

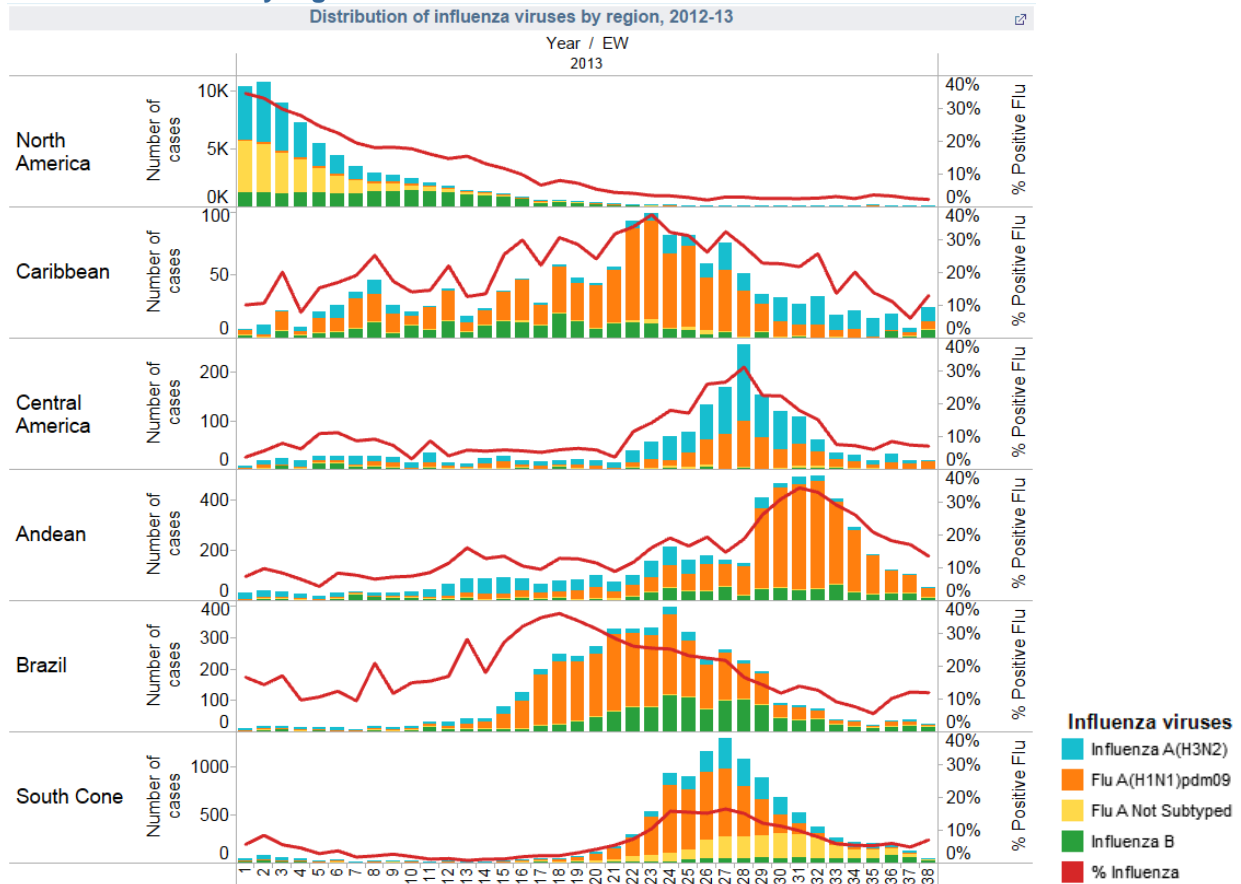
PAHO interactive influenza data: http://ais.paho.org/phis/viz/ed_flu.asp
Influenza Regional Reports: www.paho.org/reportesinfluenza

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.

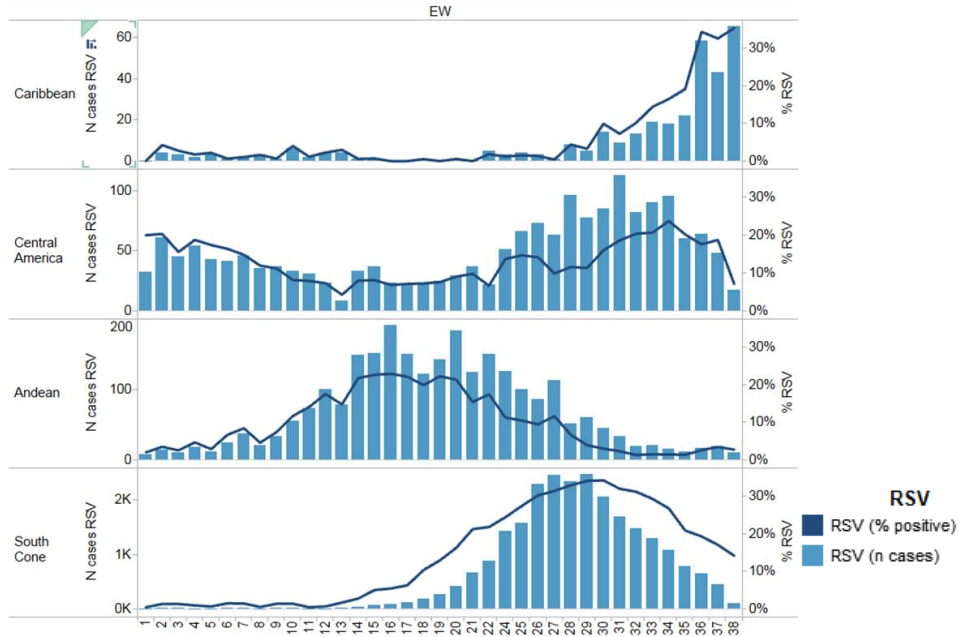
WEEKLY SUMMARY

- **North America:** Influenza activity in Canada and 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 respiratory infection activity remains stable in this sub-region, there has been increased RSV activity in some countries (Cuba, 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 activity in July and August. Co-circulation of influenza A(H1N1)pdm09 and influenza B was reported in Bolivia, Ecuador and Peru, whereas RSV predominated in Colombia.
- **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 elevated. RSV predominated in most countries with co-circulation of influenza B and A(H3N2) in Paraguay and Uruguay. In South and Southeast Brazil, influenza activity continued to decrease, with co-circulation of influenza A(H1N1)pdm09 and influenza B reported.

Influenza circulation by region. 2013



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

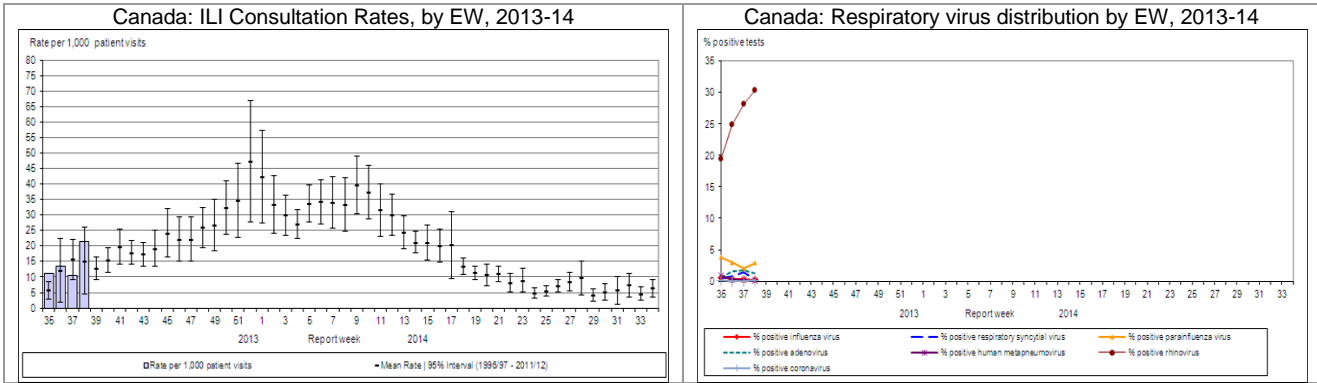
EPIDEMIOLOGIC AND VIROLOGIC UPDATE OF INFLUENZA & OTHER RESPIRATORY VIRUSES BY COUNTRY

North America:

In Canada¹, during EW 37-38, influenza activity remained low with national influenza-like-illness (ILI) consultation rates of 10.5 and 21.3 per 1,000 patient visits, respectively. No influenza-associated pediatric deaths were reported during this period. Based on laboratory data for EW 37-38, the overall percentages of positive influenza tests were 0.3% and 0.2%, respectively. Among the positive samples (N=7), 71.4% were associated with influenza A (most of which were not subtyped) and 28.6% with influenza B. Among other respiratory viruses, rhinovirus predominated (30.3%), followed by parainfluenza (2.9%), adenovirus (1.3%), RSV (0.4%), coronavirus (0.1%) and human metapneumovirus (0.1%).

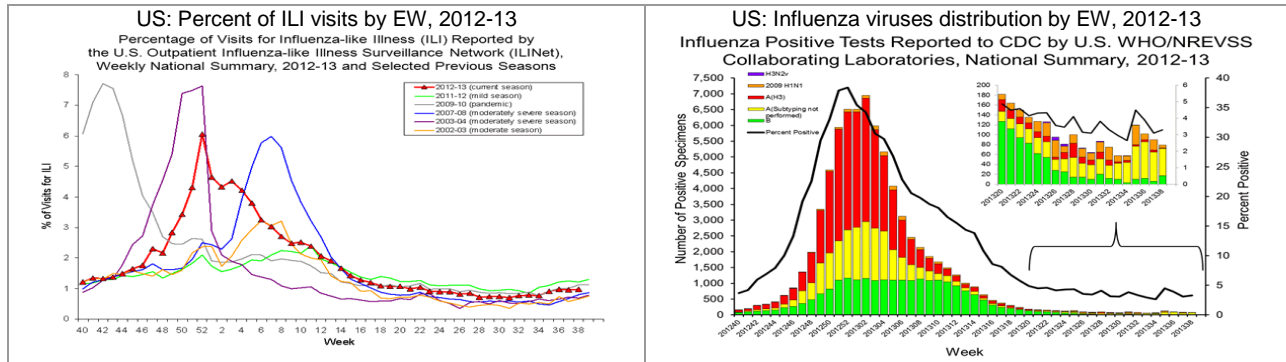
¹ Canada: FluWatch Report. EW 37-38. Available at <http://www.phac-aspc.gc.ca/fluwatch/>

Canada



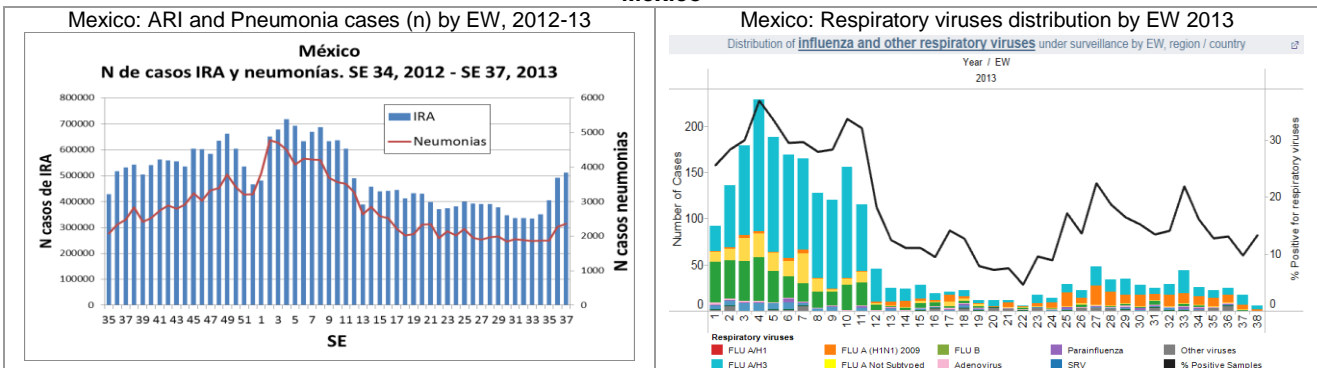
In the United States² during EW 38, influenza activity remained low with 1.0% of outpatient visits associated with ILI and 5.7% of deaths associated with pneumonia and influenza. No influenza-associated pediatric deaths were reported during EW 37. Based on laboratory data for EW 38, 2,393 samples were 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. Public health and agriculture officials are investigating the disease among humans and swine, and more cases may be identified as the investigation continues.

United States



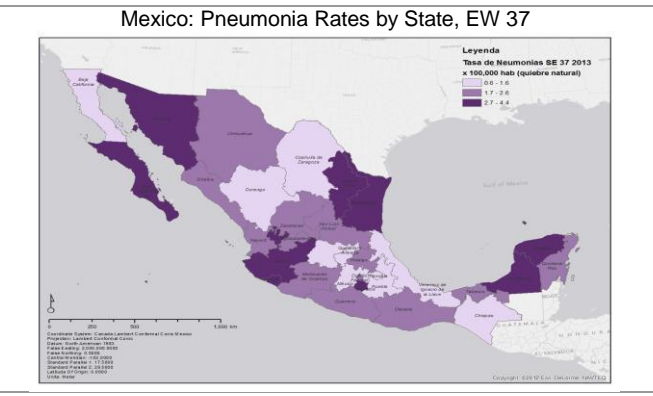
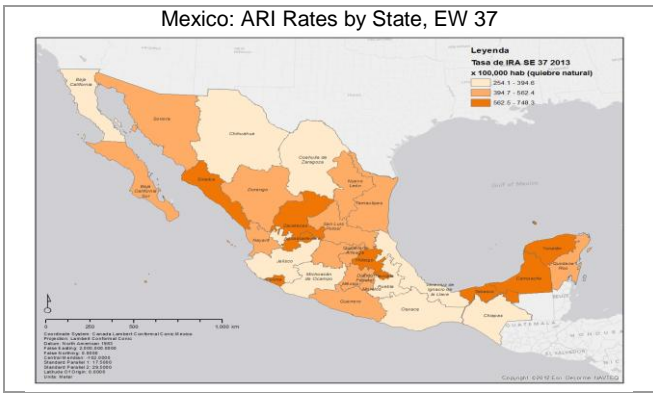
In Mexico³, during EW 38 respiratory virus activity showed an increasing trend with the number of ARI and pneumonia cases increasing by 3.7% and 4.4%, respectively, from the previous EW. According to laboratory data from EW 37-38, 240 samples were tested, of which 10.4% were positive for influenza. Among the positives, 96.0% were influenza A (58.3% were A(H3N2) and 29.2% were A(H1N1)pdm09) and 4.0% were influenza B.

Mexico



² USA: CDC FluView report. EW 38. Available at: <http://www.cdc.gov/flu/weekly/>

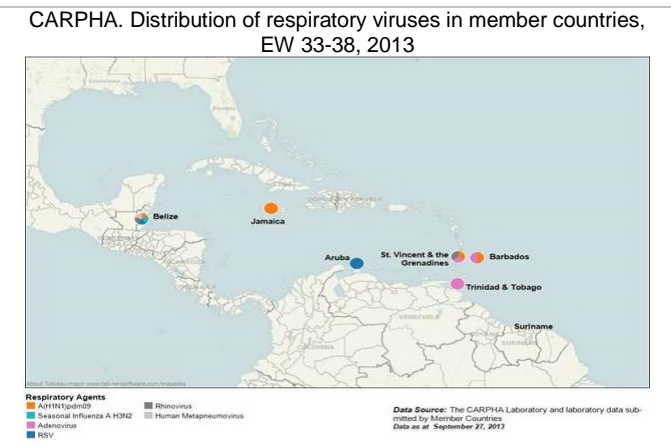
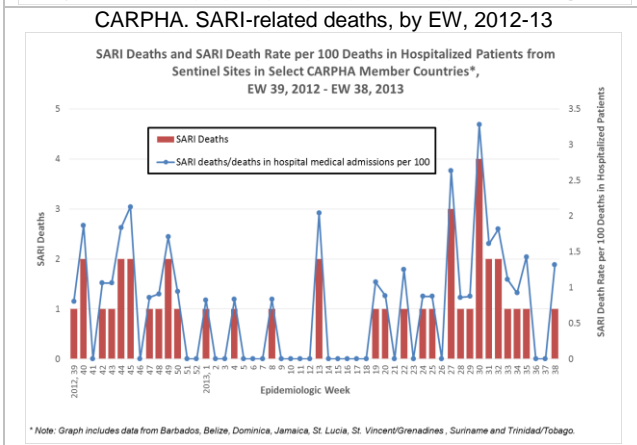
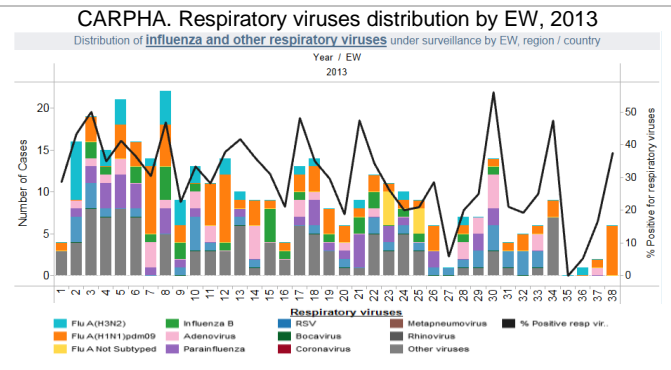
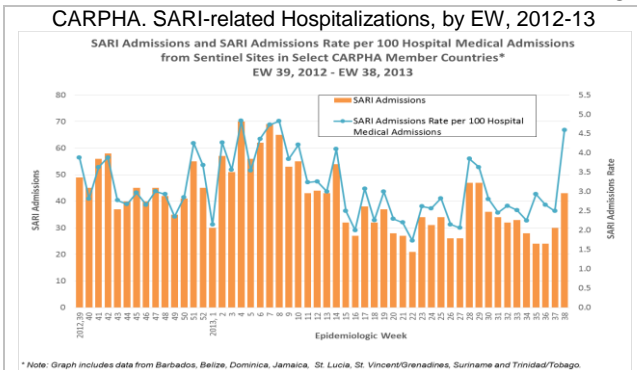
³ México. Dirección General de Epidemiología. Información epidemiológica. SE 37.



Caribbean

CARPHA⁴ 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 rate among children 6 months to 4 years of age (15.9%). 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.

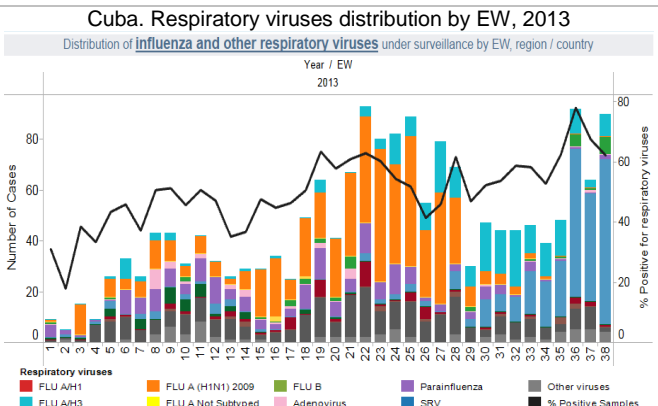
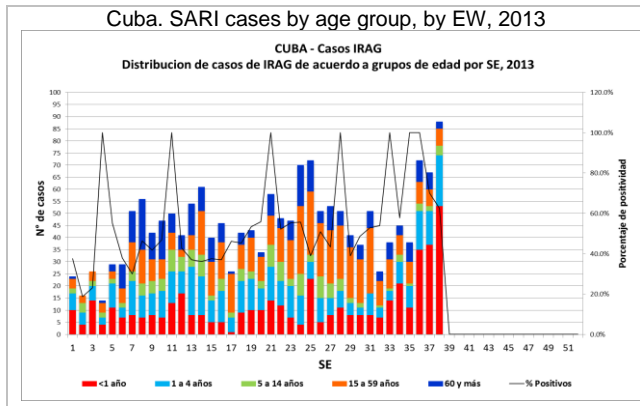
CARPHA



In Cuba during EW 38, the number of SARI-associated hospitalizations decreased compared to the previous EW and children less than one year of age comprised the largest proportion of these cases. One SARI-associated death was reported during this period and it was positive for a respiratory virus. According to national laboratory data for EW 35-38, 435 samples were analyzed, of which 67.6% were positive for a respiratory virus and 11.5% were positive for influenza. Among positive samples influenza A(H3N2) (100% of influenza A samples) and RSV (63.9%) predominated.

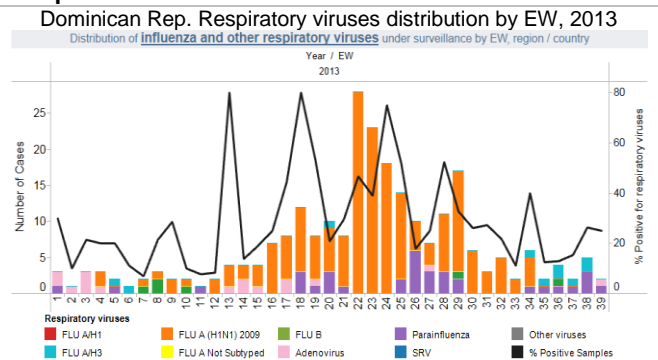
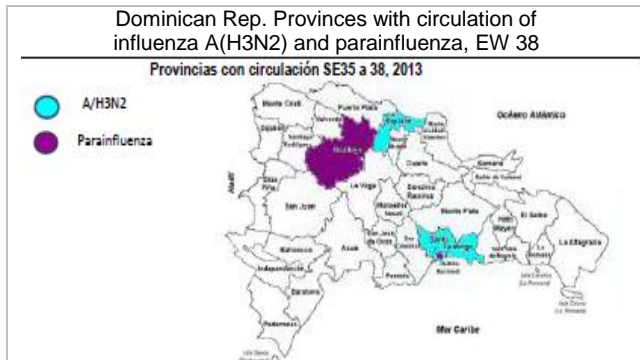
⁴ Caribbean Public Health Agency (CARPHA) EW 38

Cuba



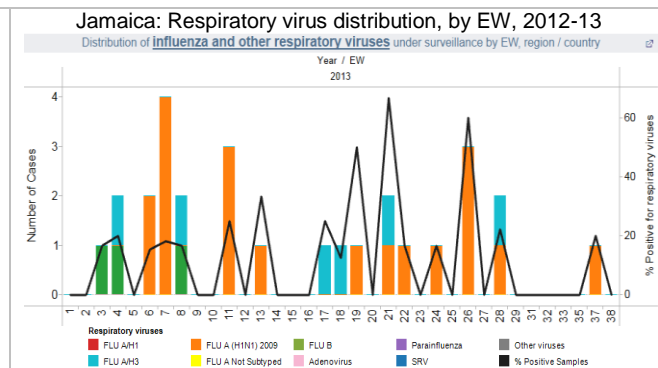
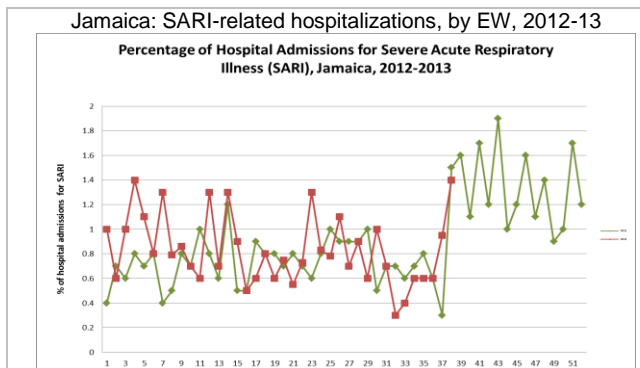
In the Dominican Republic⁵, the cumulative ILI rate for EW 1-38 was 1,251 per 10,000 inhabitants, and is 15% less than what was reported for the same period in 2012. During the same period, 1,288 SARI cases were reported through sentinel surveillance, of which 23 were reported during EW 38. One SARI-associated death was reported during EW 38 in a five-month old child. There have been 27 SARI-associated deaths reported this year (compared to 5 in 2012). According to laboratory data for EW 35-38, 79 samples were analyzed, of which 16.5% were positive for a respiratory virus and 8.9% were positive for influenza. Among positive influenza samples, 85.7% were influenza A (100% were influenza A(H3N2)) and 14.3% were influenza B. Among other respiratory viruses, parainfluenza (46.2% of positive samples) predominated.

Dominican Republic



In Jamaica, based on sentinel surveillance data for EW 38, the proportion of ARI-associated consultations was 4.0%, a 0.7% increase from the previous EW. The proportion of SARI-associated hospitalizations was less than 1% and remained stable compared to the previous weeks, and no SARI-associated deaths were reported. According to laboratory data during EW 38, no influenza viruses were detected among the samples tested (n=4). There continues to be sporadic detection of influenza A(H3N2) and A(H1N1)pdm09.

Jamaica

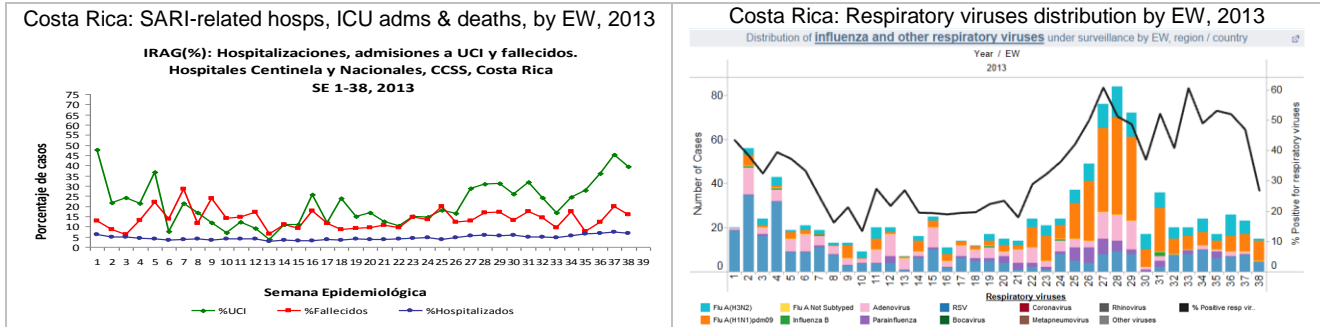


⁵ República Dominicana. Dirección Nacional de Vigilancia Epidemiológica. Boletín Semanal SE 38.

Central America

In Costa Rica, according to national surveillance data during EW 38, 6.7% of hospitalizations 39.4% of ICU admissions and 16% of deaths were associated with SARI. Based on national laboratory data from EW 35-38, 187 samples were analyzed, of which 43.3% were positive for a respiratory virus and 25.7% were positive for influenza. Among influenza positive samples, 100% were influenza A (58.3% A(H1N1)pdm09 and 41.7% A(H3N2)). Among other respiratory viruses, RSV (32.1% of positive samples) predominated, followed by adenovirus (4.9%) and parainfluenza (3.7%).

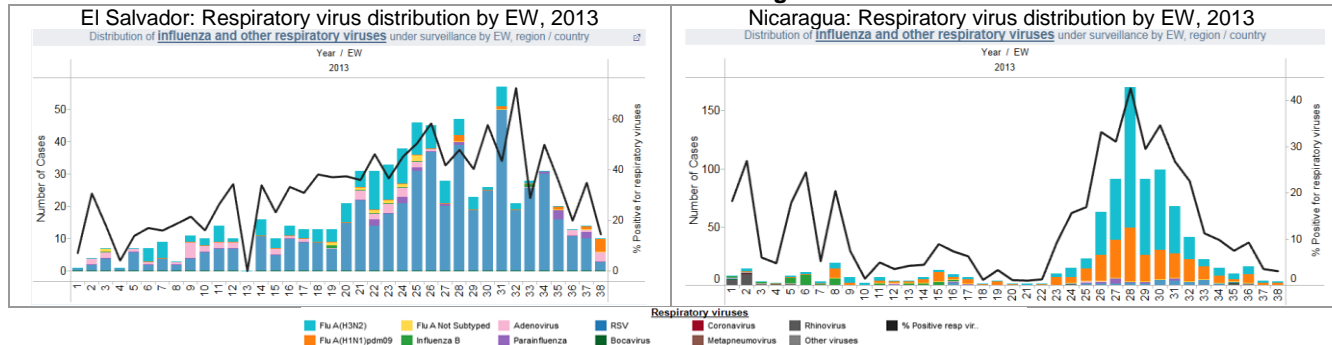
Costa Rica



In El Salvador, based on national laboratory data from EW 35-38, 230 samples were analyzed, of which 24.8% were positive for a respiratory virus and 2.6% were positive for influenza. Among influenza positive samples, 100% were influenza A(H1N1)pdm09. Among other respiratory viruses, RSV predominated (70.2% of positive samples), followed by adenovirus (10.5%) and parainfluenza (8.8%).

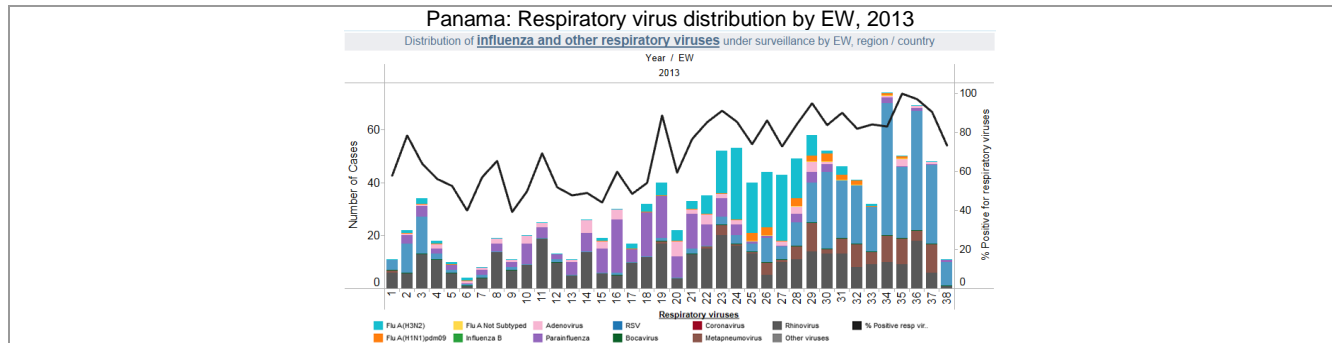
In Nicaragua, based on national laboratory data from EW 35-38, 520 samples were analyzed, of which 6.3% were positive for a respiratory virus and 5.4% were positive for influenza. Among influenza positive samples, 100% were influenza A (53.6% were A(H3N2) and 46.4% were A(H1N1)pdm09). Among other respiratory viruses, rhinovirus and RSV were detected.

El Salvador and Nicaragua



In Panama, based on national laboratory data from EW 35-38, 189 samples were analyzed, of which 94.2% were positive for a respiratory virus. Among positive samples, RSV (62.4%) predominated, followed by rhinovirus (19.6%), metapneumovirus (14.0%) and adenovirus (2.8%).

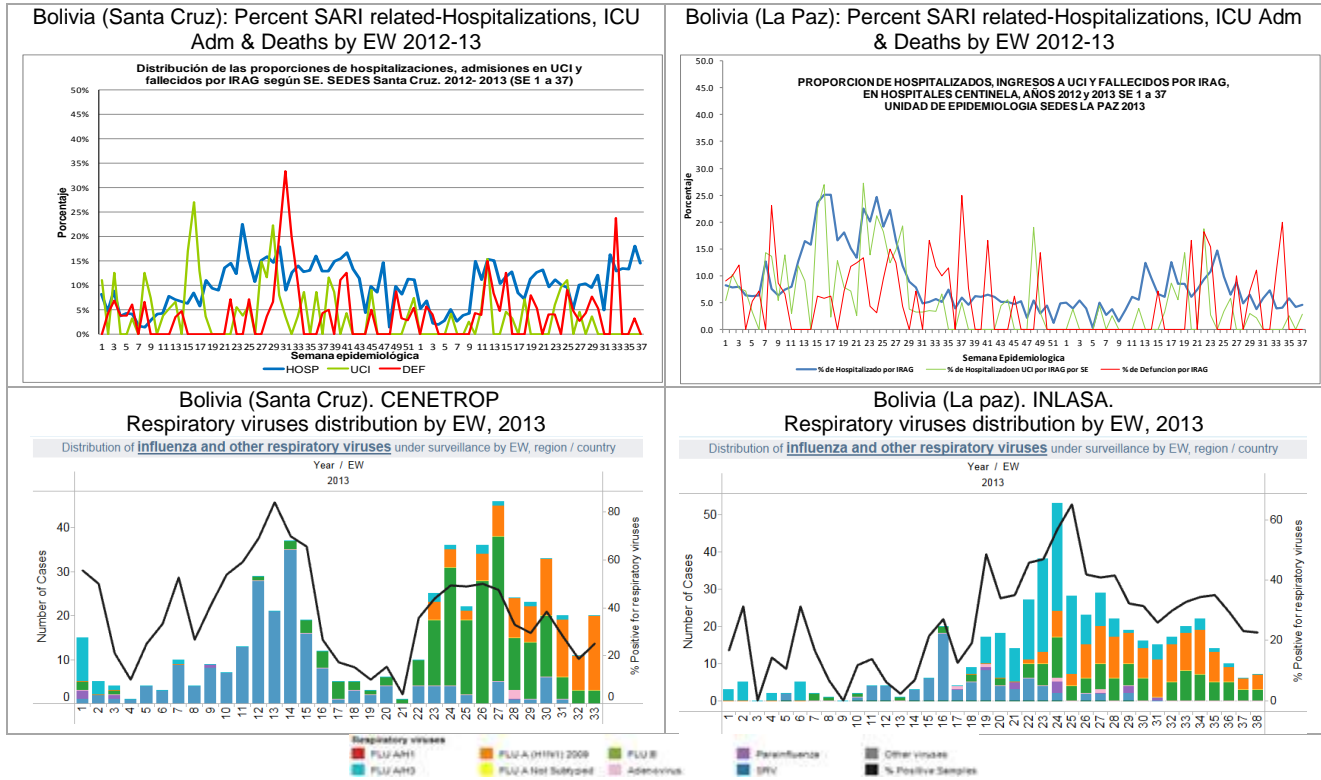
Panama



South America – Andean countries

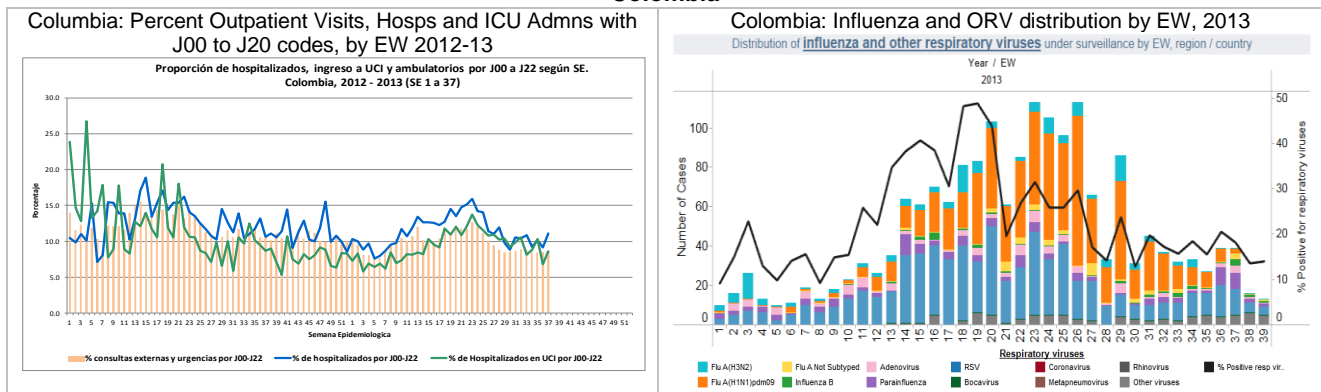
In Bolivia, according to data from Santa Cruz during EW 37, the proportion of SARI hospitalizations (14%) remained elevated compared to this period last year. Based on laboratory data from CENETROP (Santa Cruz) during EW 37-38, 203 SARI samples were analyzed, of which 24.6% were positive for a respiratory virus. Among the positive samples, influenza A(H1N1)pdm09 (80.0%) predominated. According to data from La Paz, the proportion of SARI-associated hospitalizations in EW 37 (4.7%) did not change significantly during the previous weeks and 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 37, the proportions of outpatient visits (8.6%), hospitalizations (11%), and ICU admissions (8.6%) 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 38-39, 211 samples were analyzed, of which 13.7% were positive for a respiratory virus and 1.0% were positive for influenza. Among the positive samples, RSV (31.0%) and parainfluenza (13.8%) predominated.

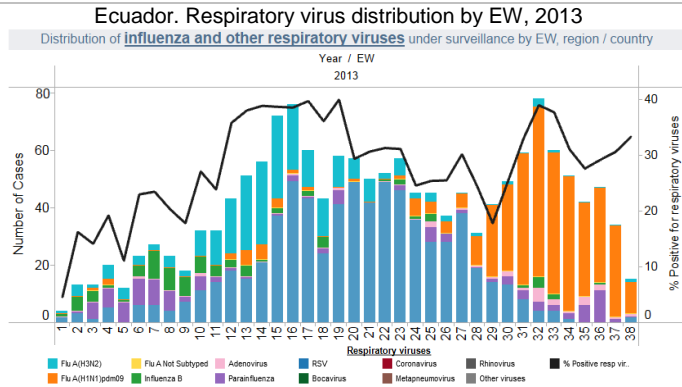
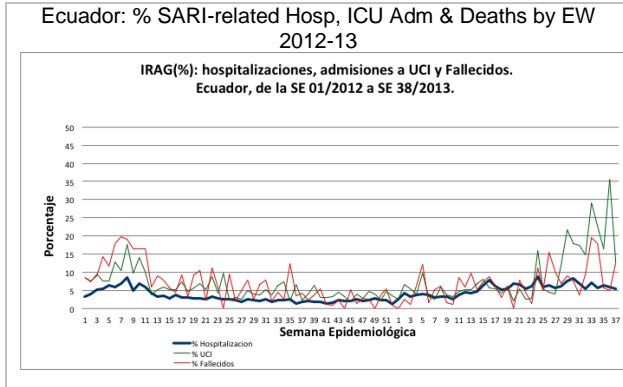
Colombia



In Ecuador, based on SARI surveillance data from EW 38, the proportion of SARI-associated hospitalizations (5%) remained stable compared to the previous weeks, but exceeded the values observed during this same period last year. Based on national reference laboratory data from EW 36-38, 317 SARI samples were

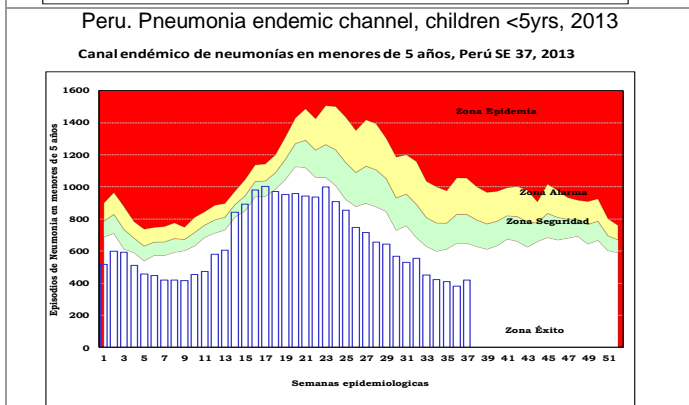
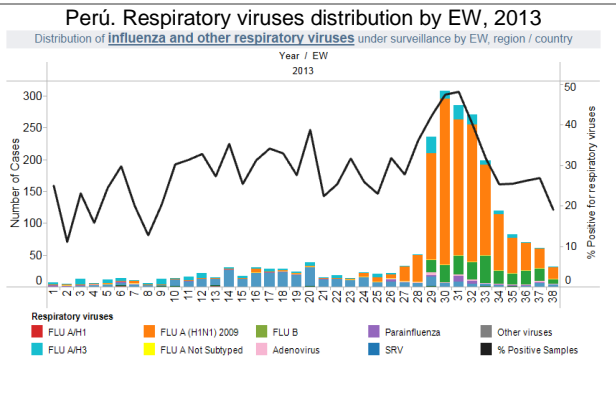
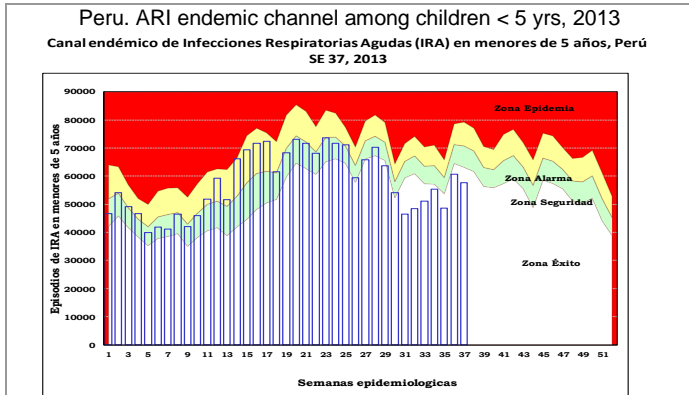
analyzed, of which 30.0% were positive for a respiratory virus and 24.0% were positive for influenza. Among the positive samples, influenza A(H1N1)pdm09 (79.0%) predominated.

Ecuador



In Peru⁶, ARI reports in children less than 5 years of age have been increasing 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 remained stable for the last weeks. Based on national laboratory data from EW 36-38, 512 samples were analyzed, of which 31.8% were positive for a respiratory virus and 28.7% were positive for influenza. Among the positive samples, influenza A(H1N1)pdm09 (64.6%) and influenza B (34.6%) predominated.

Peru

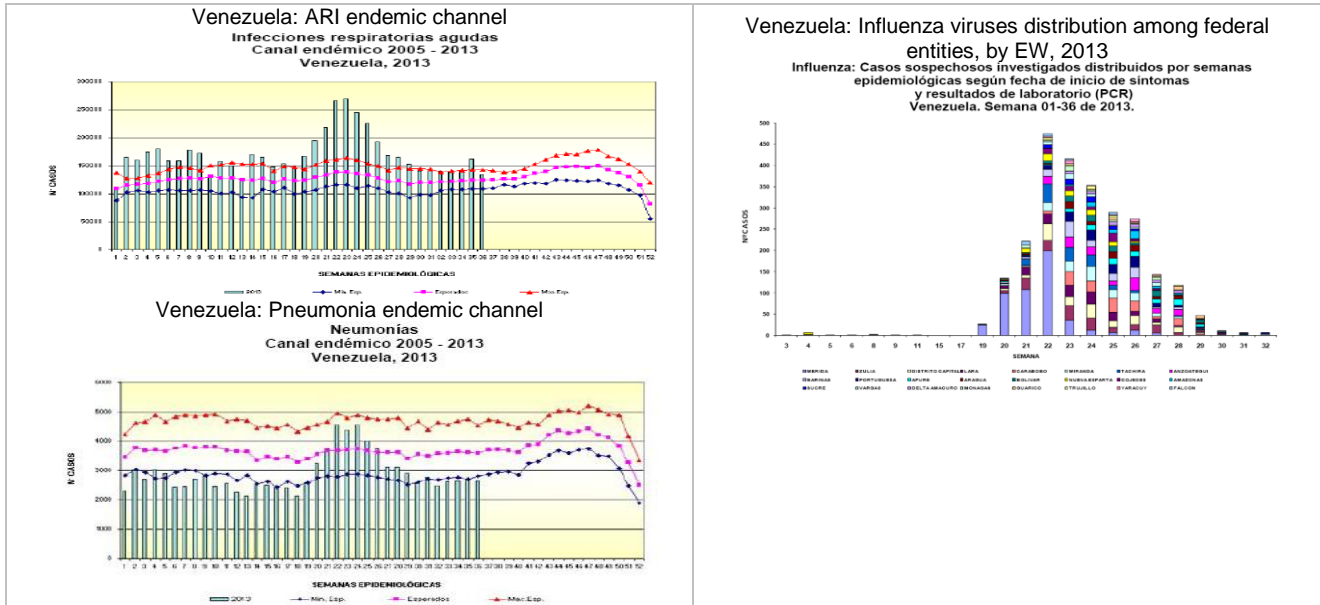


In Venezuela⁷, ARI and pneumonia activity during EW 37 were within the expected values for this time of year. Based on virologic data from EW 1-37, 5,133 samples were analyzed from suspected influenza cases, of which 53.9% were positive for influenza. Among the positive samples, 92.4% were influenza A(H1N1)pdm09. The federal entities with the largest number of suspected influenza cases were Mérida (n=948), Distrito Capital (n=377), Zulia (n=350), Carabobo (n=324), Táchira (n=291) and Lara (n=289).

⁶ Perú. Sala de Situación de Salud. EW 37, 2013. Ministerio de Salud. Dirección General de Epidemiología

⁷ Venezuela. Boletín epidemiológico, EW 37, 2013.

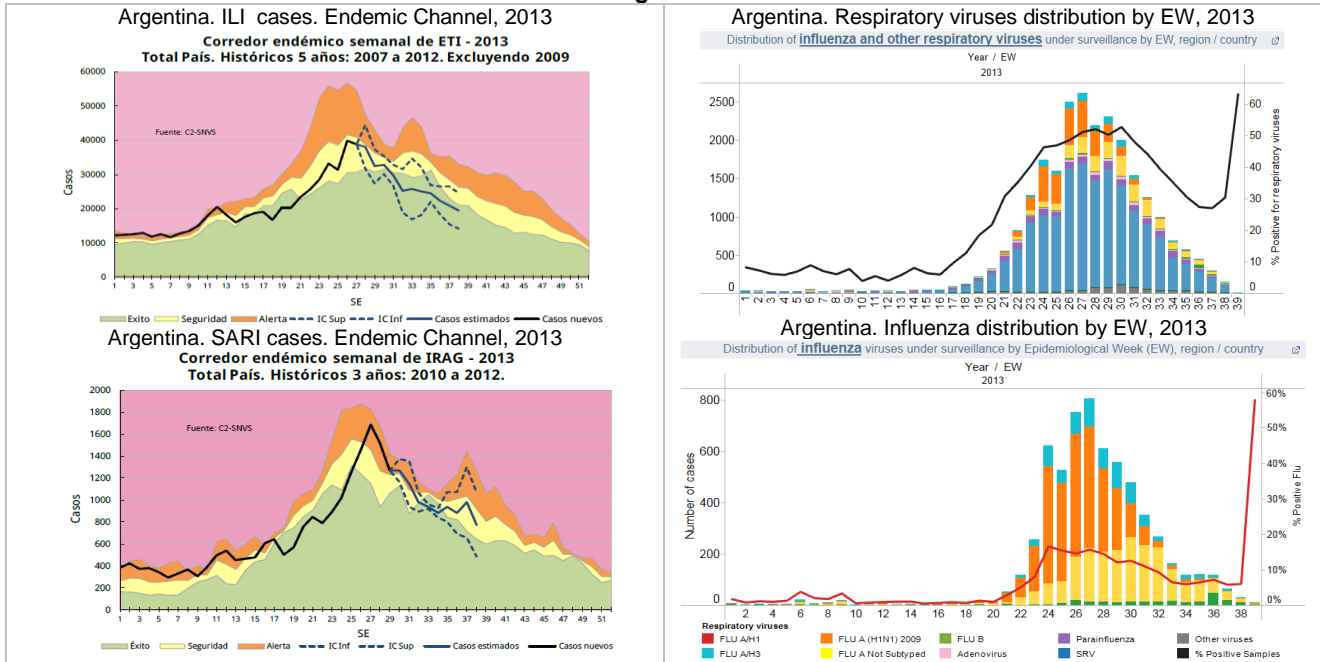
Venezuela



South America – Southern Cone and Brazil

In Argentina⁸, according to reports and calculated estimations, national ILI activity 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 entered the security zone of the endemic channel and also showed a decreasing trend. Based on laboratory data from EW 38, 513 samples were analyzed, of which 30.4% were positive for a respiratory virus and 6.0% for influenza. Among positive samples, RSV predominated (57.1%).

Argentina



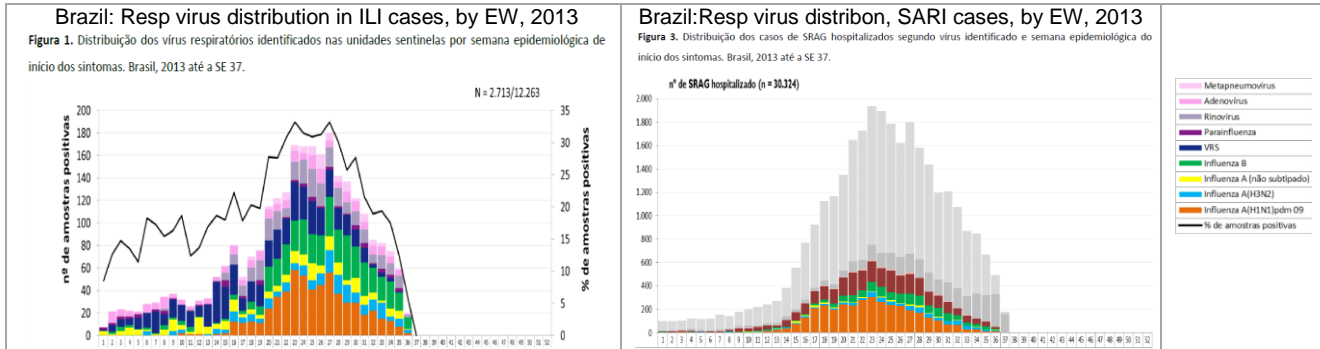
In Brazil⁹, according to ILI sentinel surveillance data through EW 37, 12,263 samples have been analyzed, of which 22.1% were positive for influenza or other respiratory viruses. Positivity has decreased since EW 27, but among positive samples influenza B predominated, primarily in the South and Southeast regions. Based on universal SARI surveillance data during this same period, 30,324 SARI cases were reported and 17.9% were positive for influenza. Of these positive samples, influenza A(H1N1)pdm09 predominated (65.5%), followed by influenza B (20.7%) and A(H3N2) (10.6%). Through EW 37, 3,377 SARI-associated deaths

⁸ Argentina. Boletín integrado de vigilancia. SE 37.

⁹ Brasil. Boletim informativo. Secretaria de Vigilância em Saúde. SE 37, 2013.

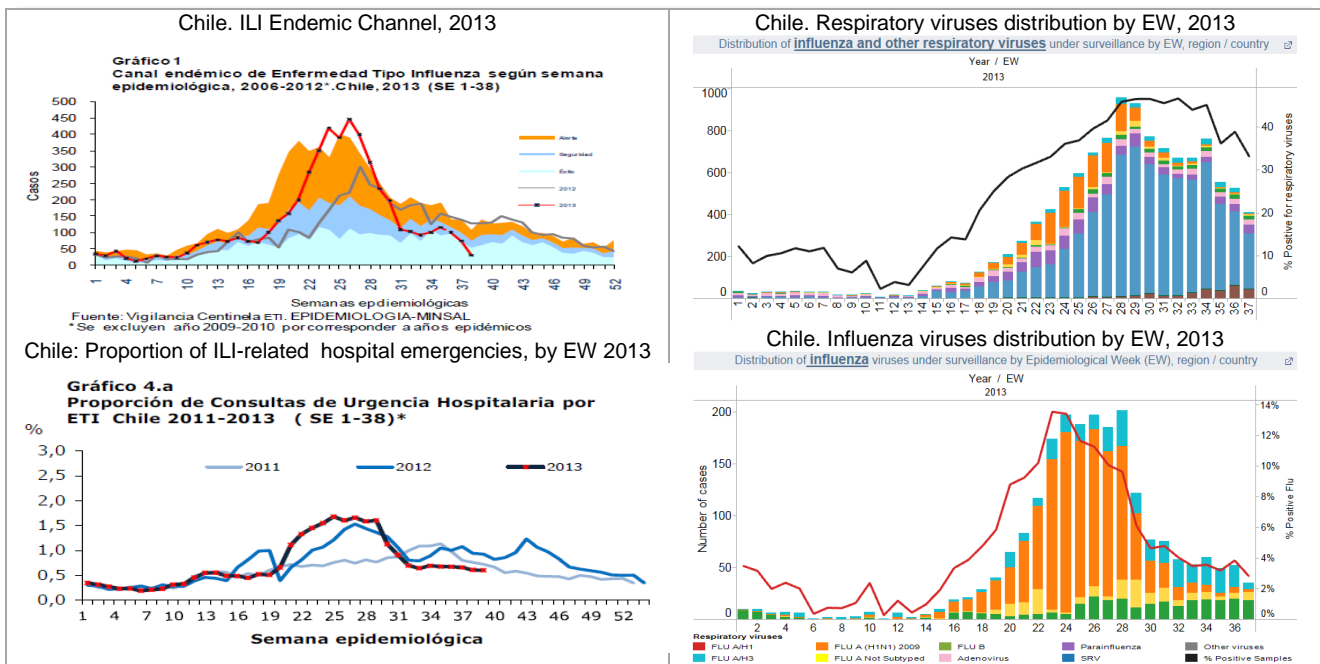
were reported of which 25.8% were positive for influenza, and of these, 82.8% were associated with influenza A(H1N1)pmd09.

Brazil



In Chile¹⁰ ILI activity during EW 38 (rate: less than 2 per 100,000 inhabitants) continued a decreasing trend and was in the success zone of the endemic channel. The low level of activity this EW was associated with national holidays. The proportion of ILI-associated hospital emergencies in EW 37 (0.6%) remained below the values observed during this time last year. Based on laboratory data from EW 38, 663 samples were analyzed, of which 32% were positive for a respiratory virus. Among the positive samples RSV predominated (64%) followed by metapneumovirus (15%) and parainfluenza (10%).

Chile

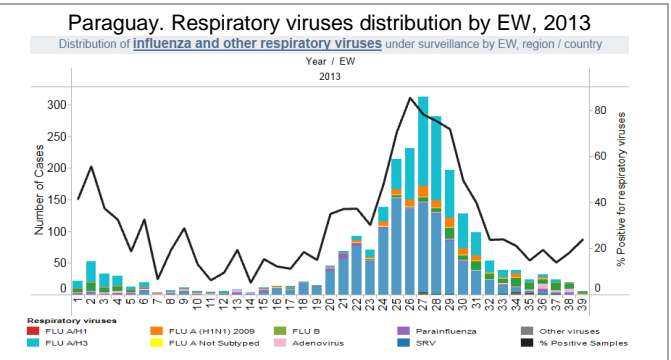
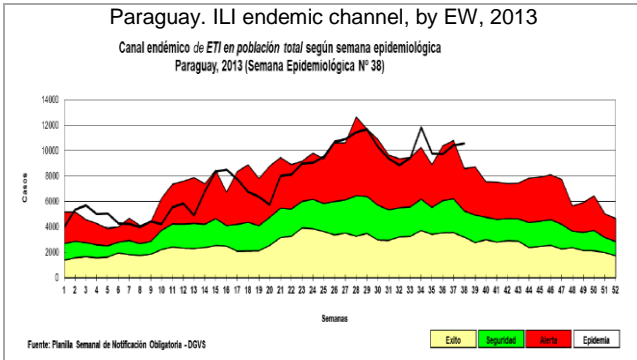


In Paraguay¹¹ during EW 38, the ILI consultation rate (158.3 per 100,000 inhabitants) increased compared to the previous EW and was higher than expected for this time of year. However, the proportion of SARI-associated hospitalizations (4.7%) decreased compared to the previous week. Based on reference laboratory data from EW 37-38, 280 samples were analyzed, of which 15.7% were positive for a respiratory virus and 10.0% were positive for influenza. Among the positive samples, influenza B predominated (47.7%), followed by adenovirus (20.5%) and influenza A(H3N2) (15.9%).

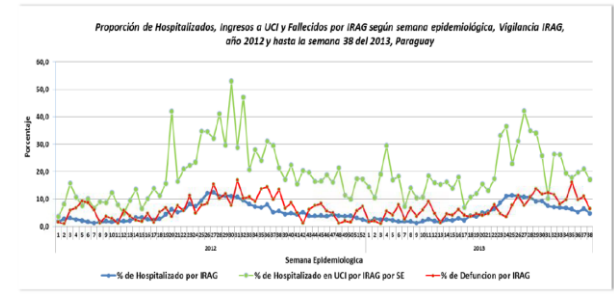
¹⁰ Chile. Informe de situación. EW 38. Disponible en: <http://epi.minsal.cl/>

¹¹ Paraguay. Informe de situación. Vigilancia de ETI e IRAG. SE 38, 2013

Paraguay

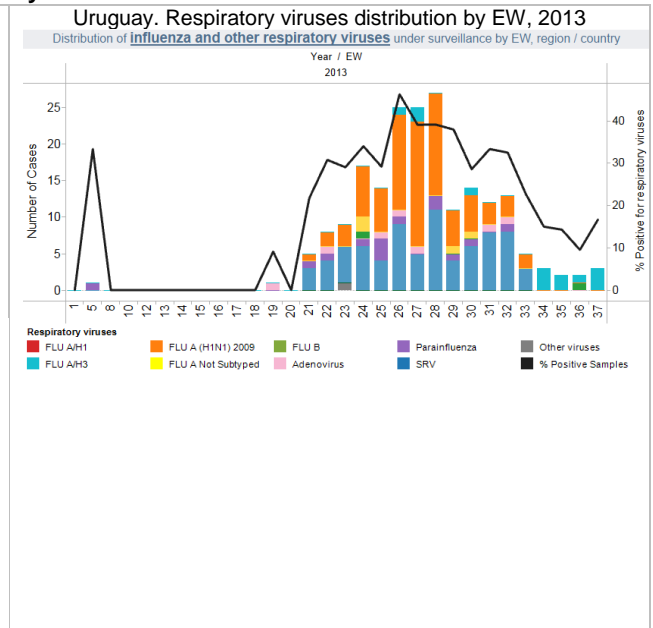
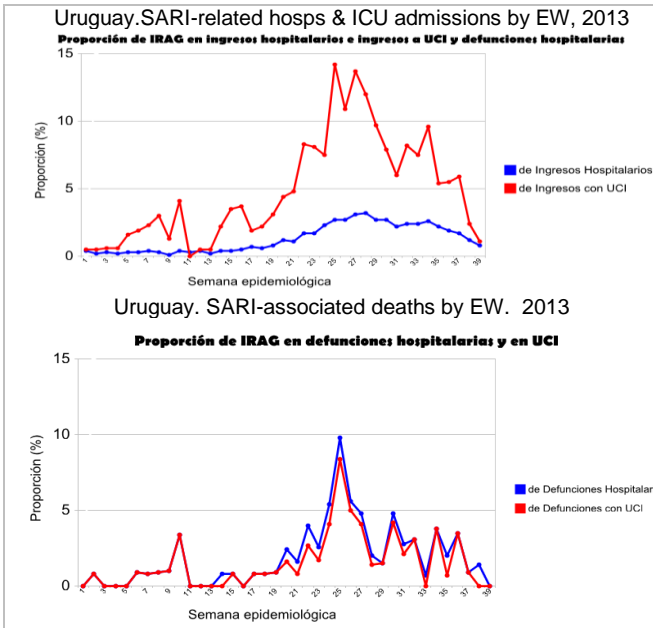


Paraguay: % SARI Hosps, ICU Adms & Deaths by EW 2012-13



In Uruguay¹², the proportions of SARI-associated hospitalizations and ICU admissions continued their decreasing trends for the last several weeks. The proportion of SARI-associated deaths also demonstrated a decrease during the same period. 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



¹² Uruguay. Generador de gráficos de la división de epidemiología, Dirección General de Salud – Ministerio de Salud Pública