associated with influenza A. Since the beginning of June, 4,282 influenza cases have been reported and children 0-14 years of age account for 42% of those cases. During this same period, 188 influenza-associated hospitalizations and 9 influenza-associated deaths were reported.

Puerto Rico



Central America

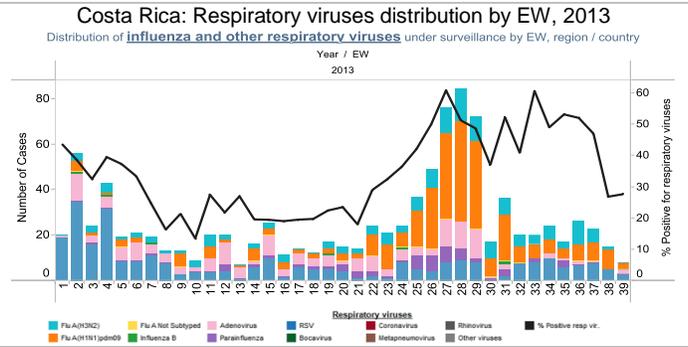
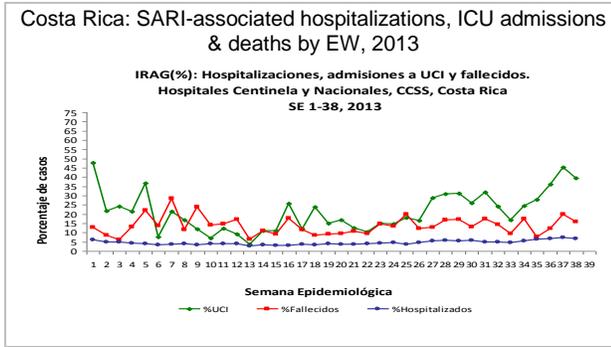
In Costa Rica, during EW 38, SARI activity (6.7% of hospitalizations 39.4% of ICU admissions and 16% of deaths) remained at an elevated level but was lower than during EW 37. Based on national laboratory data from EW 36-39, 184 samples were analyzed, of which 38.0% were positive for a respiratory virus and 22.7%

⁵ Puerto Rico. Departamento de Salud. Vigilancia de influenza de Puerto Rico SE 37.

<http://www.salud.gov.pr/influenza/Informes%20Influenza/Informe%20Influenza%20Semana%2037.pdf>.

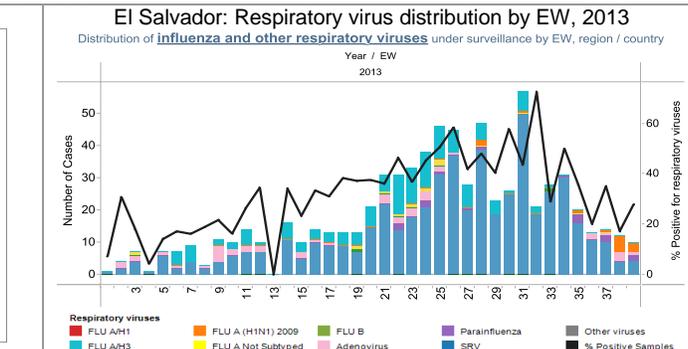
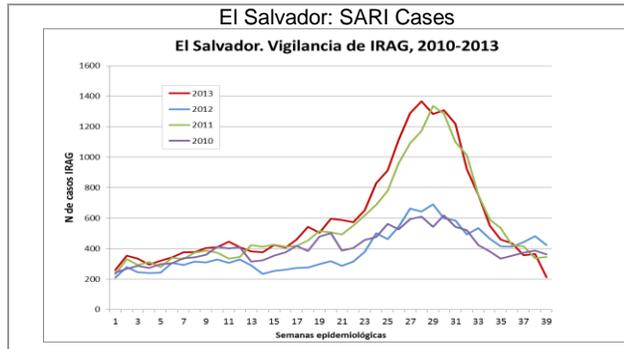
were positive for influenza. Among influenza positive samples, 100% were influenza A (61.0% A(H1N1)pdm09 and 39.0% A(H3N2)). Among other respiratory viruses, RSV (12.5% of positive samples) predominated.

Costa Rica



In El Salvador, the number of SARI cases continued to decrease since its peak in EW 28. During EW 39, activity was at a low level and below what was observed during 2010-2012. Based on national laboratory data from EW 36-39, 211 samples were analyzed, of which 25% were positive for a respiratory virus and 4.5% were positive for influenza. Among influenza positive samples, A(H1N1)pdm09 has been predominant for the last three weeks. Among other respiratory viruses, RSV predominated (13.7% positivity) followed by adenovirus and parainfluenza.

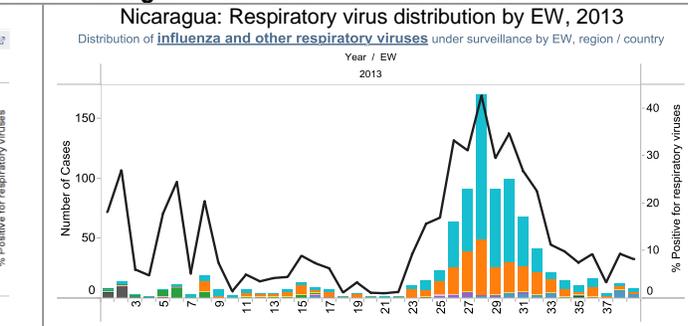
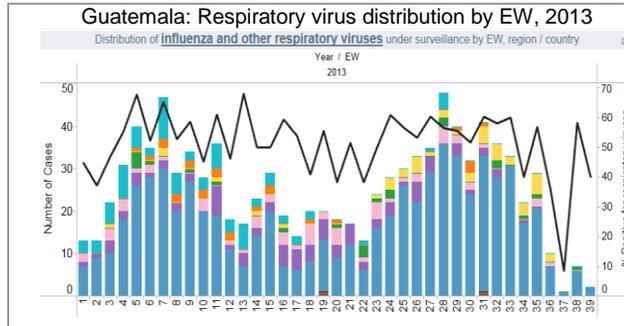
El Salvador



In Guatemala, based on laboratory data from EW 36-39, 57 samples were analyzed, of which 36% were positive for a respiratory virus. Among these, RSV predominated while influenza positivity was low (4%).

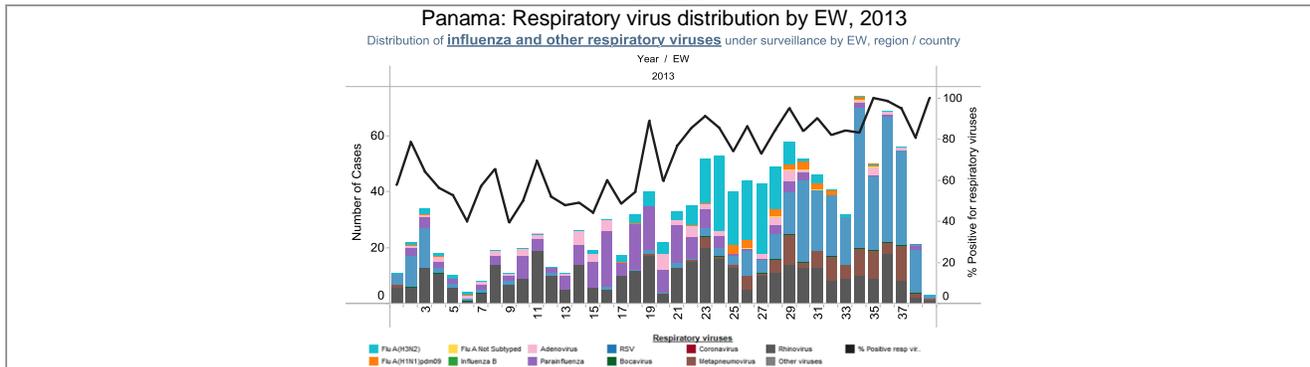
In Nicaragua, based on national laboratory data from EW 36-39, 522 samples were analyzed, of which 7.5% were positive for a respiratory virus and 4.8% were positive for influenza. Influenza positivity continued to remain low compared to the peak observed during EW 28 (42%). Among influenza positive samples, 100% were influenza A (52% were A(H3N2) and 48% were A(H1N1)pdm09). Among other respiratory viruses, RSV predominated.

Guatemala and Nicaragua



In Panama, based on national laboratory data from EW 36-39, 158 samples were analyzed, of which 94.3% were positive for a respiratory virus. Among positive samples, RSV (63.8%) predominated, followed by rhinovirus (19.5%) and metapneumovirus (13.4%).

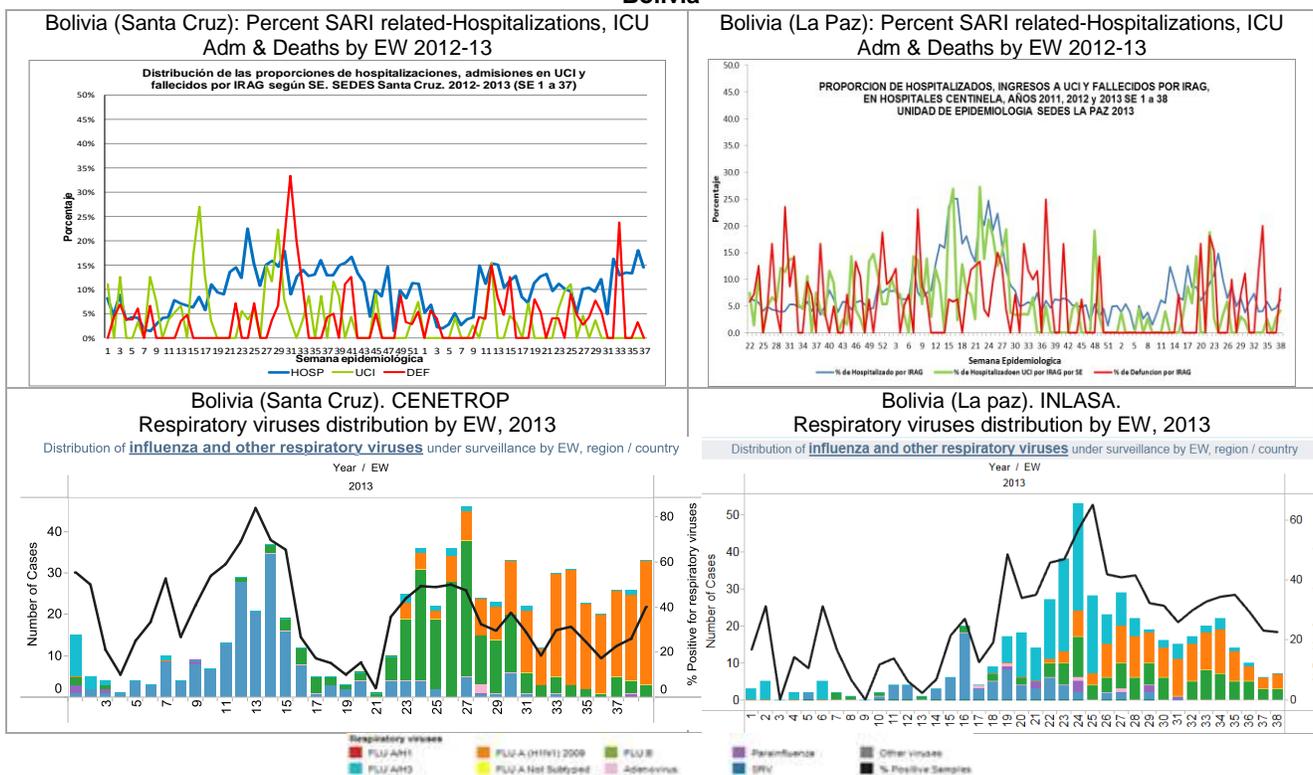
Panama



South America – Andean countries

In Bolivia, according to data from Santa Cruz during EW 37, the proportion of SARI hospitalizations (14%) remained elevated compared to this period last year. Based on laboratory data from CENETROP (Santa Cruz) during EW 38-39, 182 SARI samples were analyzed, of which 33.0% were positive for a respiratory virus (a 9% increase compared to the previous EW). Among the positive samples, influenza A(H1N1)pdm09 (86.4%) predominated. According to data from La Paz, the proportion of SARI-associated hospitalizations in EW 38 (6.2%) increased compared to the previous weeks but remains low. Based on laboratory data from INLASA (La Paz) from EW 37-38, 57 samples were analyzed of which 22.8% were positive for a respiratory virus. Among positive samples, influenza A(H1N1)pdm09 (53.8%) and influenza B (46.7%) predominated.

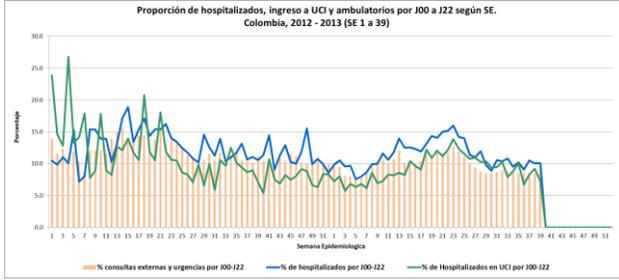
Bolivia



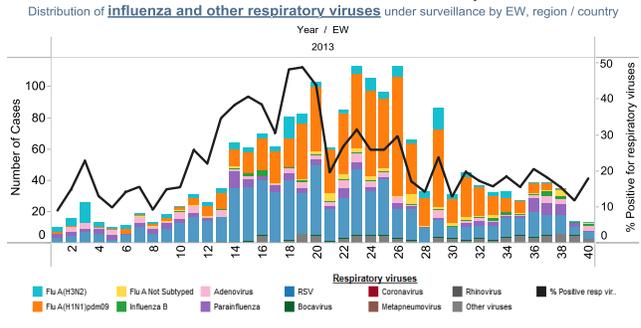
In Colombia, nationally during EW 39, the proportions of outpatient visits (8.6%), hospitalizations (10.1%), and ICU admissions (7.3%) with ARI-associated ICD-10 codes (J00 to J22) did not change significantly from the previous EW and are similar to what was observed during this same period last year. Based on INS national laboratory data from EW 39-40, 192 samples were analyzed, of which 14.8% were positive for a respiratory virus and 1.8% were positive for influenza. Among the positive samples, RSV (33.0%) and parainfluenza (14.8%) predominated.

Colombia

Colombia: Percent Outpatient Visits, Hosps and ICU Adms with J00 to J20 codes, by EW 2012-13



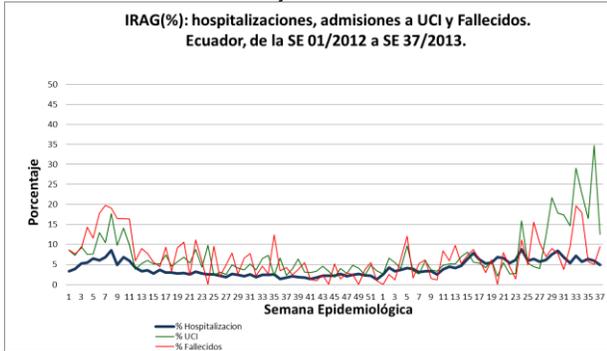
Colombia: Influenza and ORV distribution by EW, 2013



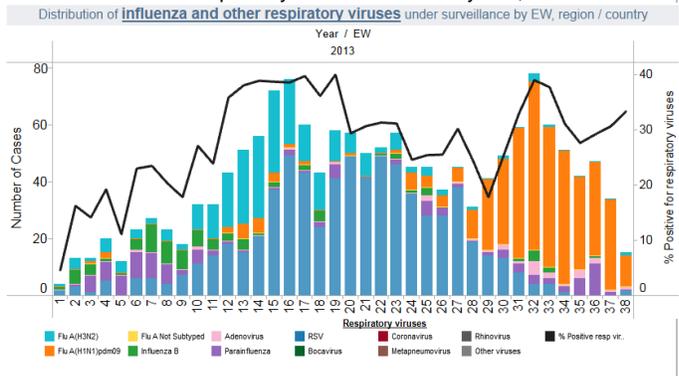
In Ecuador⁶, based on SARI surveillance data from EW 1-39, there were 5,694 SARI-associated hospitalizations of which 1,868 (32.8%) were positive for a respiratory virus. During this same period 193 SARI-associated deaths were reported, of which 78 (40.4%) were positive for a respiratory virus. Based on national reference laboratory data from EW 35-38, 469 SARI samples were analyzed, of which 29.4% were positive for a respiratory virus and 23.7% were positive for influenza. There has been a decreasing trend in the number of positive samples since the peak in EW 32. Among the positive samples, influenza A(H1N1)pdm09 (79.0%) predominated.

Ecuador

Ecuador: Percent SARI related-Hospitalizations, ICU Adm & Deaths by EW 2012-13



Ecuador. Respiratory virus distribution by EW, 2013

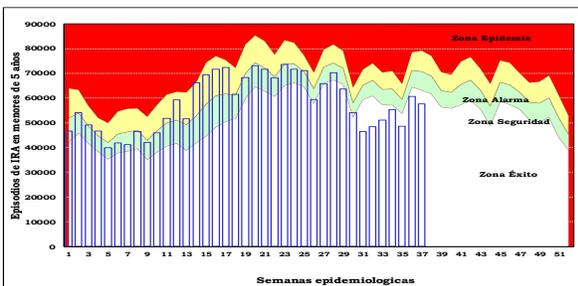


In Peru⁷, ARI reports in children less than 5 years of age have shown an increasing trend since EW 31 but are within the success zone of the endemic channel. Pneumonia reports in the same age group are also within the success zone and have shown a decreasing trend for the last several weeks. Based on national laboratory data from EW 36-39, 760 samples were analyzed, of which 24.9% were positive for a respiratory virus and 21.8% were positive for influenza. Among the positive samples, influenza A(H1N1)pdm09 (57.1%) and influenza B (30.2%) predominated.

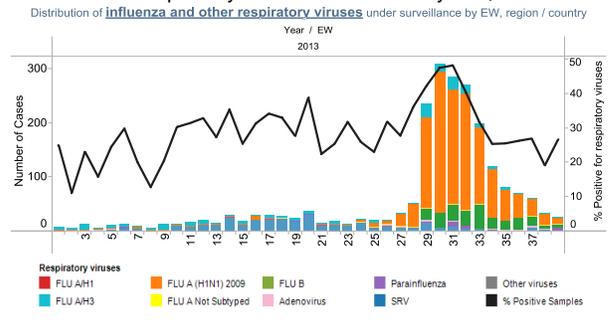
Peru

Peru. ARI endemic channel among children < 5 yrs, 2013

Canal endémico de Infecciones Respiratorias Agudas (IRA) en menores de 5 años, Perú SE 37, 2013

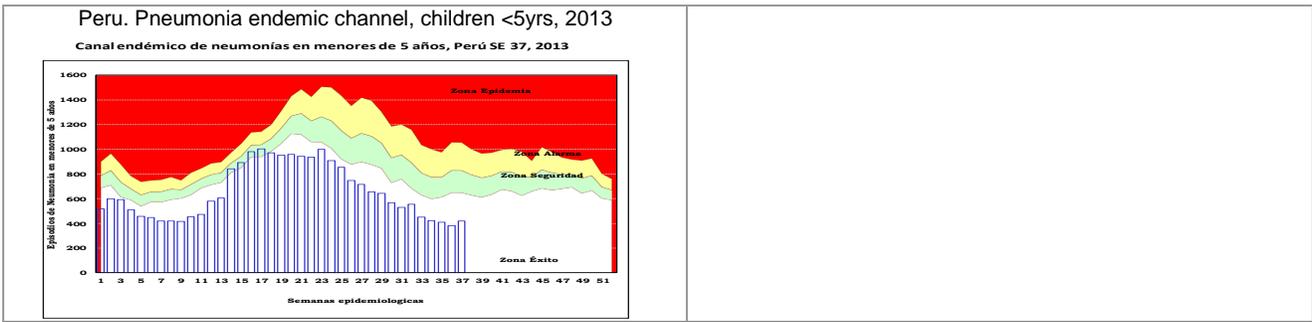


Perú. Respiratory viruses distribution by EW, 2013



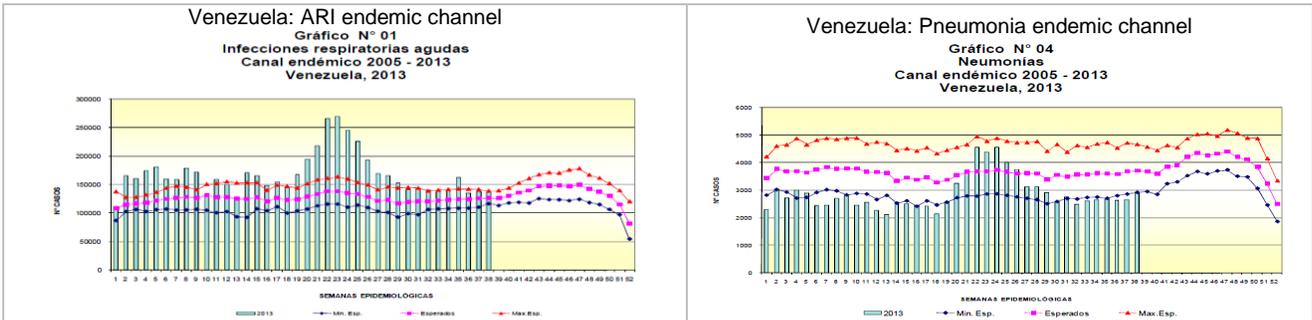
⁶ Ecuador: Ministerio de Salud Pública. Actualización Nacional Vigilancia de IRAG, SE 39.

⁷ Perú. Sala de Situación de Salud. EW 37, 2013. Ministerio de Salud. Dirección General de Epidemiología



In Venezuela⁸, ARI and pneumonia activity during EW 38 were within the expected values for this time of year. During this time, 93 SARI-associated hospitalizations were reported, with children less than 4 years of age comprising the largest proportion of cases. Based on virologic data from EW 1-38, 5,152 samples were analyzed from suspected influenza cases, of which 53.7% were positive for influenza. Among the positive samples, 92.3% were influenza A(H1N1)pdm09. The federal entities with the largest number of suspected influenza cases were Mérida (n=948), Distrito Capital (n=378) and Zulia (n=351).

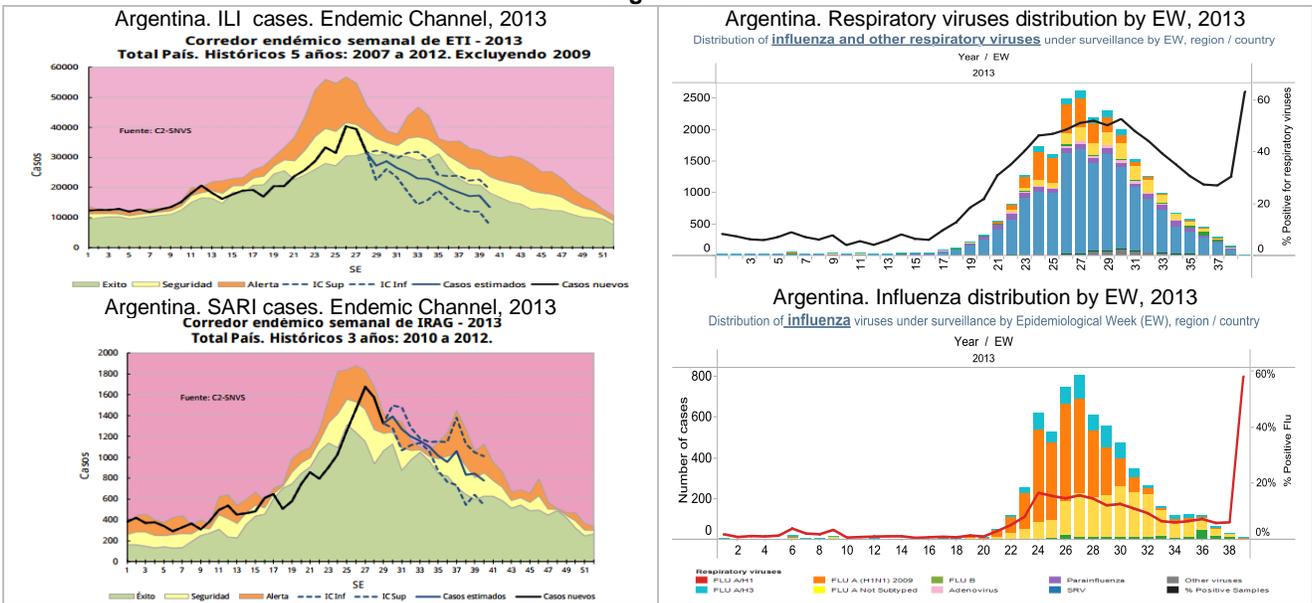
Venezuela



South America – Southern Cone and Brazil

In Argentina⁹, according to reports and calculated estimations, national ILI activity during EW 39 is within the success zone of the endemic channel and has shown a decreasing trend since its peak in EW 25-27. The proportion of SARI-associated hospitalizations was within the security zone of the endemic channel and also showed a decreasing trend. Based on laboratory data from EW 38-39, 532 samples were analyzed, of which 31.6% were positive for a respiratory virus and 7.9% for influenza. Among positive samples, RSV predominated (53.6%).

Argentina

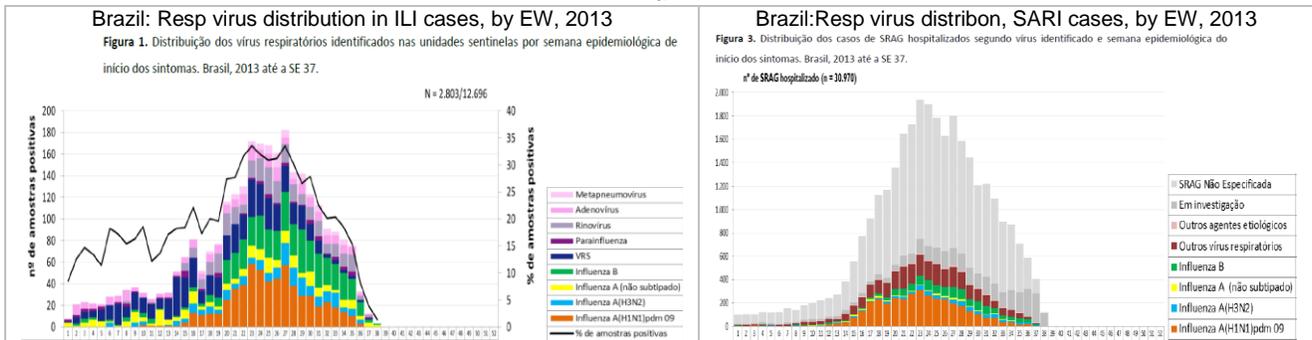


⁸ Venezuela. Boletín epidemiológico, EW 38, 2013.

⁹ Argentina. Boletín integrado de vigilancia. SE 39.

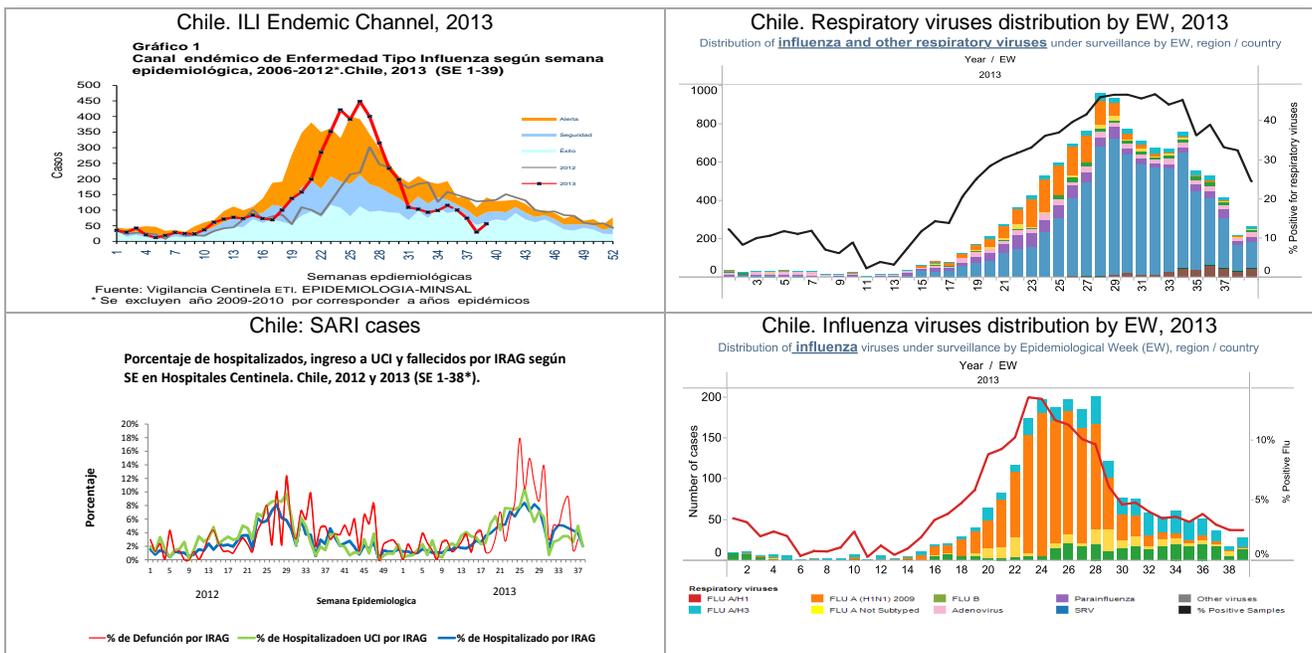
In Brazil¹⁰, according to ILI sentinel surveillance data through EW 38, 12,696 samples have been analyzed, of which 22.1% were positive for influenza or other respiratory viruses. Positivity has decreased since EW 27 and among positive samples influenza B and Influenza A not subtyped were detected. Based on universal SARI surveillance data during this same period, 30,970 SARI cases were reported and 17.8% were positive for influenza. Of these positive samples, influenza A(H1N1)pdm09 predominated (65.0%), followed by influenza B (21.2%) and A(H3N2) (10.6%). Through EW 38, 3,469 SARI-associated deaths were reported of which 25.5% were positive for influenza, and of these, 82.1% were associated with influenza A(H1N1)pdm09.

Brazil



In Chile¹¹ ILI activity during EW 39 (rate: 3.6 per 100,000 inhabitants) was within the success zone of the endemic channel. The proportion of SARI-associated hospitalizations and SARI-associated ICU admissions continued to show a decreasing trend since peaking in EW 26 (8% and 10%, respectively) and currently are below 5%. Based on laboratory data from EW 36-39, 103 IRAG samples were tested, of which 54.4% were positive for a respiratory virus and 9.7% were positive for influenza. Among the positive samples, metapneumovirus (33.9%), RSV (32.1%) and influenza A (17.9%) predominated.

Chile



In Paraguay¹² during EW 39, the ILI consultation rate (176 per 100,000 inhabitants) increased compared to the previous EW and was higher than expected for this time of year. The proportion of SARI-associated hospitalizations (5.3%) decreased compared to the previous week and children less than 5 years of age comprised the largest portion (48%) of these cases. Based on reference laboratory data from EW 38-39, 134 samples were analyzed, of which 19.4% were positive for a respiratory virus and 11.9% were positive for

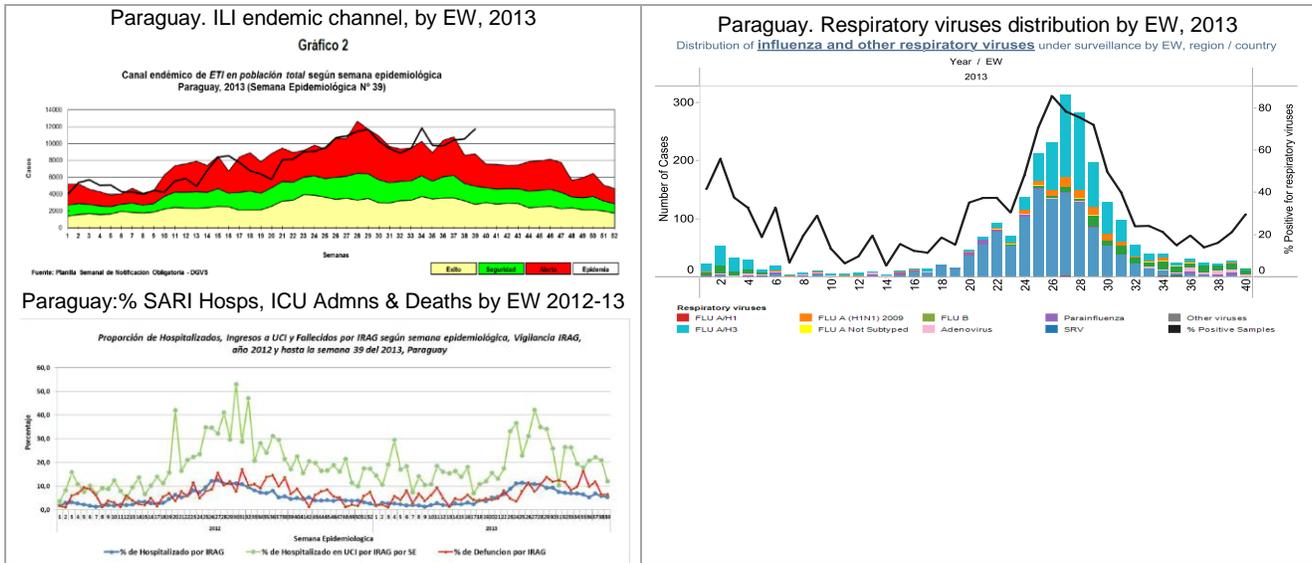
¹⁰ Brasil. Boletim informativo. Secretaria de Vigilância em Saúde. SE 38, 2013.

¹¹ Chile. Informe de situación. EW 38. Disponible en: <http://epi.minsal.cl/>

¹² Paraguay. Informe de situación. Vigilancia de ETI e IRAG. SE 39, 2013

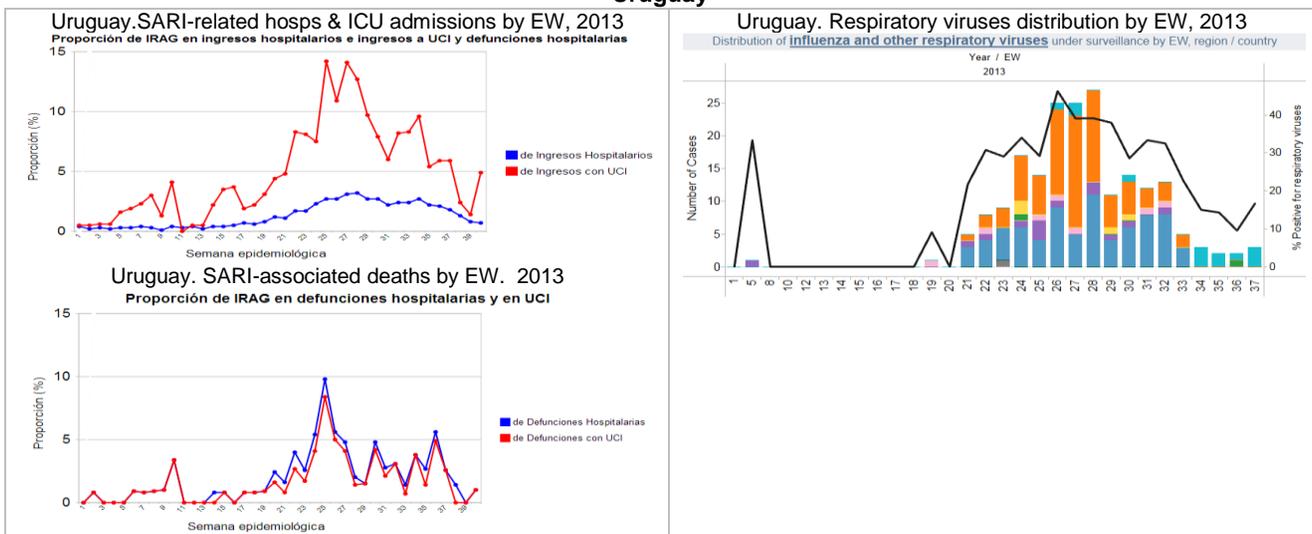
influenza. Among the positive samples, influenza B predominated (50.0%), followed by adenovirus (23.1%) and influenza A(H3N2) (11.5%).

Paraguay



In Uruguay¹³, the proportions of SARI-associated hospitalizations and deaths increased compared to the previous EW, but the proportion of ICU admissions continued a decreasing trend. Based on laboratory data from EW 36-37, 39 SARI samples were analyzed, of which 12.8% were positive for influenza. Among the positive samples (n=5), 80% were influenza A (of which 100% were A(H3N2)) and 20% were influenza B.

Uruguay



¹³ Uruguay. Generador de gráficos de la división de epidemiología, Dirección General de Salud – Ministerio de Salud Pública