



PAHO interactive influenza data: http://ais.paho.org/phis/viz/ed_flu.asp

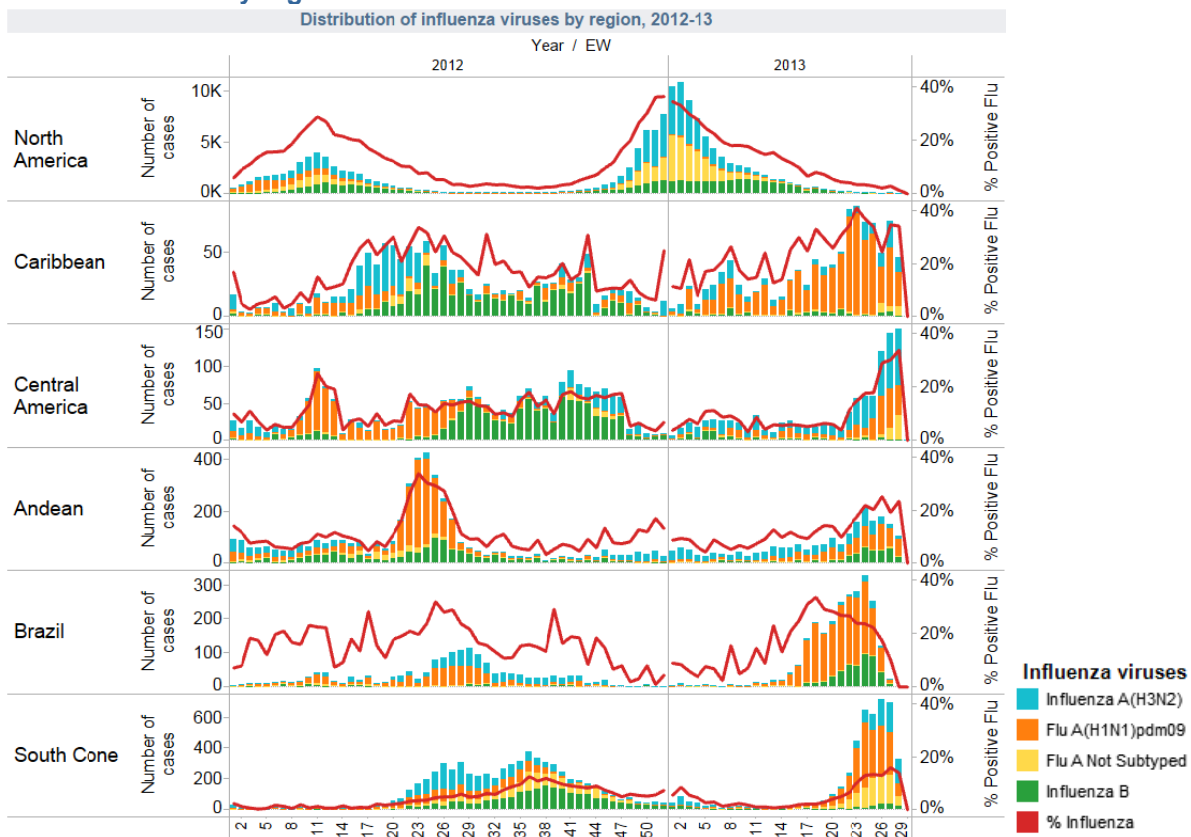
Influenza Regional Reports: www.paho.org/reportesinfluenza

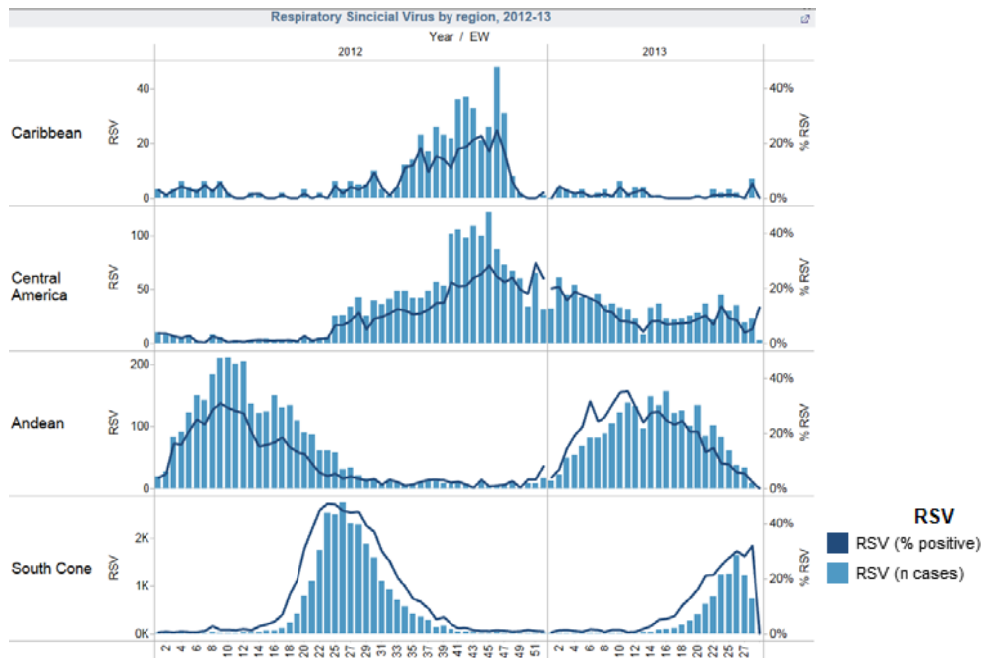
The information presented in this update is based on data provided by Ministries of Health and National Influenza Centers of Member States to the Pan American Health Organization (PAHO) or from updates on the Member States' Ministry of Health web pages.

WEEKLY SUMMARY

- **North America:** most influenza activity indicators were low and within expected levels for this time of year. In the United States, 12 cases of influenza A(H3N2v) have been reported (no hospitalizations or deaths have been reported) and these infections have mostly been associated with prolonged exposure to pigs at agricultural fairs.
- **The Caribbean and Central America:** influenza activity continued to be high in Cuba and decreased in the Dominican Republic. Meanwhile, it increased in some countries in Central America (Costa Rica, El Salvador, Nicaragua). In Central America, co-circulation of A(H1N1)pdm09 (in Costa Rica and Nicaragua) and A(H3N2) (in El Salvador, Nicaragua and Panama) were reported. Among other respiratory viruses, RSV has also been increasing in El Salvador in the last weeks.
- **South America – Andean Countries:** acute respiratory illness activity continued to decrease in Colombia and Venezuela. In this region, influenza A(H1N1)pdm09 predominates, with a substantial increase seen in Peru. Meanwhile, influenza B predominates in Santa Cruz (Bolivia) and RSV in Ecuador.
- **South America - South Cone:** acute respiratory illness activity was high. Although some indicators showed a decreasing trend; Uruguay and the southern Brazil continue to see an increase. RSV predominated in most countries, with co-circulation of influenza A(H1N1)pdm09 in Argentina, Brazil, Chile and Uruguay, and influenza A(H3N2) in Paraguay.

Influenza circulation by region. 2012-2013



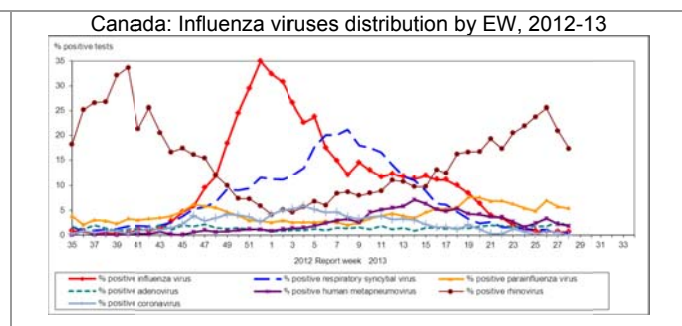
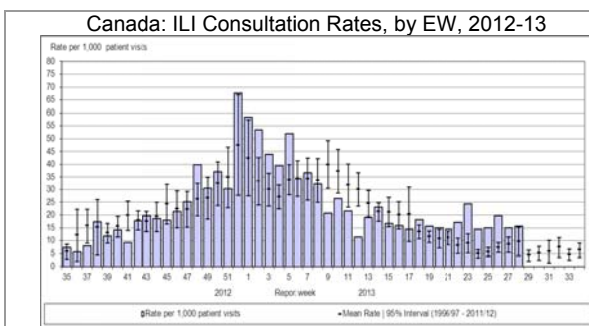


EPIDEMIOLOGIC AND VIROLOGIC UPDATE OF INFLUENZA & OTHER RESPIRATORY VIRUSES BY COUNTRY

North America:

In Canada¹, during EWs 27 and 28, influenza activity remained at low, with no regions reporting localized activity. Nationally, the influenza-like-illness (ILI) consultation rate (15.6 ILI consultations per 1,000 patient visits in EW 28) has been similar for the past 14 weeks. The ILI rates observed during EWs 18 to 28 were above the expected range, with the highest rate observed among children under 5 years of age. Among the total samples analyzed, the percentage of positive influenza tests decreased, and was 0.7% in EW 27 and 0.6% in EW 28. Of these positive influenza cases, 85.1% were influenza A (34.7% A(H3), 4.7% A(H1N1)pdm09 and 60.5% A, unsubtype), and 14.9% were influenza B viruses. Among other respiratory viruses, the percentage of positive tests for rhinovirus decreased from its peak in EW 26 (25.6%) to 21.1% in EW 27 and 17.5% in EW 28. The percentage of positive tests for parainfluenza continued the downward trend observed since EW 16, and was 5.7% in EW 27 and 5.4% in EW 28. The percentage of positive tests for other respiratory viruses was low in EW 28: human metapneumovirus (1.9%), adenovirus (1.8%), RSV (0.5%), and coronavirus (0%). There were no pediatric deaths reporting during EW 27 and 28. During the 2012-13 season, 1,490 influenza viruses have been antigenically characterized: 100% of influenza A(H3N2) and A(H1N1)pdm09 viruses were antigenically similar to the vaccine strain. Among the influenza B viruses, 77.8% (n=462) were antigenically similar to the vaccine strain B/Wisconsin/01/2010 (Yamagata lineage) and 22.2% (n=132) were similar to B/Brisbane/60/2008 (Victoria lineage). During the 2012-13 season, 1,487 influenza viruses have been tested for oseltamivir resistance and 1,484 for zanamivir resistance; among these, one A(H3N2) virus was resistant to oseltamivir and zanamivir, one A(H1N1)pdm09 virus was resistant to oseltamivir, and three influenza B virus samples were resistant to both oseltamivir and zanamivir.

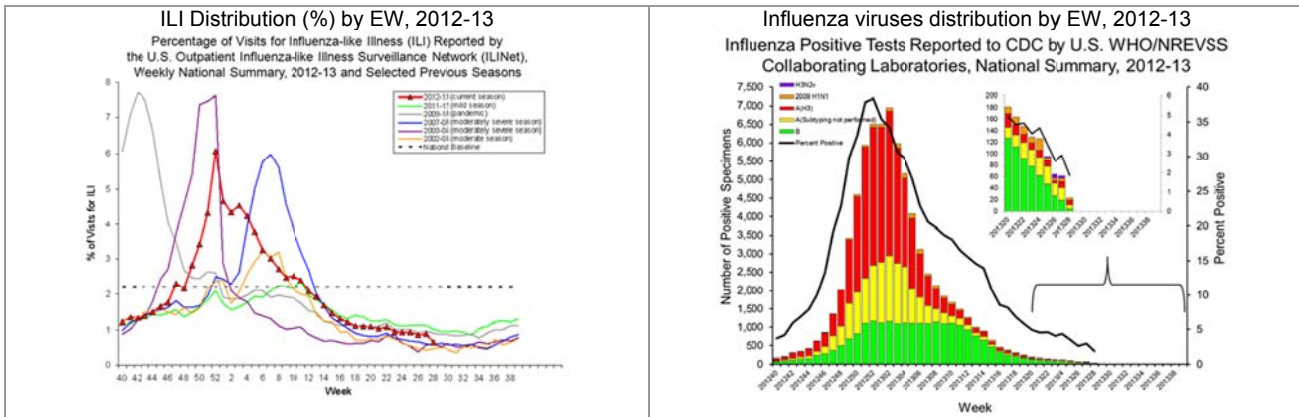
Canada



¹ Canada: FluWatch Report. EW 27&28. Available at <http://www.phac-aspc.gc.ca/fluwatch/>

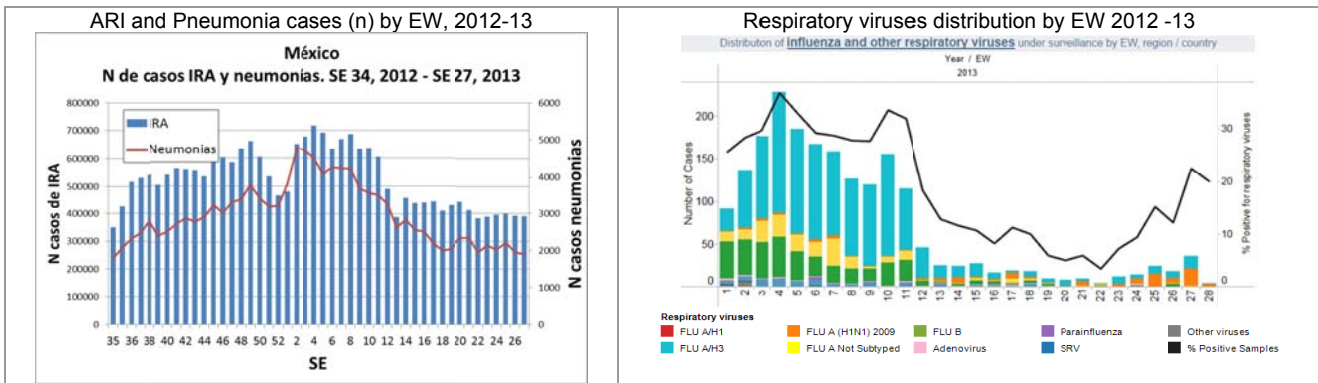
In the United States², during EW 28, influenza activity remained low. Nationally, the proportion of ILI consultations (0.6%) was below the national baseline of 2.2%. Nationally, the proportion of deaths attributed to pneumonia and influenza for EW 26 (5.3%) was below the epidemic threshold for this time of year. In EW 28, no influenza-associated pediatric deaths were reported. Among all samples tested during EW 27 (n=1,233), the percentage of samples positive for influenza (1.9%) decreased from the previous week. Among the influenza positive samples, 82.6% were influenza A (44% were influenza A(H3N2)) and 17.4% were influenza B. Recently, 12 human infections with an influenza A(H3N2) variant (H3N2v) were reported by Indiana. None of these persons were hospitalized and no deaths have occurred. At this time, 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, nationally the number of ARI and pneumonia cases decreased by 0.6% and 3.2%, respectively, from EW 26 to EW 27 and have shown decreasing trends since their peaks in 2013 (EW 4 for ARI and EW 2 for pneumonia). According to laboratory data, between EWs 24-27, 404 samples were tested, of which 16.9% were positive for influenza. Among the positive influenza samples, 95.1% were influenza A (56.4% were A(H1N1)pdm09 and 42.3% were A(H3N2)) and 4.9% were influenza B.

Mexico



Caribbean

CARPHA⁴, received weekly SARI/ARI data from 7 countries for EW 27: Barbados, Belize, Dominica, Jamaica, St. Lucia, St. Vincent and the Grenadines, and Trinidad and Tobago. In EW 27, the proportion of SARI-associated hospitalizations was 1.9% and the highest rate of SARI was among children 6 months to 4 years of age (6.9%). St. Lucia reported one (1) SARI death in EW 27, 2013. For cases with dates of onset between EW 22 to EW 27, the following viruses were laboratory confirmed in member countries: influenza A (H1N1)pdm09 (Jamaica, Trinidad and Tobago, St. Kitts & Nevis); influenza A(H3N2) (Barbados); influenza B (Barbados), adenovirus (St. Vincent and the Grenadines), human metapneumovirus (St. Vincent and the

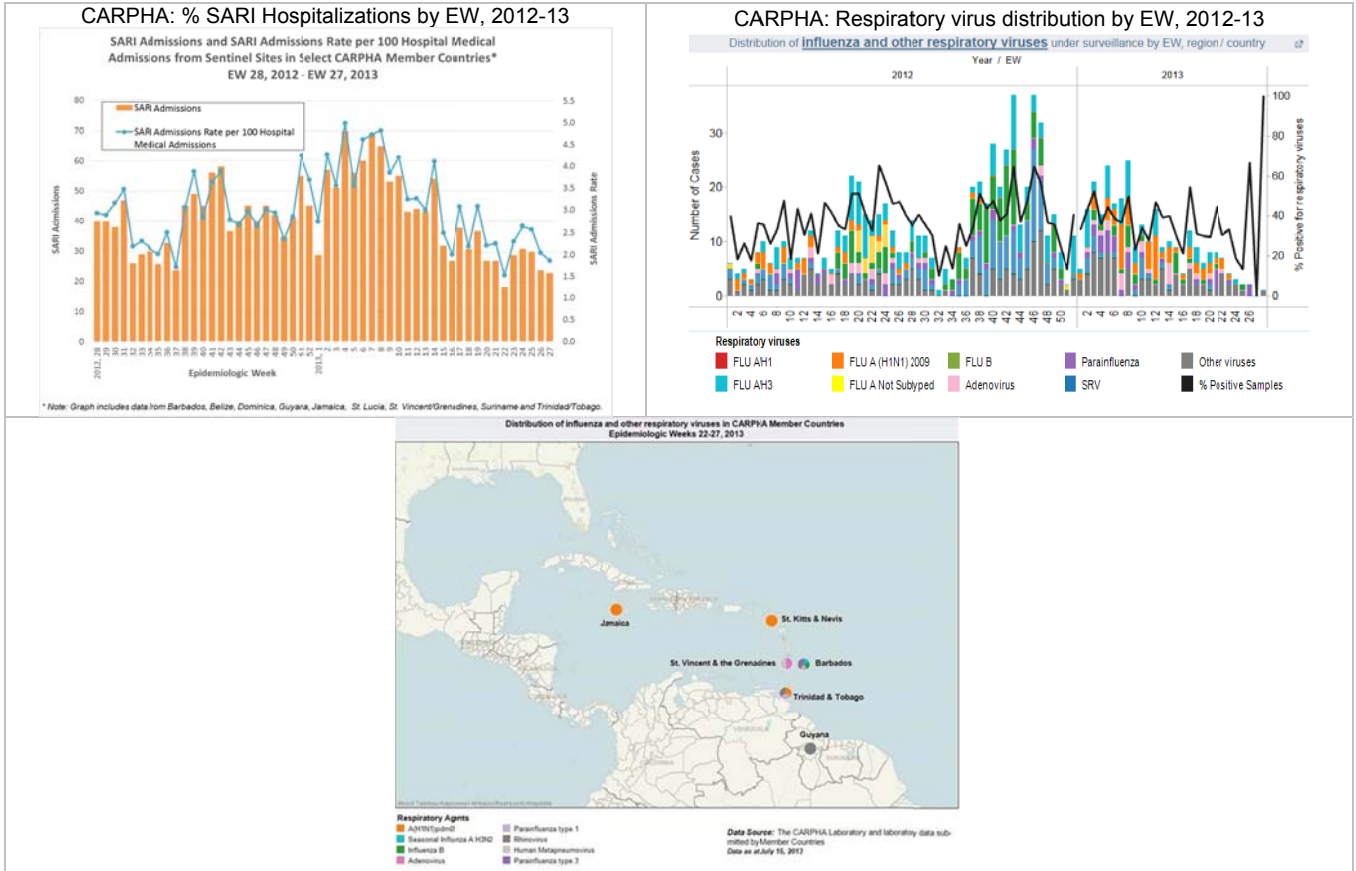
² USA: CDC FluView report. EW 28. Available at: <http://www.cdc.gov/flu/weekly/>

³ México. Dirección General de Epidemiología. Información epidemiológica. SE 28.

⁴ Caribbean Public Health Agency (CARPHA) EW 27

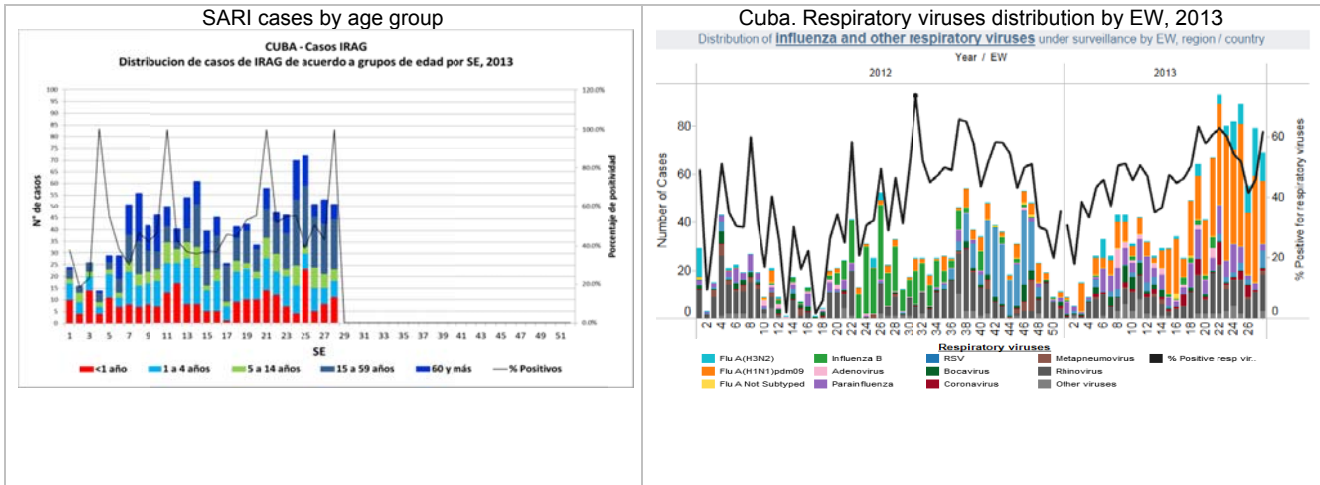
Grenadines), parainfluenza 1 (Barbados, Trinidad and Tobago), parainfluenza 3 (Barbados, Cayman islands), rhinovirus (Barbados, Trinidad and Tobago, Guyana). Through EW 27, CARPHA laboratory has confirmed 213 cases as positive for 1 or more respiratory agent, and the overall percentage positivity for specimens tested is 33.6%.

CARPHA

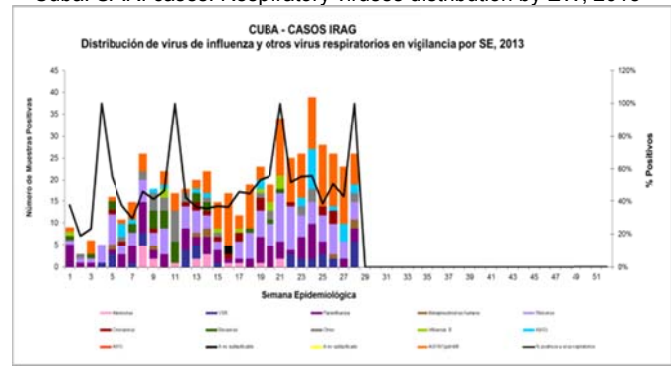


In Cuba, according to national laboratory data for EWs 25-28, 589 samples were analyzed and the average percent of samples positive for respiratory viruses was 50.2% and for influenza was 33.3%. Of the total positive samples for influenza A, 73.5% were influenza A(H1N1)pdm09 and 26.5% were influenza A(H3N2). Rhinovirus and parainfluenza (8.5% & 2.5% of positivity, respectively) were also circulating. In EW 28, of the total of positive samples, 60.8% were from ILI cases and 37.6% were from SARI cases. The age group most affected by SARI was those between 15 and 54 years. Between EW 25 and 28, 202 samples were analyzed from SARI patients and influenza A(H1N1)pdm09, influenza A(H3N2), rhinovirus and parainfluenza were detected. One SARI-associated death was reported during EW 28.

Cuba



Cuba. SARI cases. Respiratory viruses distribution by EW, 2013



In the Dominican Republic⁵, from EW 1 to 28, a total of 1,317,726 ILI cases were reported, with a rate of 691 per 10,000 inhabitants. This is 15% less than what was reported for the same period in 2012 (812 per 10,000 inhabitants). Between EW 1-28, 888 SARI cases were reported through sentinel surveillance, primarily in Santo Domingo and Santiago provinces. Influenza A(H1N1)pdm09 circulation was identified in the provinces of Dajabon and Valverde. Of the total 17 SARI-associated deaths, 14 were associated with influenza A (H1N1)pdm09 (higher than the number observed in 2012 (n=5)). According to laboratory data from EW 26 to 29, 157 samples were analyzed, and the average percent positivity for influenza was 29.6%. Influenza A not subtyped and parainfluenza were detected.

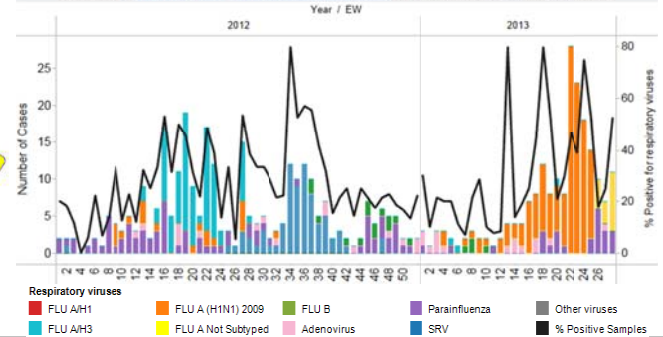
Dominican Republic

Dominican Rep. Provinces with Influenza A, not subtyped and Influenza A(H1N1)pdm09, 2013

Provincias con circulación de Influenza A no subtipificado y AH1N1-2009, año 2013



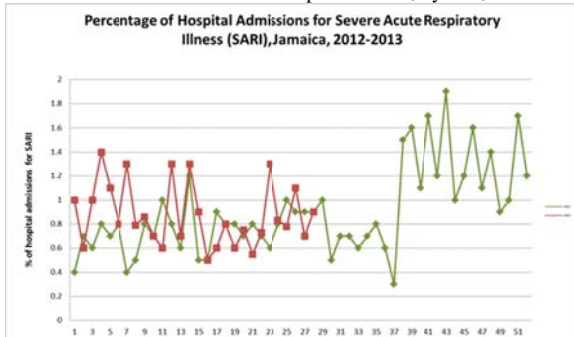
Dominican Rep. Respiratory viruses distribution by EW, 2012 -13
Distribución de influenza and other respiratory viruses under surveillance by EW, region / country



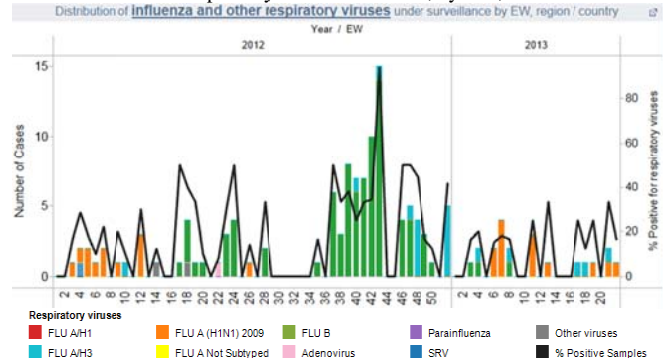
In Jamaica for EW 28, sentinel data showed that the proportion of consultations ARI consultations was 3.3%, a decrease of 0.1% compared EW 27. The proportion of admissions due to SARI was less than 1% and stable compared to the previous week. There were no SARI-associated deaths reported during EW 28.

Jamaica

Jamaica: % SARI-associated Hospitalizations, by EW, 2012-13



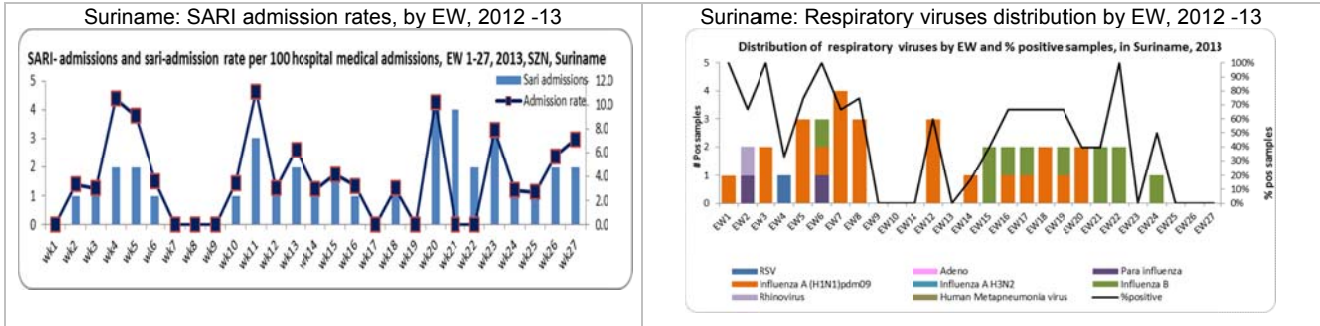
Jamaica: Respiratory virus distribution, by EW, 2012-13
Distribución de influenza and other respiratory viruses under surveillance by EW, region / country



⁵ República Dominicana. Dirección Nacional de Vigilancia Epidemiológica. Boletín Semanal SE 28.

In Suriname, the Bureau of Public Health (BOG) received weekly SARI data from the Streekiekenhuis Nickerie Hospital and ILI sentinel sites. The proportion of SARI cases was 5.7% in EW 27, higher than the previous 3 weeks. The highest SARI rates were observed among the following age groups 6 months-4 years, 50-64 years, and ≥ 65 years of age (50%, 33% and 40% respectively). Eight SARI-associated deaths have been reported in Suriname between EW 8 and EW 27. Based on ILI and SARI surveillance, influenza A(H1N1)pdm09, influenza B, parainfluenza 1, rhinovirus and RSV have been reported in 2013.

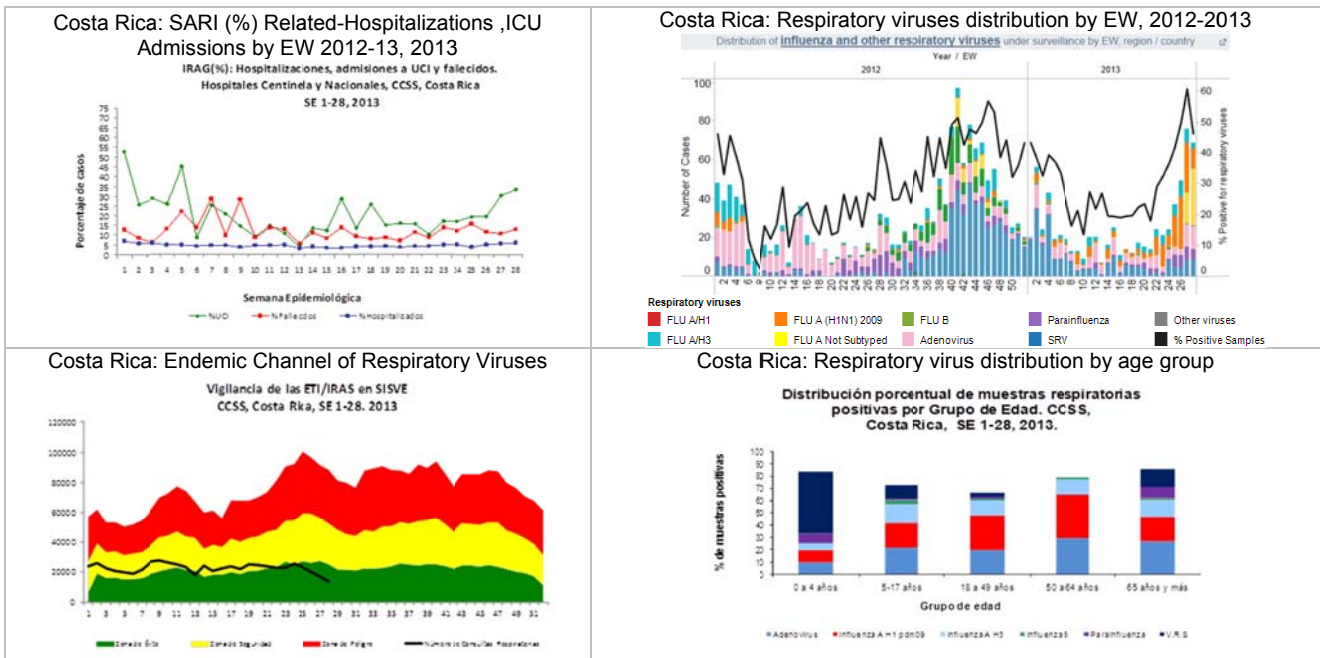
Suriname



Central America

In Costa Rica⁶, nationally in EW 28, influenza activity continued to increase. SARI was associated with 6.3% of all hospitalizations (n=2,759 total hospitalizations), 33% of ICU admissions (n=63) and 13% of deaths (n=18). From EW 1-28, 267 SARI-associated deaths were reported. A sample was collected from about 25% of these cases (n=65), and of these 20 were positive for a respiratory virus. Among all deaths that occurred between EW 1- and 28, 26 were positive for a respiratory virus (there has been a significant increase from EW 15 to 29). Between EW 25 and 28, 10 deaths were associated with influenza A(H1N1)pmd09, one death was associated with each of the following: influenza A(H3N2), parainfluenza, and adenovirus. According to laboratory data, the percentage of positive samples had increased in the last 8 weeks. In EW 28, among tested samples, 46% were positive for respiratory viruses and 29% were positive for influenza. Among the influenza viruses, 67% were A unsubtype, 25.6% A(H1N1)pdm09 and 7% A(H3N2). Among other respiratory viruses, adenovirus (8% of positivity) and RSV (6% of positivity) predominated.

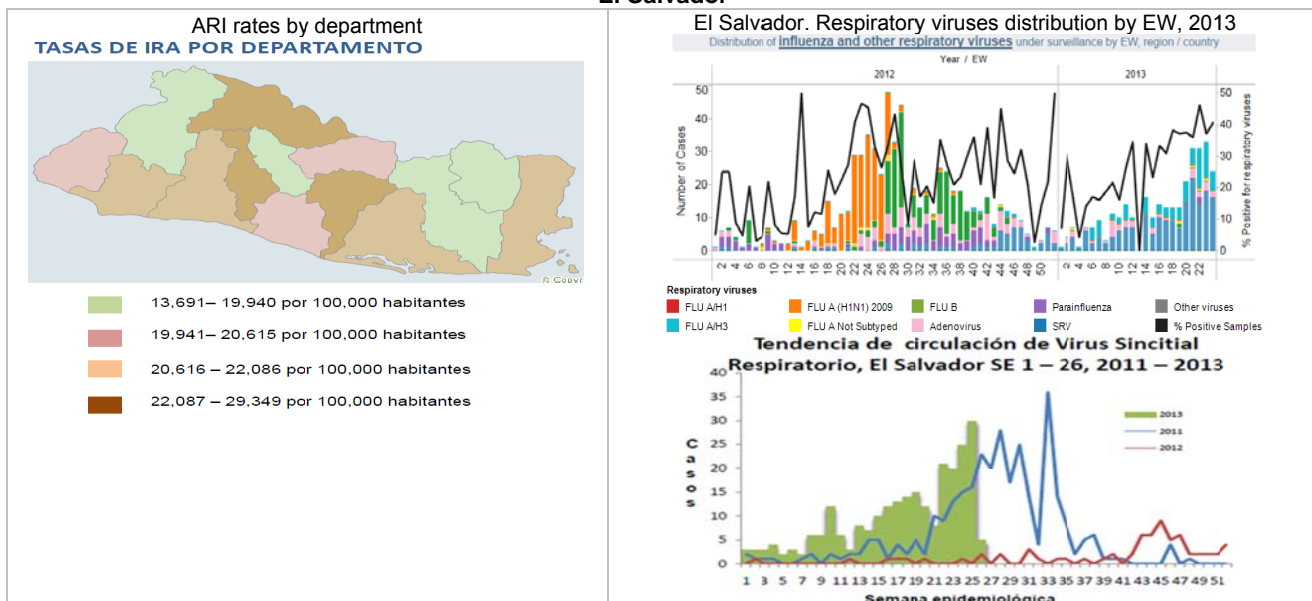
Costa Rica



⁶ Costa Rica. Caja Costarricense de Seguro Social, INCIENSA. Influenza y otras virosis respiratorias. SE 28.

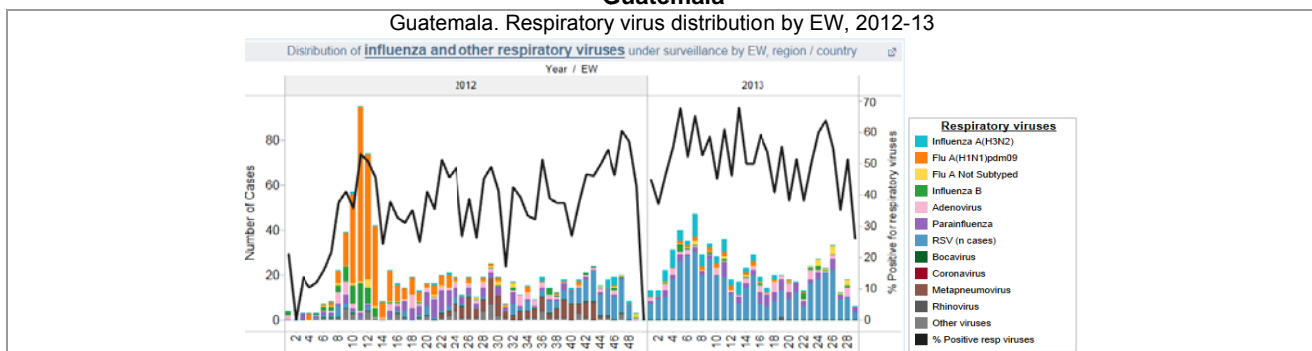
In El Salvador⁷, nationally, in EW 27 there were 53,060 cases of ARI, 12.9% less than reported in the previous week (n=60,040 cases). The number of cumulative ARI cases between EW 01-26, 2013 (n=1,432,611) is similar to that observed in the same period of 2012. Persons aged 60 years and older accounted for 63% of SARI-associated deaths and the highest mortality (16%). In EW 27 2.262 cases of pneumonia were reported and accounted for a 13.1% (n=262) increase from the previous week. Regionally, the highest SARI rates per 100,000 population were reported in Chalatenango (29.3), San Salvador (28.4) and San Vicente (24.8), while the highest rates of pneumonia (per 100,000 population) were reported in San Vicente (904), Chalatenango (714), and San Miguel (698). During EW 27, there was 41.9% positivity for respiratory viruses, with RSV having 29.7% positivity. Influenza positivity was 10.8% and was predominated by influenza A(H3N2).

El Salvador



In Guatemala, according to national laboratory data, during EW 25-28, 165 samples were analyzed and the percent positive for respiratory viruses fluctuated between 63.9% (in EW 25) to 51.4% (in EW 28). During this time period, 52.1% of samples were positive for a respiratory virus and 6.1% were positive for influenza. Among respiratory viruses, RSV predominated (37.6%) followed by parainfluenza (4.2%), and adenovirus (4.2%). Among influenza viruses, 90% were influenza A (100% influenza A, not subtyped) and 10.0% were influenza B.

Guatemala



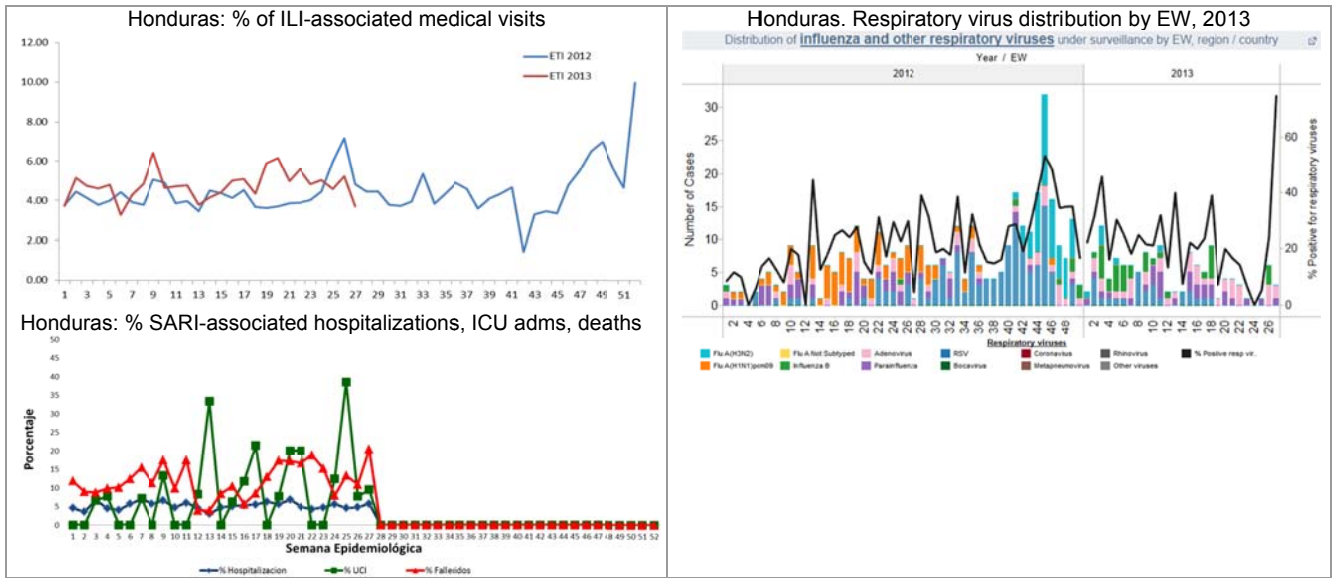
In Honduras⁸, during EW 27, based on sentinel surveillance, ILI accounted for 3.7% (406/10,990) of visits, lower than the level reported in EW 26 (5.2%). The proportion of SARI-associated hospitalizations was 5.7% (52/907) and was higher than the level reported in SE 26 (4.8%). Among deaths during EW 27, 20.4% were SARI-associated (11/54). Based on laboratory data for EW 24-27, 17.9% of samples were positive for

⁷ El Salvador. Boletín epidemiológico SE 27.

⁸ Honduras. Boletín de influenza SE 27.

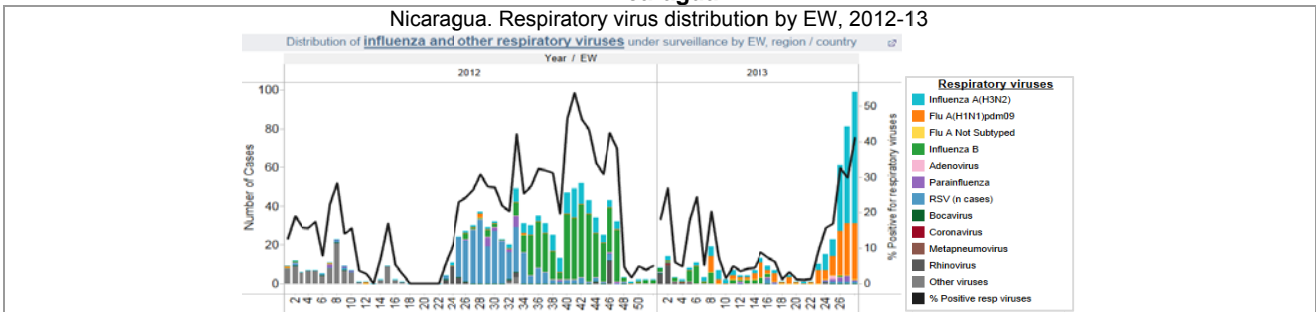
respiratory viruses (8.9% were positive for adenovirus and 3.6% for parainfluenza), and 5.4% were positive for influenza (influenza B predominated).

Honduras



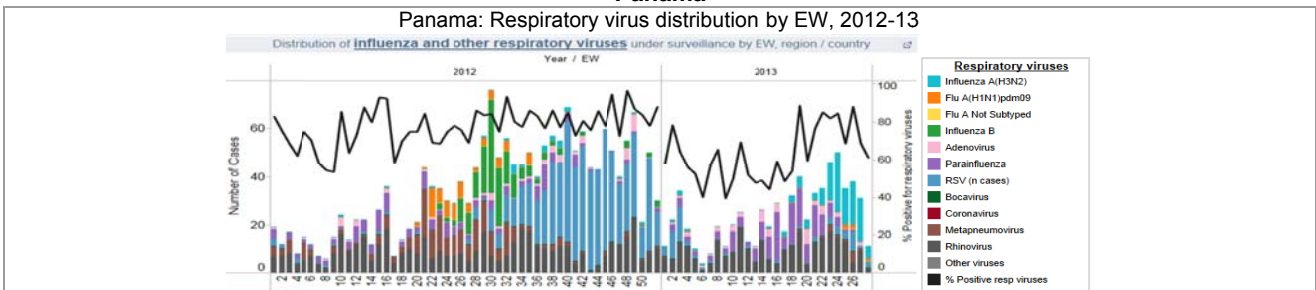
In Nicaragua, according to national laboratory, of the samples tested between EW 25-28 (n=836), the percentage of positive samples increased from 16.9% (EW 25) to 41.1% (EW 28). Among samples tested during that time, 31.6% were positive for a respiratory virus and 30.0% were positive for influenza. Among influenza viruses, influenza A(H3N2) (64.4%) and influenza A(H1N1)pdm09 (35.6%) predominated.

Nicaragua



In Panama, according to national laboratory, of the samples tested between EW 25-28 (n=157), the percentage of positive samples decreased from 68.6% (EW 25) to 61.1% (EW 38). Among samples tested during that time, 73.2% were positive for a respiratory virus and 38.9% were positive for influenza. Influenza A(H3N2) (91.8%) and influenza A(H1N1)pdm09 (8.2%) predominated. Among the other respiratory viruses, rhinovirus (17.8%), RSV (9.6%), metapneumovirus (4.5%), parainfluenza (1.3%) and adenovirus (1.2%) were detected.

Panamá

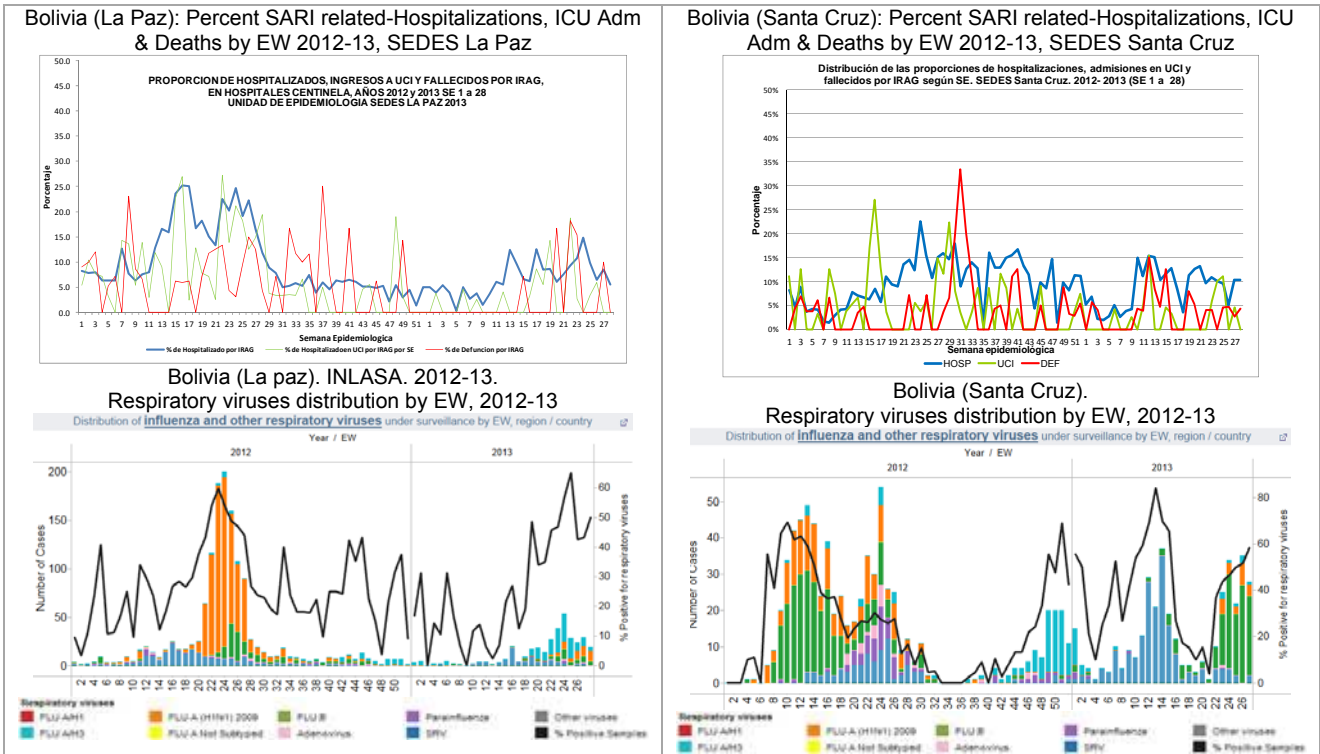


South America – Andean countries

In Bolivia, according to data from Santa Cruz, during EW 28 the proportion of SARI hospitalizations (10%) did not change from the previous week and has been relatively stable with only slight fluctuations since EW 9. Based on laboratory data from CENETROP (Santa Cruz), 116 samples were analyzed from SARI cases during EWs 26 and 27, and increased positivity was observed for all respiratory viruses (54%) and influenza (53%). Influenza B was most predominant (77% of positive samples).

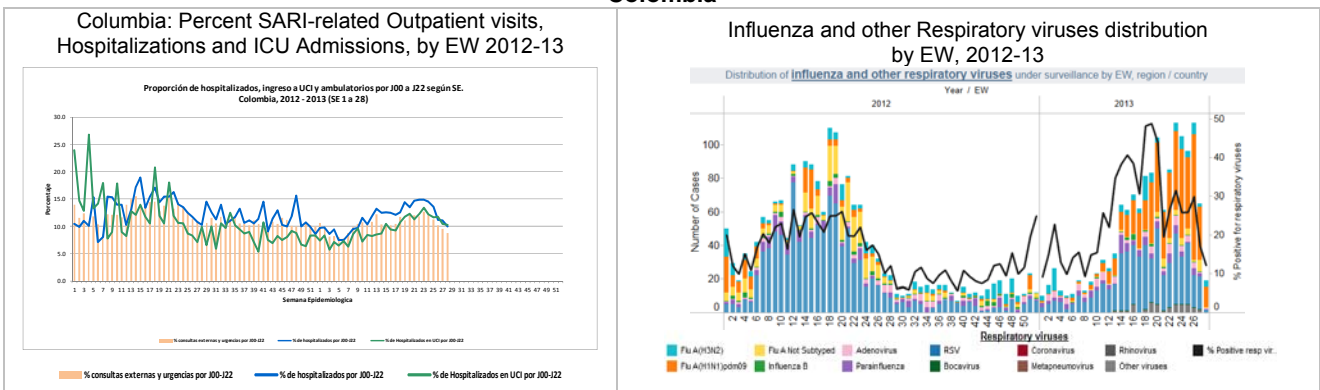
According to data from La Paz, the proportion of SARI-associated hospitalizations (5.5%) during EW 28 was lower than that observed in the previous week and showed a decreasing trend since EW 24. According to laboratory data from INLASA (La Paz), among 105 SARI samples processed during EWs 27-28, 46% were positive for respiratory viruses and 43% were positive for influenza. Among influenza positive samples, influenza A(H1N1)pmd09 (42%, increasing since EW 24), influenza A(H3N2) (27%), and influenza B (25%) predominated.

Bolivia



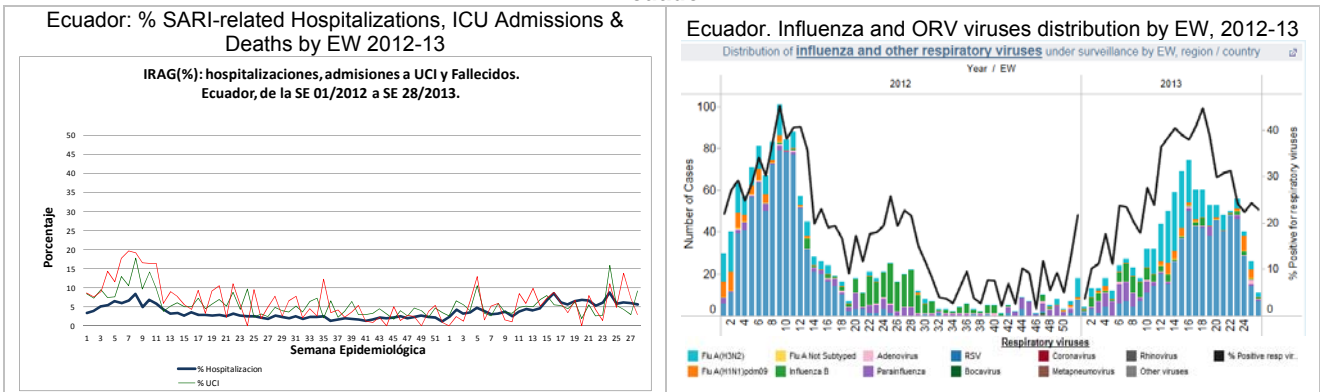
In Colombia, nationally during EW 28, the proportions of SARI outpatient visits (8.8%), SARI hospitalizations (10%), and SARI ICU admissions (10.2%) (J00 and J22 codes) decreased compared to the previous week, and have been showing a decreasing trend since EW 23. According to the national laboratory data (INS), among samples tested (n=317) in EW 28-29, 18% were positive for respiratory viruses and 12% were positive for influenza. Among the positive samples, influenza A(H1N1)pdm09 (47%) and RSV (17%) predominated.

Colombia



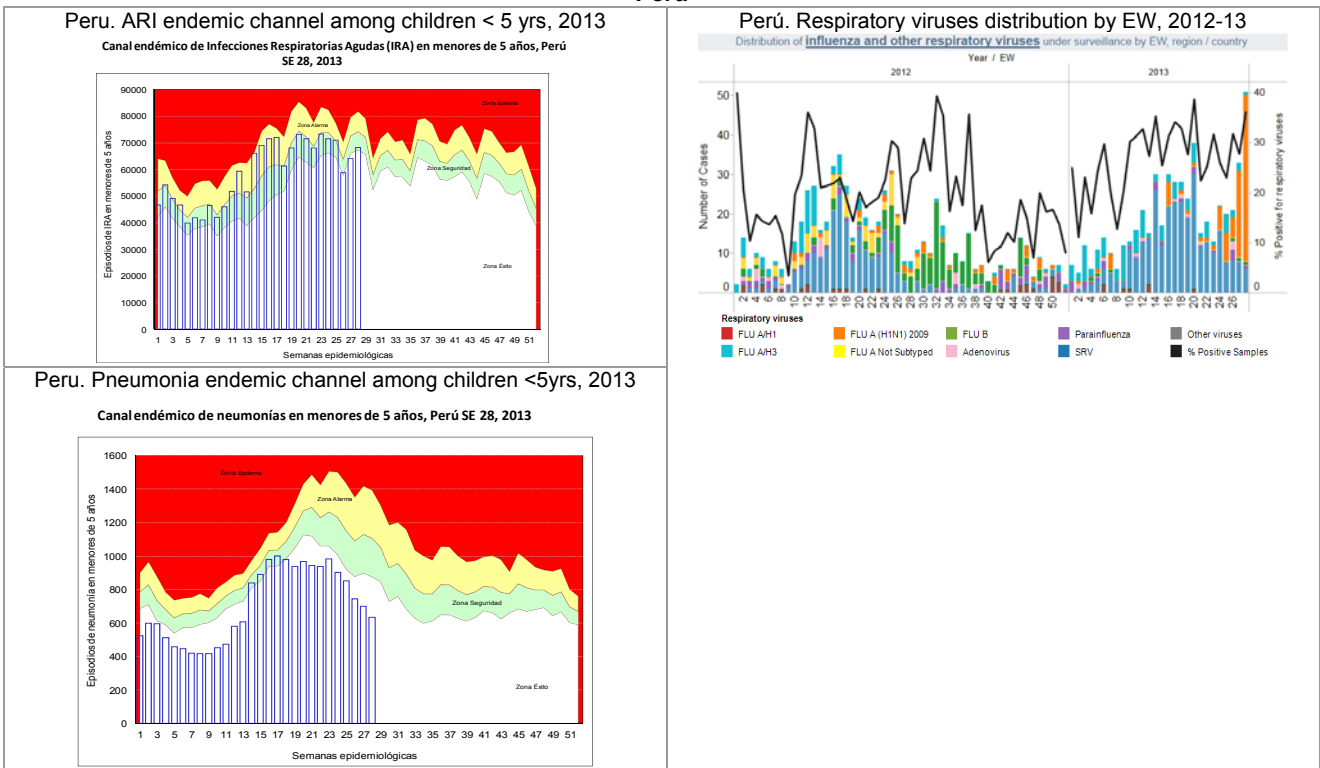
In Ecuador, based on SARI surveillance during EW 28, the proportion of SARI hospitalizations (6%) maintained a similar level to the previous weeks. According to national laboratory data, among the 219 analyzed during EWs 27 and 28, 34% were positive for respiratory viruses and 10% were positive for influenza. RSV was the predominant virus (67%) followed by influenza A(H1N1)pdm09 (28%). Among the 135 SARI samples analyzed during the same period, the same virus profile was observed.

Ecuador



In Peru⁹, nationally, in EW 28, the number of ARI and pneumonia cases in children less than 5 years of age remained within the expected level for this time of year. According to national laboratory data during EWs 27 and 28, among the 260 samples analyzed, 32% were positive for respiratory viruses and 26% were positive for influenza viruses. Among the positive viruses, influenza A(H1N1)pdm09 (76%) and RSV (16%) predominated.

Peru

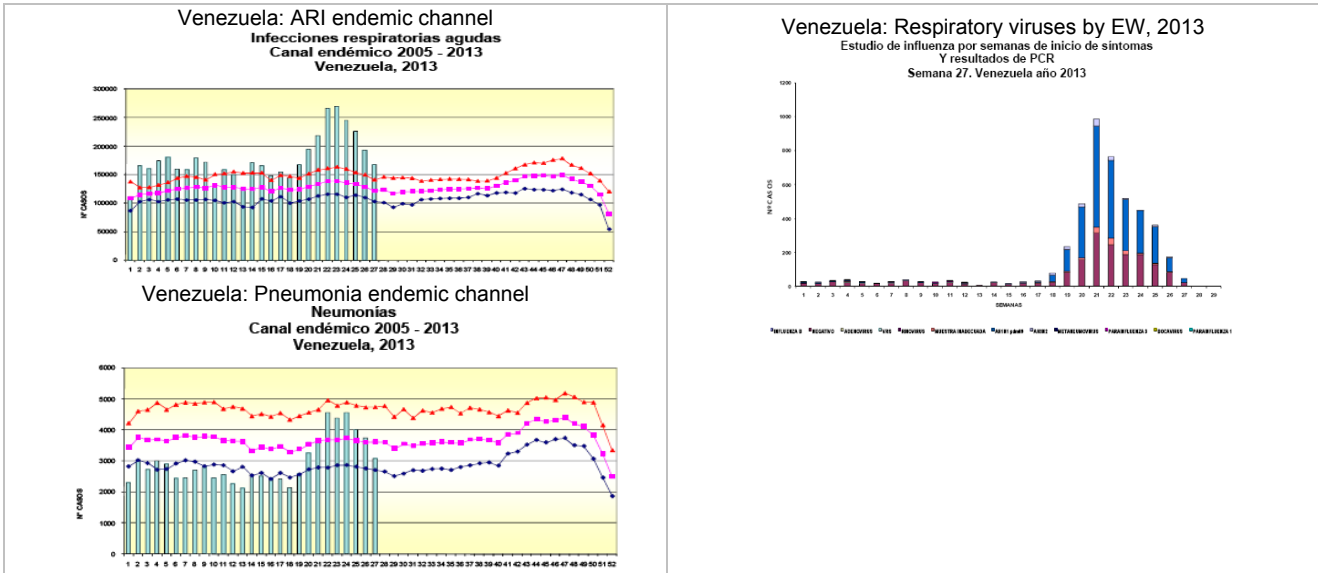


In Venezuela¹⁰, according to data published through EW 27, ARI activity continued to be above the epidemic threshold for this time of the year, but showed a decreasing trend. The pneumonia notifications fell with the expected range, and also showed a decreasing trend. Regionally, the highest numbers of ARI and pneumonia cases were reported in Zulia. According to virologic surveillance data, the number of samples

⁹ Perú. Sala de Situación de Salud. EW 27, 2013. Ministerio de Salud. Dirección General de Epidemiología
¹⁰ Venezuela. Boletín epidemiológico, SE 27, 2013.

analyzed has decreased considerable since EW 21. During EW 26 and 27, influenza A(H1N1)pdm09 continued to predominate among positive samples.

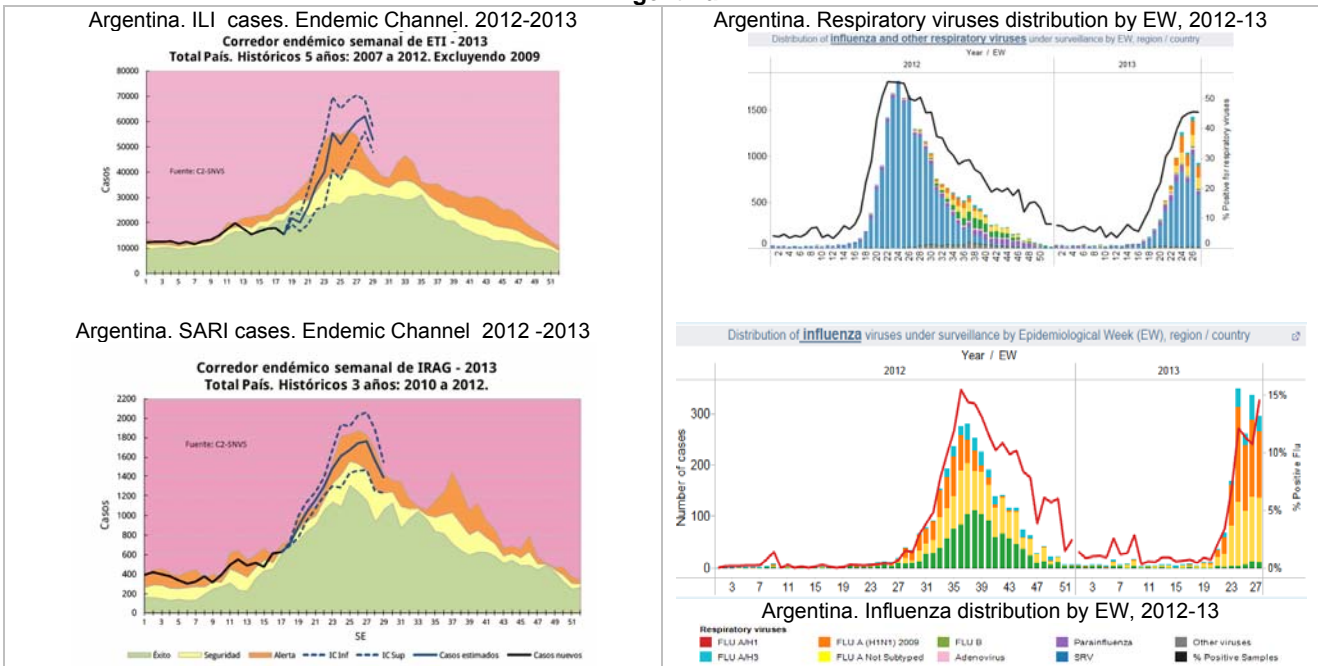
Venezuela



South America – Southern Cone

In Argentina¹¹, at the national level, according to reports and estimations, the number of ILI cases and SARI hospitalizations are above what is expected, but with an obvious decrease. La Rioja (Cuyo region) and Santiago del Estero (northwest region) provinces observed SARI rates above what was reported during this same period last year. According to laboratory data during EW 28, 1,408 samples were analyzed of which 60% were positive for a respiratory virus and 22% were positive for influenza. Among the positive samples, RSV (54%), and influenza A(H1N1)pdm09 and influenza, not subtyped (29%) predominated.

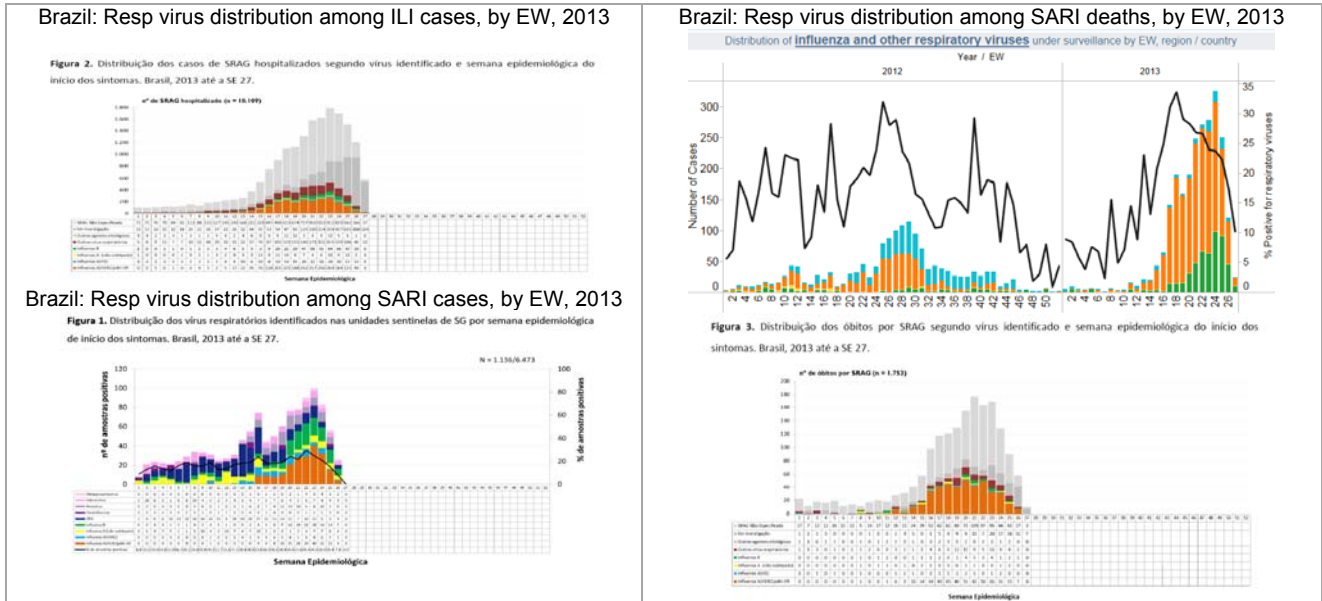
Argentina



¹¹ Argentina. Boletín integrado de vigilancia. SE 28.

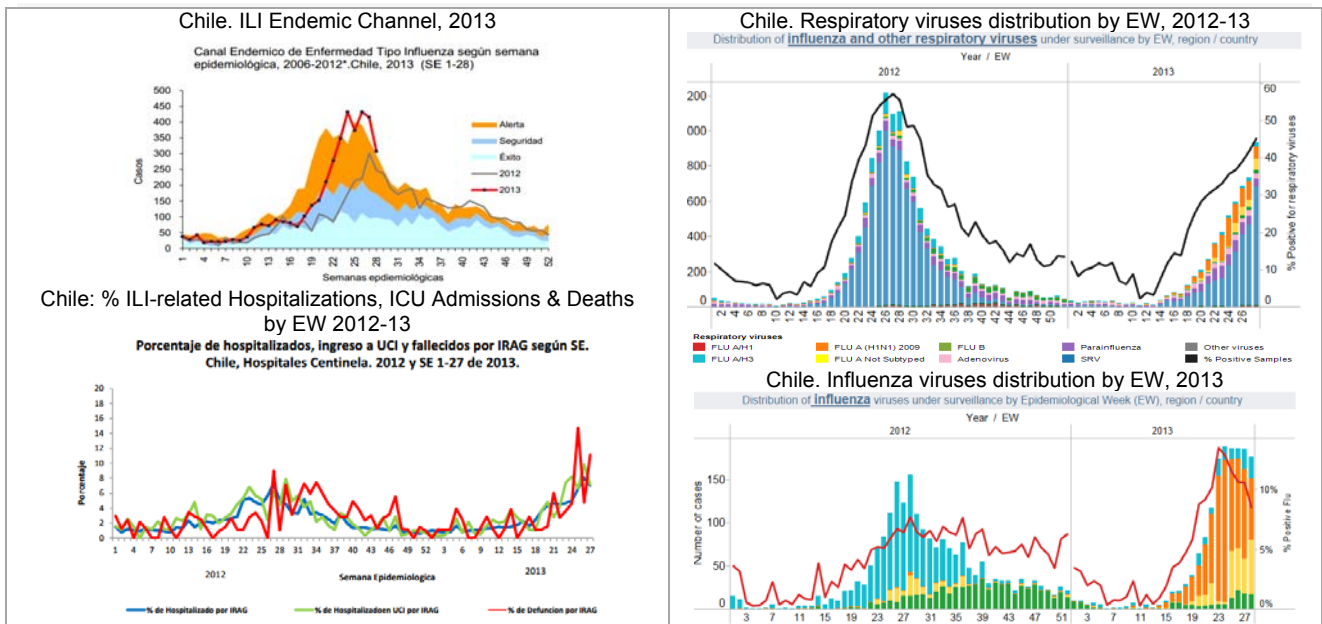
In Brazil¹², since EW 23 a decrease in respiratory virus activity has been observed. Based on influenza sentinel surveillance during EW 25 and 26, 658 samples were processed. Of these, 11.5% were positive for respiratory viruses and 8% were positive for influenza; influenza B (27%) and influenza A(H1N1)pdm09 (25%) predominated among the positive samples. According to universal SARI surveillance, during EW 26 and 27, 451 samples were processed and “other respiratory viruses” predominated (39%), primarily in the southern region, followed by influenza A(H1N1)pdm09 (35%) in the south and southeast regions. Among SARI-associated deaths during the same period, influenza A(H1N1)pmd09 predominated.

Brazil



In Chile¹³, during EW 28, ILI activity (rate: 19.6 per 100,000 inhabitants) showed a significant decline compared to the previous EW, and the majority of regions also showed decreased ILI reports. During EW 27, the proportions of ILI-associated hospitalizations (6.9%) and ICU admissions (9.8%) were lower than those reported in EW 26. According to laboratory data from EW 27, 2,065 samples were analyzed. Of these, 45% were positive for a respiratory virus and 8.5% were positive for influenza. There was a predominance of RSV (72%, an increase), and influenza A(H1N1)pmd09 and influenza A, no subtype (14%, a decrease for the last two weeks).

Chile

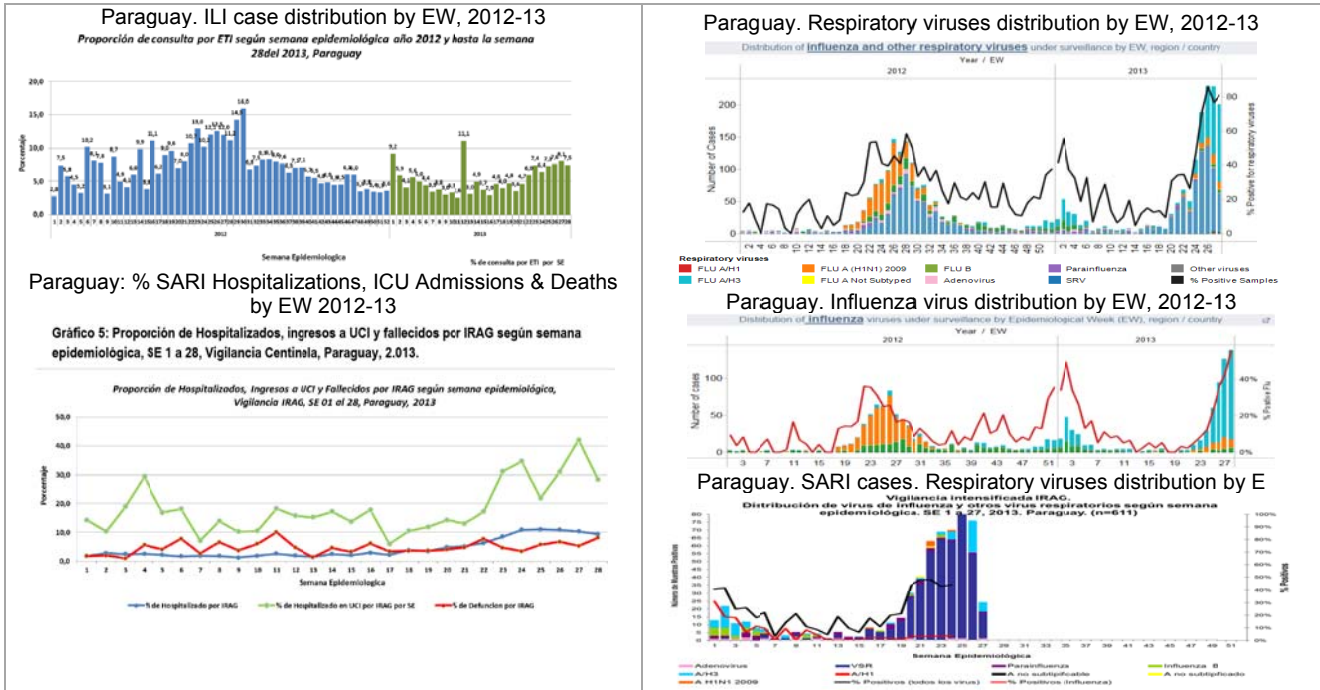


¹² Brasil. Boletim informativo. Secretaria de Vigilância em Saúde. SE 27, 2013.

¹³ Chile. Informe de situación. EW 28. Disponible en: www.pandemia.cl

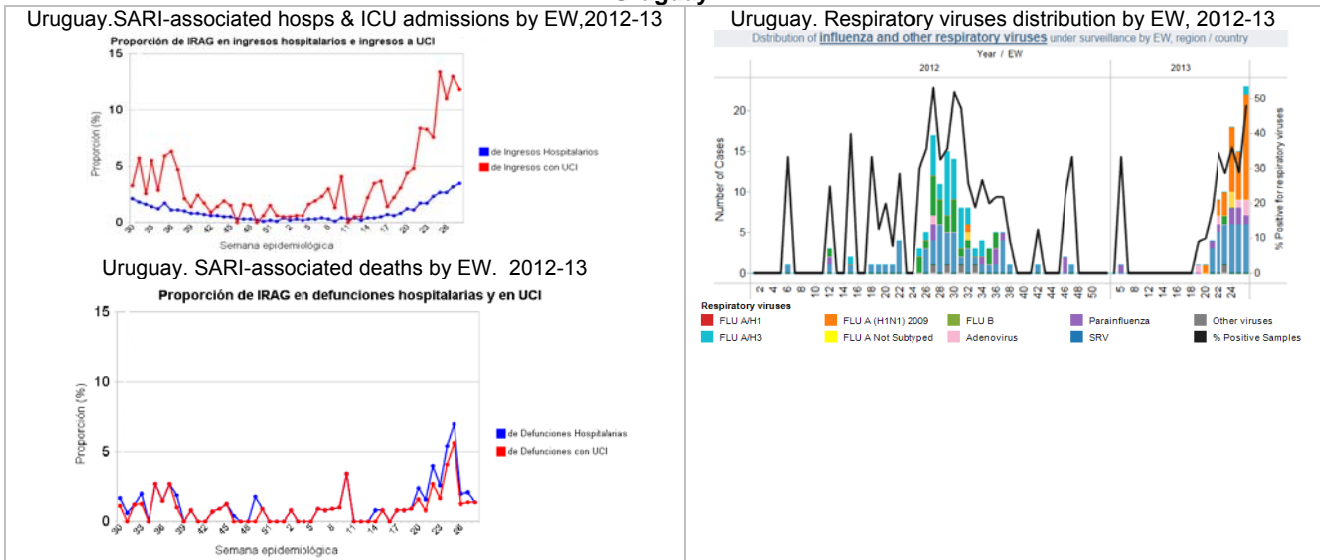
In Paraguay¹⁴, during EW 28, the rate of ILI consultations was 171 per 100,000 population. This was slightly higher than what was observed during the previous week and falls within the alert zone of the endemic channel. The proportion of ILI-associated hospitalizations (9.4%) did not change significantly from the previous week. Based on laboratory data during EW 28, 248 samples were processed and showed increased positivity for respiratory viruses (81%) and influenza (56%). Among the positive samples, influenza A(H3N2) (60%) and RSV (30%) predominated. Among the 22 samples from SARI sentinel centers, equal proportions of RSV and influenza A(H3N2) were identified.

Paraguay



In Uruguay¹⁵, nationally the proportion of SARI-associated hospitalizations was higher than that observed during the previous week, and is showing an upward trend. Similarly, ICU admissions showed an upward trend, however, SARI-associated deaths decreased and have remained unchanged for the last three EW. During EW 27-28, 116 SARI samples were analyzed, and 35% were positive for a respiratory virus and 22% were positive for influenza. Influenza A(H1N1)pmd09 (56%) and RSV (24%) predominated among the positive samples.

Uruguay



¹⁴ Paraguay. Informe de situación. Vigilancia de ETI e IRAG. SE 28, 2013

¹⁵ Uruguay. Generador de gráficos de la división de epidemiología, Dirección General de Salud – Ministerio de Salud Pública