

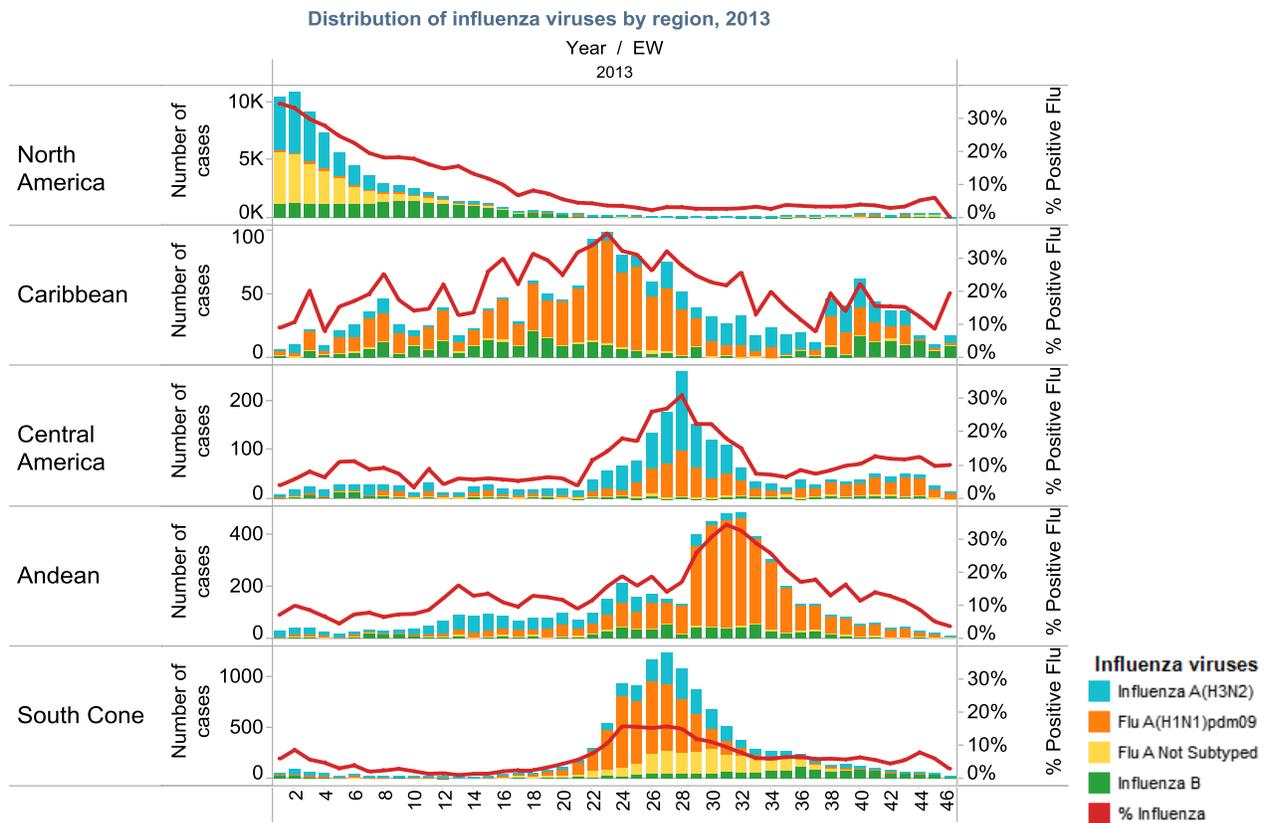
PAHO interactive influenza data: http://ais.paho.org/phis/viz/ed_flu.asp
Influenza Regional Reports: www.paho.org/reportesinfluenza

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

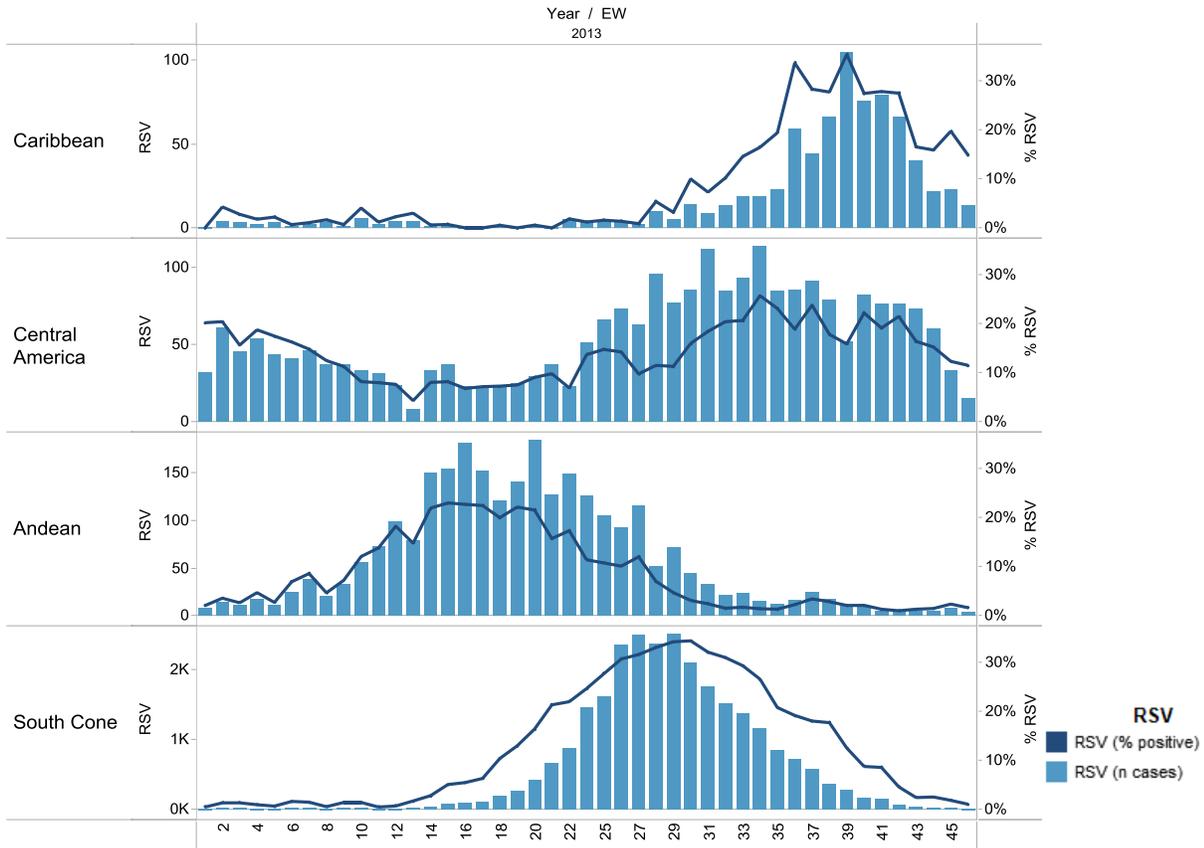
- **North America:** Influenza activity remained low, although some indicators in Canada and Mexico showed slight increasing trends. Among circulating influenza viruses, influenza A predominated.
- **The Caribbean and Central America:** RSV continued circulating in many countries in the region (Cuba, Costa Rica, Guatemala, Honduras, Nicaragua and Panama). Among influenza viruses, influenza B predominated in Cuba, Dominican Republic and Guatemala while influenza A predominated in Costa Rica, El Salvador, Honduras and Nicaragua.
- **South America – Andean Countries:** Acute respiratory virus activity remained low in most countries in the region except Bolivia (Santa Cruz) where influenza A(H1N1)pmd09 activity remained high. Among other respiratory viruses, parainfluenza continued to circulate in several countries (Bolivia (Santa Cruz), Colombia and Ecuador).
- **South America - South Cone and Brazil:** Acute respiratory virus activity was low and within the expected level for this time of year in all countries except Paraguay where ILI activity remained high. A slight increase in influenza B circulation was seen in some countries of the region(especially Paraguay).

Influenza circulation by region. 2013



Respiratory syncytial virus (RSV) circulation by region. 2013

Respiratory Sincicial Virus 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:

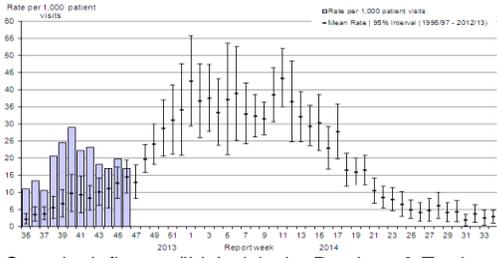
In Canada¹, during EW 46 influenza activity continued its increasing trend. The national influenza-like illness (ILI) consultation rate was 16.9 per 1,000 patient visits, a slight decrease from the previous week and within the expected level for this time of year. To date this season, 21 influenza-associated hospitalizations have been reported (10 pediatric and 11 adult), of which two required ICU admission (1 pediatric and 1 adult). No influenza-associated deaths were reported. Based on laboratory data for EW 46, the overall percentage of positive influenza tests was 2.6% (N=63), an increase compared to the previous week. Among the positive tests, 81% were influenza A, of which 66.7% were influenza A(H1N1)pdm09. Among other respiratory viruses, rhinovirus and parainfluenza continued to predominate.

¹ Canada: FluWatch Report. EW 46. Available at <http://www.phac-aspc.gc.ca/fluwatch/>

Canada

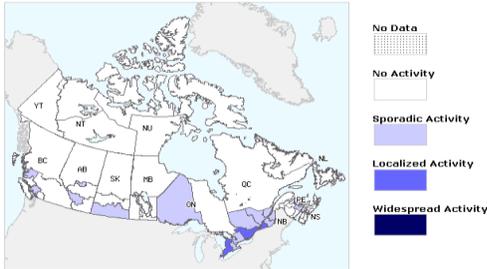
Canada: ILI Consultation Rates, by EW, 2013-14

Figure 5. Influenza-like illness (ILI) consultation rates by report week, compared to the 1996-97 through to 2012-13 seasons (with pandemic data suppressed), Canada, 2013-2014



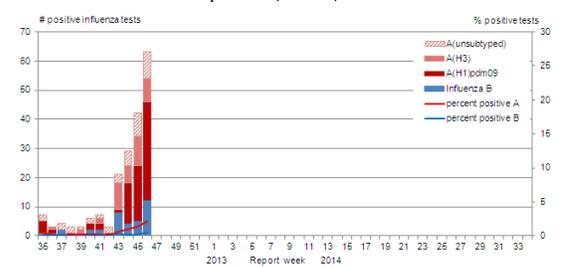
Canada: Influenza/ILI Activity by Province & Territory, EW 46, 2013

Figure 1. Map of overall influenza/ILI activity level by province and territory, Canada, Week 46



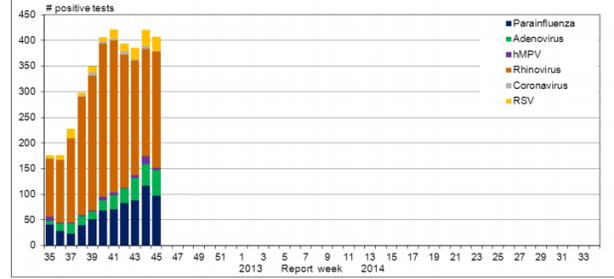
Canada: Influenza virus distribution by EW, 2013-14

Figure 2. Number of positive influenza tests and percentage of tests positive, by type, subtype and report week, Canada, 2013-14



Canada: Respiratory virus distribution by EW, 2013-14

Figure 3. Number of positive laboratory tests for other respiratory viruses by report week, Canada, 2013-14

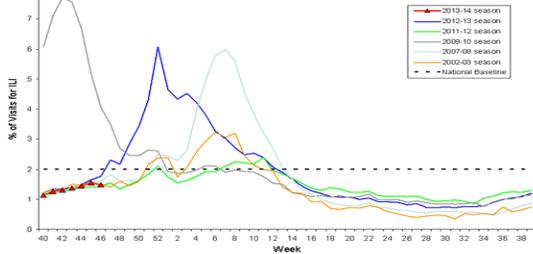


In the United States² during EW 46, influenza activity was generally low and similar compared to the previous week with 1.5% of outpatient visits associated with ILI and 5.8% of deaths associated with pneumonia and influenza. No influenza-associated pediatric deaths were reported during EW 46. Based on laboratory data for EW 46, 4,457 samples were analyzed, of which 7.0% were positive for influenza. Among the positive samples, 89.7% were influenza A (52.9% were not subtyped and 42.1% were A(H1N1)pdm09) and 10.3% were influenza B. Based on antiviral resistance testing, 2.6% (4/151) of the influenza A(H1N1)pdm09 samples tested were oseltamivir resistant.

United States

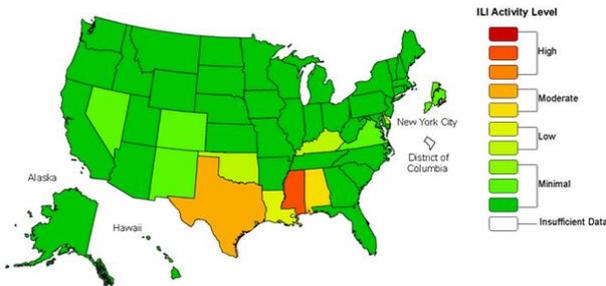
US: Percent of ILI visits by EW, 2013-14

Percentage of Visits for Influenza-like Illness (ILI) Reported by the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), Weekly National Summary, 2013-14 and Selected Previous Seasons



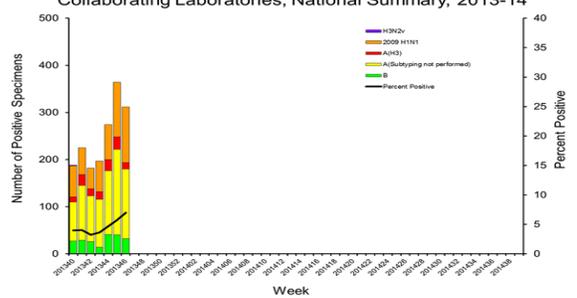
US: ILI Activity by State, EW 46, 2013

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet 2013-14 Influenza Season Week 46 ending Nov 16, 2013



US: Influenza viruses distribution by EW, 2013-14

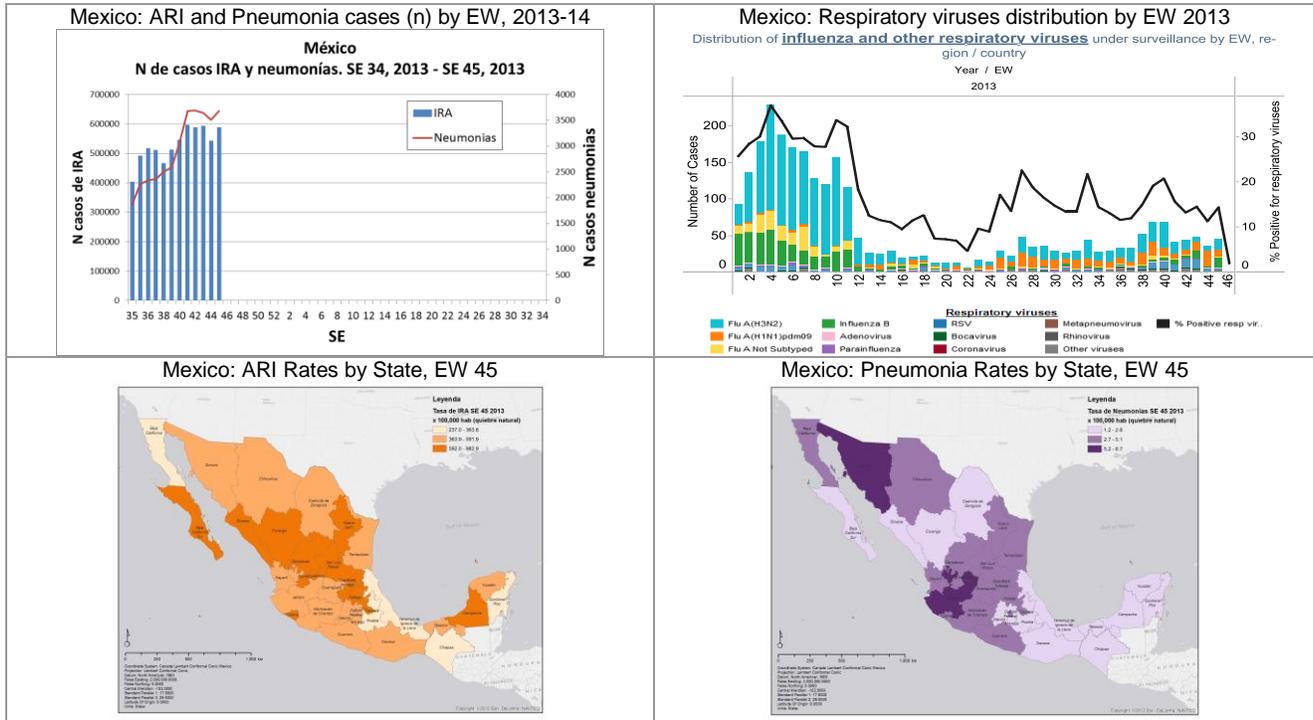
Influenza Positive Tests Reported to CDC by U.S. WHO/NREVSS Collaborating Laboratories, National Summary, 2013-14



² USA: CDC FluView report. EW 46. Available at: <http://www.cdc.gov/flu/weekly/>

In Mexico³, during EW 45 the number of ARI and pneumonia cases increased by 8.5% and 5.0%, respectively, from the previous week. The highest levels of ARI activity were reported in Aguascalientes, Zacatecas and Hidalgo, and the highest levels of pneumonia activity were reported in Jalisco, Aguascalientes and Sonora. According to laboratory data from EW 43-46, 1,006 samples were tested, of which 12.7% were positive for a respiratory virus and 9.5% for influenza. Among the positive influenza samples, 71.9% were influenza A (60.9% were A(H1N1)pdm09 and 37.7% were A(H3N2)) and 28.1% were influenza B. Among other respiratory viruses, RSV predominated (17.2% of positive samples).

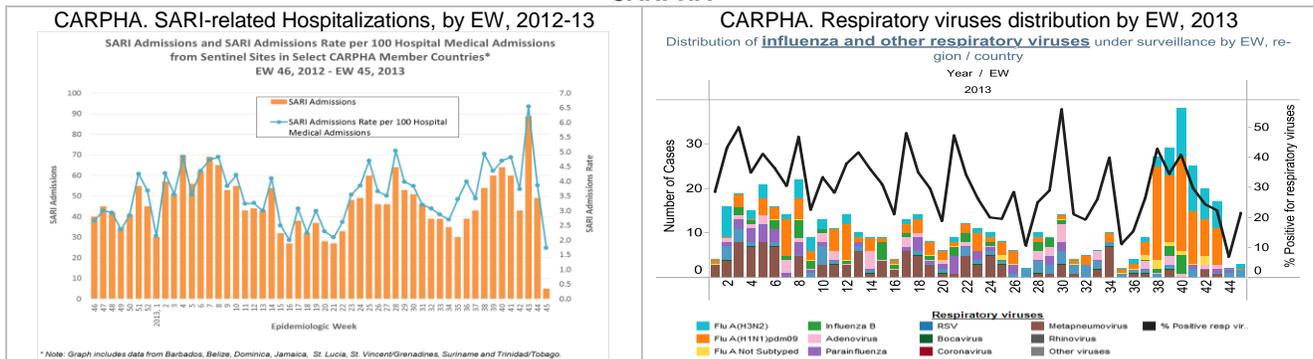
Mexico



Caribbean

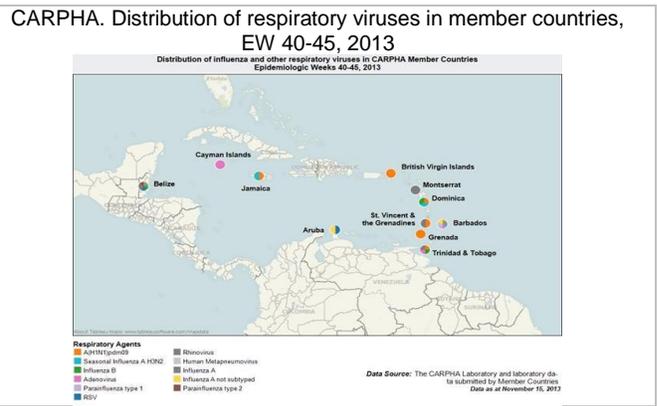
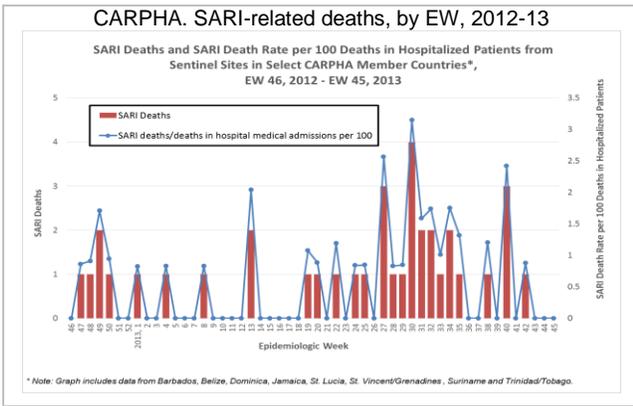
CARPHA⁴ received weekly SARI/ARI data from the following countries for EW 43-45: Barbados, Belize, Dominica, Jamaica, St. Lucia, St. Vincent & the Grenadines and Trinidad & Tobago. The proportion of SARI-associated hospitalizations has shown an increasing trend over the last several weeks and children 6 months to 4 years have had the highest rate of SARI admissions. There were no SARI-associated deaths reported during this time. According to laboratory data from EW 42-45, 201 samples were tested, of which 20.9% were positive for a respiratory virus and 15.9% were positive for influenza. Among the positive samples, influenza A(H1N1)pdm09 predominated and was detected in Barbados, British Virgin Islands, Dominica, Grenada, Jamaica, St. Vincent & the Grenadines, and Trinidad & Tobago. For cases with dates of onset between EW 40-45, the following viruses were also reported: influenza A(H3N2) (Barbados, Dominica, Jamaica), influenza B (Trinidad & Tobago), adenovirus (Barbados, Cayman Islands, Trinidad & Tobago), rhinovirus (Montserrat, Trinidad & Tobago), RSV (Aruba, Barbados), and parainfluenza 1 (Barbados).

CARPHA

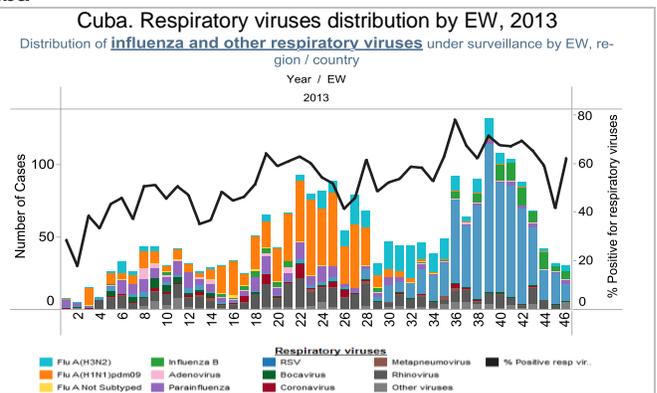
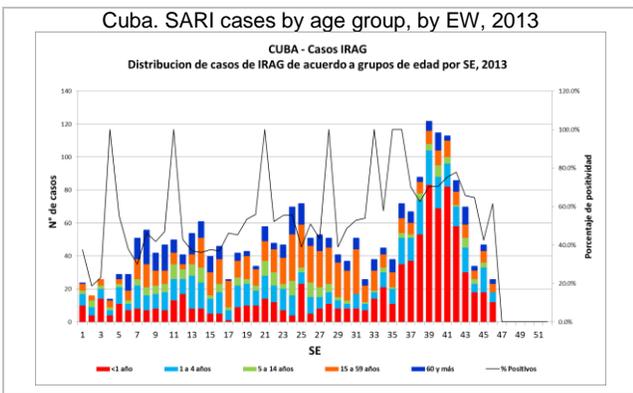


³ México. Dirección General de Epidemiología. Información epidemiológica. SE 45.

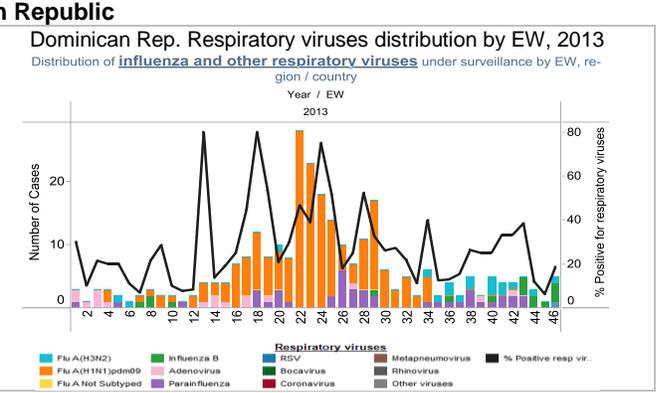
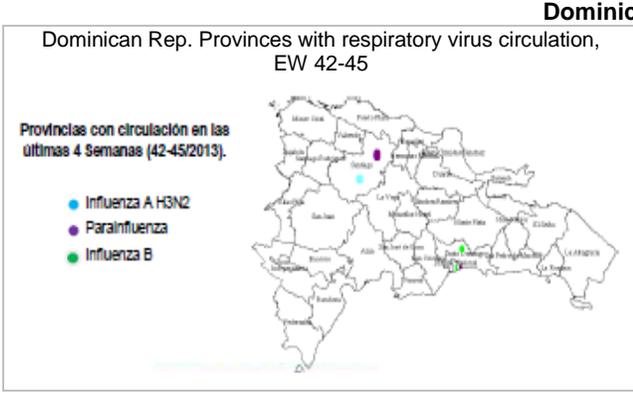
⁴ Caribbean Public Health Agency (CARPHA) EW 45



In Cuba during EW 46, the number of SARI-associated hospitalizations decreased compared to the previous EW and has shown a decreasing trend since peaking in EW 39. Children less than one year of age comprised the largest proportion of these cases. No SARI-associated deaths were reported during this period. According to national laboratory data for EW 43-46, 304 samples were analyzed, of which 57.2% were positive for a respiratory virus and 12.8% were positive for influenza. RSV remained the predominant circulating virus (54.0% of the positives), and among influenza viruses, influenza B predominated.



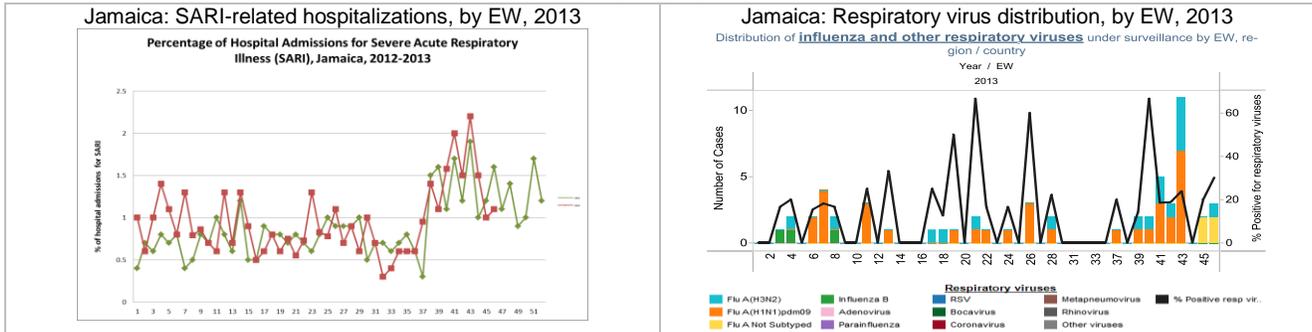
In the Dominican Republic⁵, the cumulative ILI rate for EW 1-45 was 1,786 per 10,000 inhabitants, and is 14% less than what was reported this period last year. During this period, 1,512 SARI cases were reported through sentinel surveillance, of which 14 were reported during EW 44. No SARI-associated deaths were reported during EW 45. According to laboratory data for EW 43-46, 81 samples were analyzed, of which 17.3% were positive for a respiratory virus and 13.6% were positive for influenza. Among positive influenza samples, 81.8% were influenza B and 18.2% were influenza A (all influenza A(H3N2)). Among other respiratory viruses, parainfluenza (14.3% of positive samples) predominated.



⁵ República Dominicana. Dirección Nacional de Vigilancia Epidemiológica. Boletín Semanal SE 45.

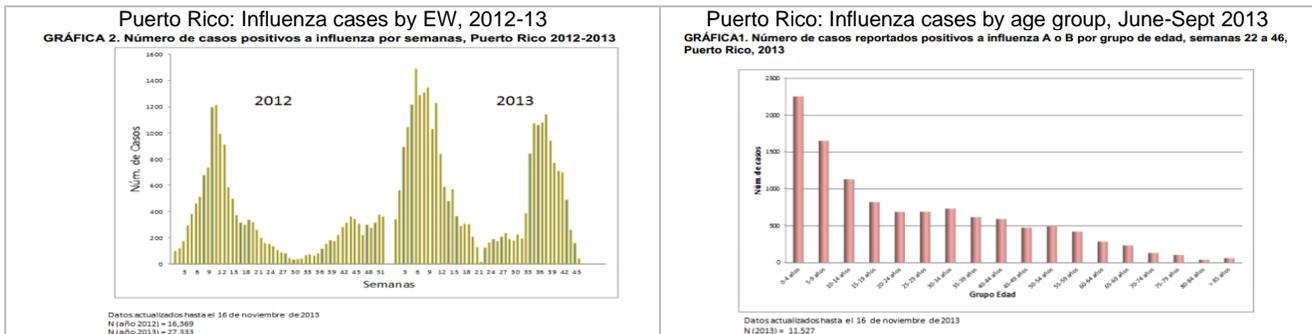
In Jamaica, based on sentinel surveillance data for EW 46, the proportion of ARI-associated consultations (7.1%) and SARI-associated hospitalizations (1.1%) increased slightly compared to the previous week. No SARI-associated deaths were reported during this period. Based on laboratory data from EW 46, 9 samples were tested, of which 22% were positive for influenza.

Jamaica



In Puerto Rico⁶ during EW 46, the number of influenza cases (n=40) continued a decreasing trend since peaking in EW 37. Of these, 70% were associated with influenza A. Since the beginning of June, 11,527 influenza cases have been reported and children aged 0-14 years accounted for 44% of those cases. Since June, 715 influenza-associated hospitalizations and 16 influenza-associated deaths have been reported.

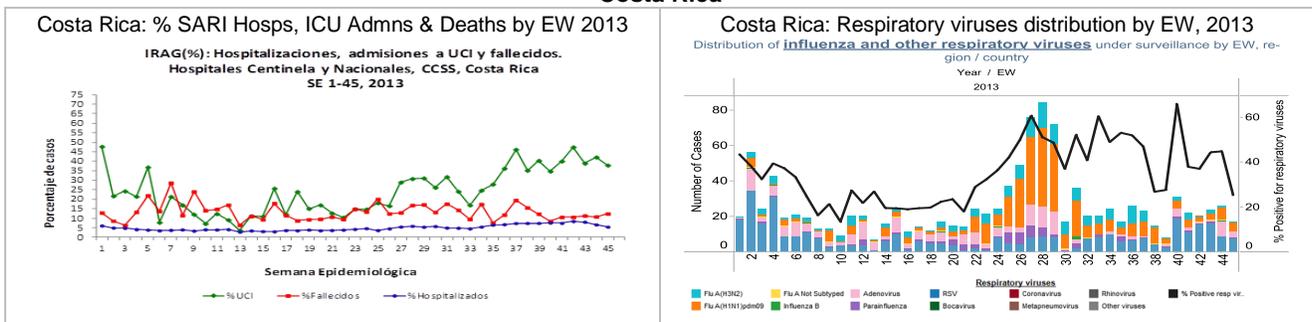
Puerto Rico



Central America

In Costa Rica, during EW 45, the proportions of SARI-associated hospitalizations (6%) and deaths (12%) were within the expected levels, while the proportion of ICU admissions (38.0%) remained elevated for the last several weeks. Based on national laboratory data from EW 42-45, 233 samples were analyzed, of which 37.3% were positive for a respiratory virus and 9.9% were positive for influenza. Among influenza positive samples, 95.7% were influenza A (86.4% were A(H1N1)pdm09 and 13.6% were A(H3N2)). Among other respiratory viruses, RSV predominated (56.3% of positive samples).

Costa Rica

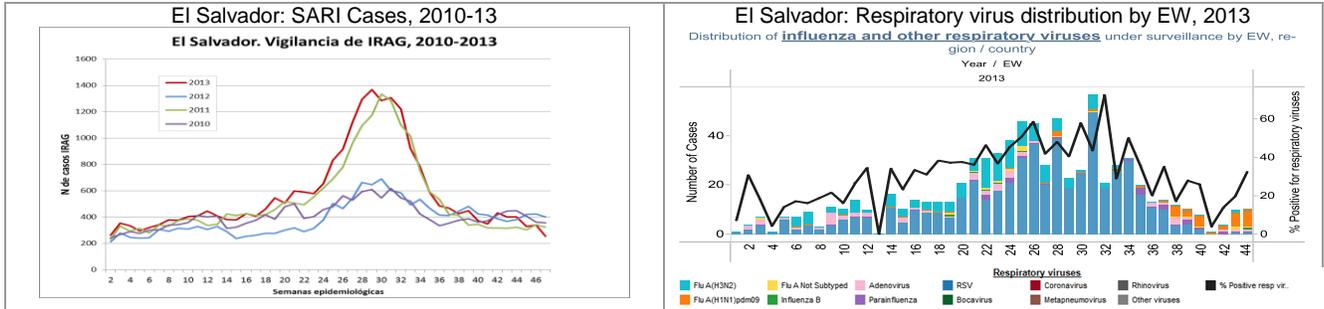


In El Salvador, during EW 46 respiratory activity remained low and similar to what was observed in previous years. Based on national laboratory data from EW 41-44, 141 samples were analyzed, of which 18.4% were

⁶ Puerto Rico. Departamento de Salud. Vigilancia de influenza de Puerto Rico SE 46.

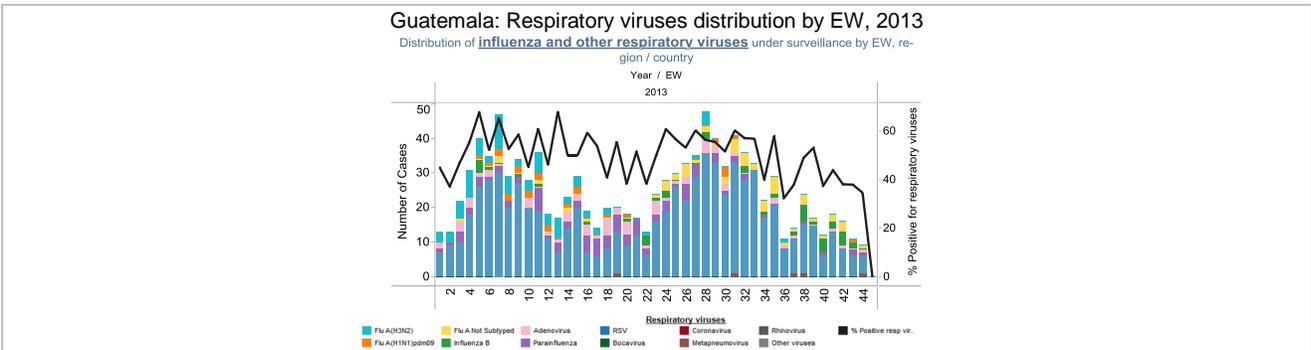
positive for a respiratory virus and 14.2% were positive for influenza. Among influenza positive samples, A(H1N1)pdm09 predominated (84.2%). Among other respiratory viruses, adenovirus, RSV and parainfluenza were detected.

El Salvador



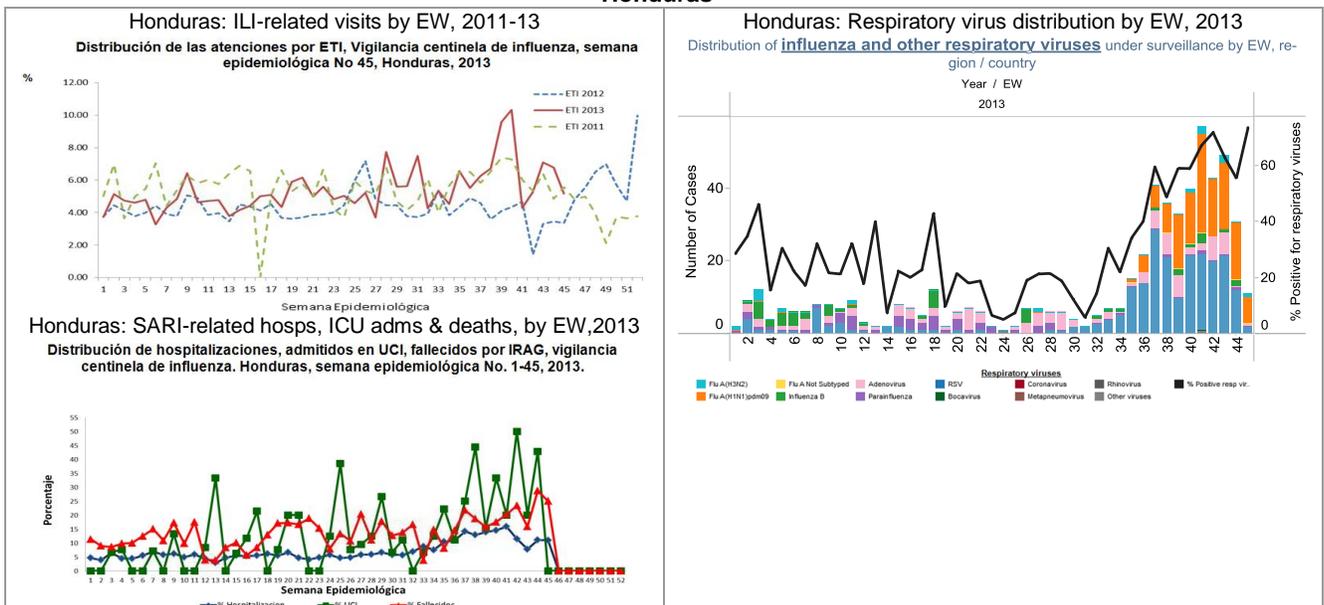
In Guatemala, based on laboratory data from EW 42-45, 99 samples were analyzed, of which 36.4% were positive for a respiratory virus and 11.1% were positive for influenza. Among influenza positive samples, 54.5% were influenza B and 45.5% were influenza A (80% were not subtyped and 20% were A(H1N1)pdm09). Among the other respiratory viruses, RSV predominated (52.8% of positive samples).

Guatemala



In Honduras⁷, during EW 45, the proportion of ILI-associated visits (5.2%) as well as SARI-associated hospitalizations (11.0%) and deaths (25.3%) decreased compared to the previous week. Based on national laboratory data for EW 42-45, 209 samples were analyzed, of which 64.1% were positive for a respiratory virus and 30.1% were positive for influenza. Among the positive samples, influenza A(H1N1)pdm09 (42.5%) and RSV (41.8%) predominated.

Honduras

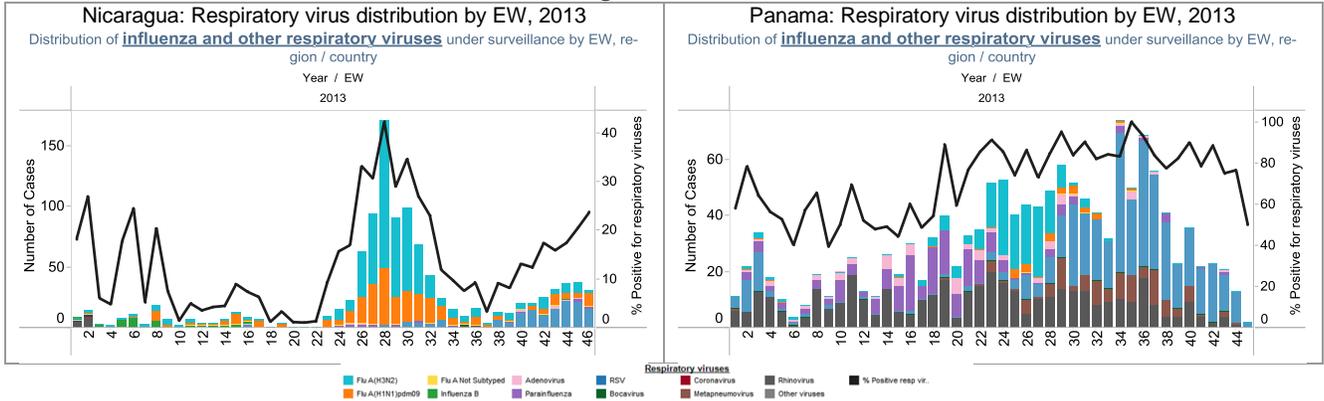


⁷ Honduras. Influenza Bulletin, EW 45

In Nicaragua, based on national laboratory data from EW 43-46, 721 samples were analyzed of which 18.9% were positive for a respiratory virus (increasing positivity has been observed since EW 39) and 7.2% were positive for influenza. Among influenza positive samples, 96.2% were influenza A (58.0% were A(H1N1) and 42.0% were A(H3N2)). Among other respiratory viruses, RSV predominated (53.7% of positive samples) and has been increasing for the last several weeks.

In Panama, based on national laboratory data from EW 42-45, 75 samples were analyzed, of which 78.7% were positive for a respiratory virus. Among positive samples, RSV (79.7%) predominated, followed by rhinovirus (11.9%).

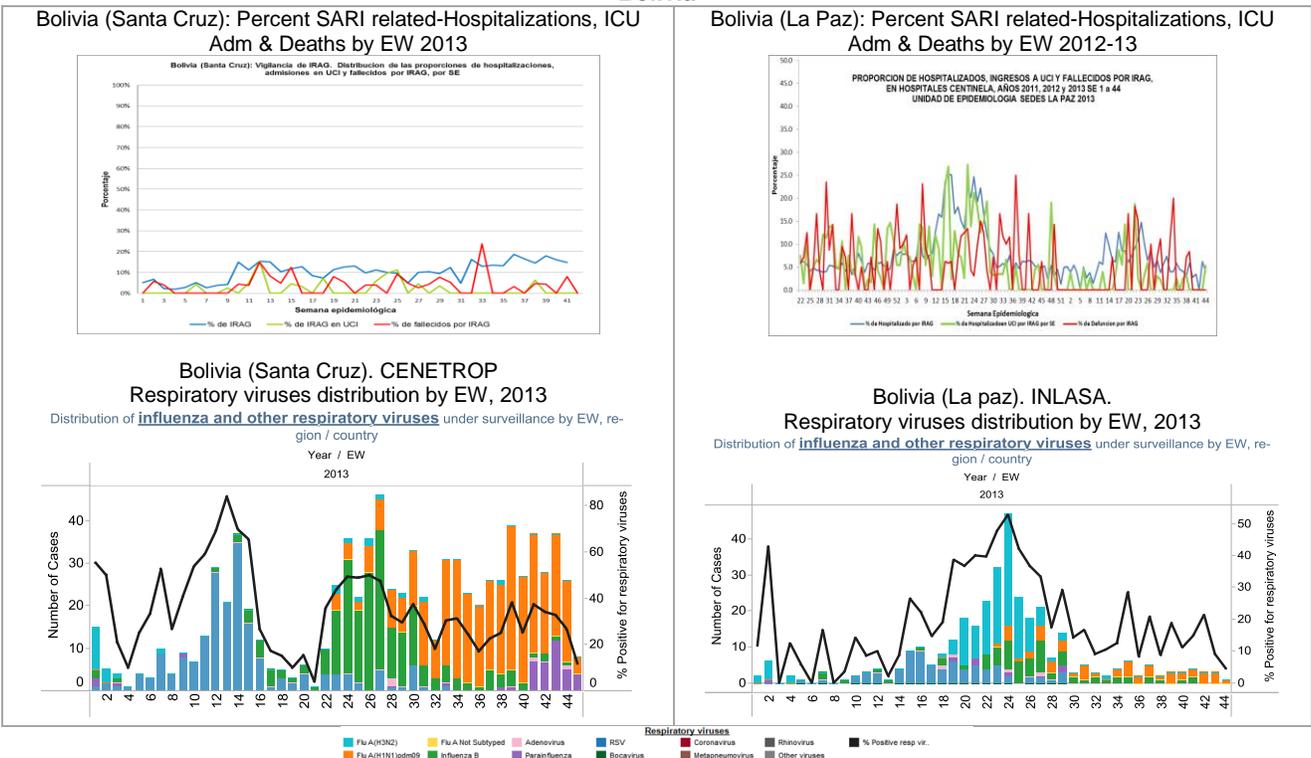
Nicaragua and Panama



South America – Andean countries

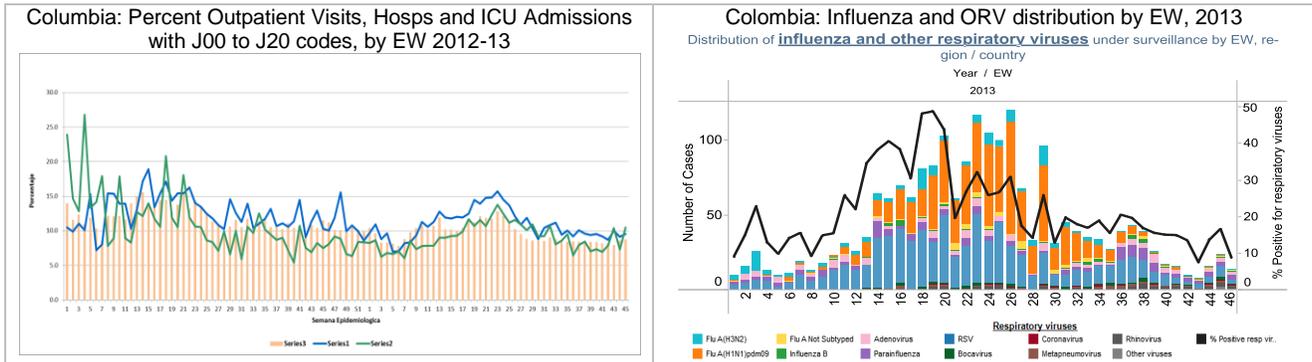
In Bolivia, in Santa Cruz, the proportion of SARI hospitalizations remained elevated compared to this period last year. Based on laboratory data from CENETROP (Santa Cruz) during EW 42-45, 361 SARI samples were analyzed, of which 27.4% were positive for a respiratory virus and 19.4% were positive for influenza. Among the positive samples, influenza A(H1N1)pdm09 (66.7%) predominated, followed by parainfluenza (28.3%). According to data from La Paz, the proportion of SARI-associated hospitalizations in EW 44 (4.0%) continued a decreasing trend. Based on laboratory data from INLASA (La Paz) from EW 41-44, 96 samples were analyzed of which 11.5% were positive for influenza. Among positive samples, influenza A(H1N1)pdm09 (81.8%) and influenza B (18.2%) were detected.

Bolivia



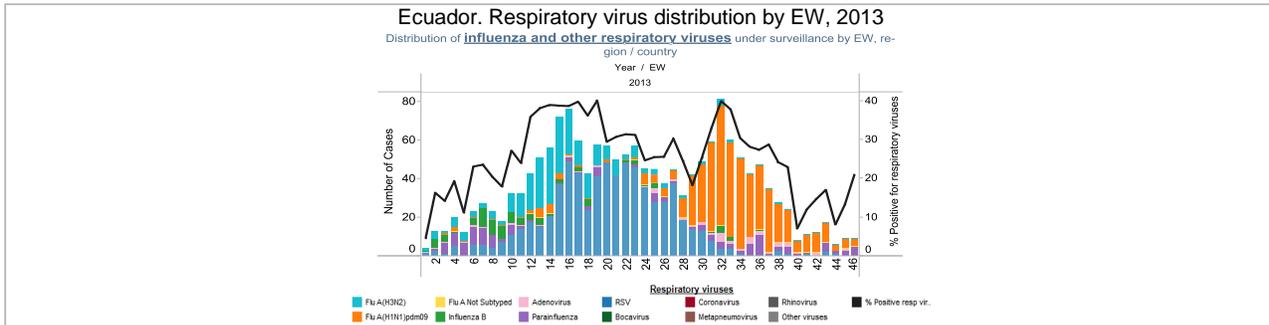
In Colombia, nationally during EW 45, the proportions of hospitalizations (9.5%), ICU admissions (10.5%) and deaths (8.7%) with ARI-associated ICD-10 codes (J00 to J22) remained at low levels. Based on INS national laboratory data from EW 43-46, 527 samples were analyzed, of which 11.8% were positive for a respiratory virus and 1.5% were positive for influenza. Among the positive samples, RSV (27.4%) and parainfluenza (17.7%) predominated.

Colombia



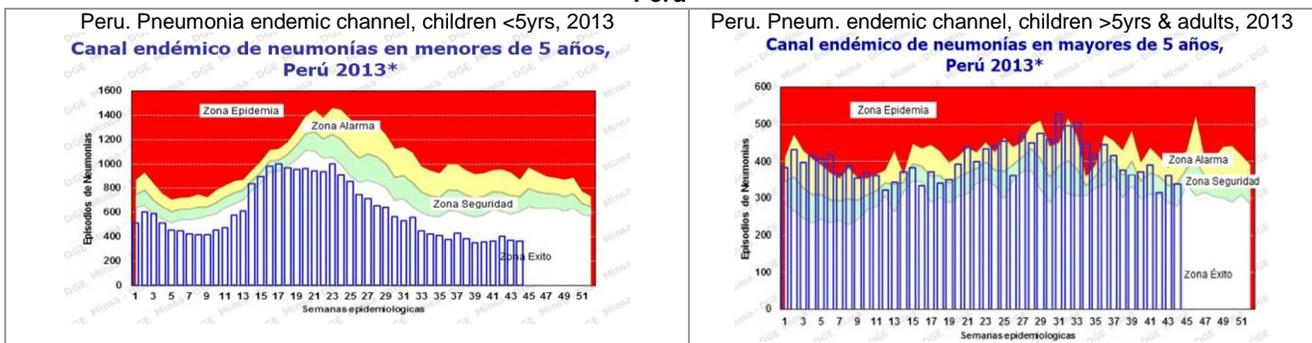
In Ecuador, based on national reference laboratory data from EW 43-46, 286 SARI samples were analyzed, of which 14.3% were positive for a respiratory virus and 7.7% were positive for influenza. Among the positive samples, influenza A(H1N1)pdm09 (53.7%) and parainfluenza (36.6%) predominated.

Ecuador

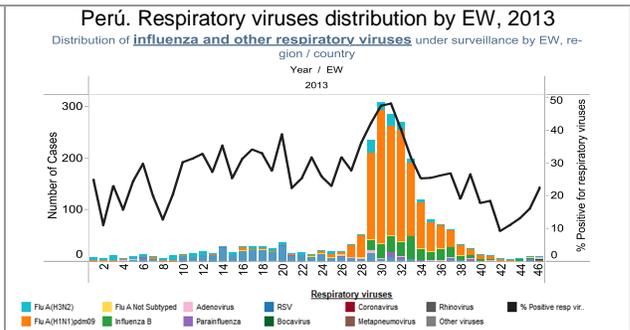
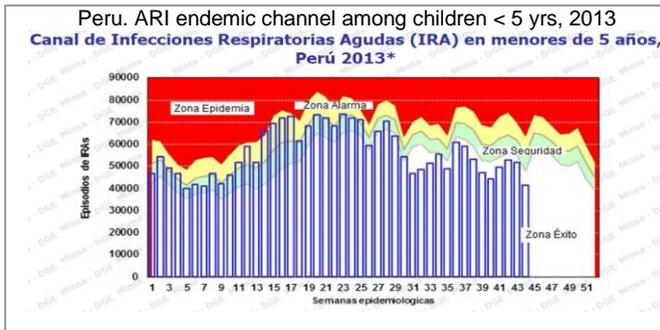


In Peru⁸ during EW 44, the number of ARI and pneumonia reports in children less than 5 years of age decreased compared to the previous EW and remained within the success zone of the endemic channel. Among patients older than 5 years, the number of pneumonia reports continued a decreasing trend since peaking during EW 31 and was within the security zone of the endemic channel. Based on national laboratory data from EW 43-46, 185 samples were analyzed, of which 16.2% were positive for a respiratory virus and 8.6% were positive for influenza. Among the positive samples, influenza B predominated (36.7%), followed by metapneumovirus (20.0%) and influenza A(H1N1)pdm09 (16.7%).

Peru

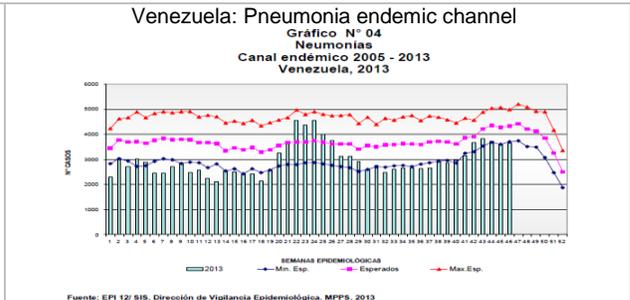
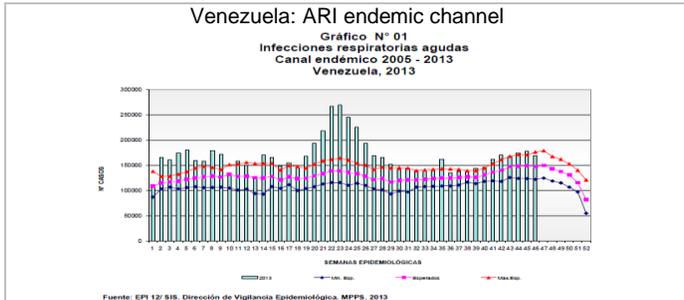


⁸ Perú. Sala de Situación de Salud. EW 44, 2013. Ministerio de Salud. Dirección General de Epidemiología



In Venezuela⁹ during EW 46, ARI activity decreased by 4.6% compared to the previous EW, while pneumonia activity increased by 2.3%. Both were near the expected values for this time of year. During EW 46, 173 SARI-associated hospitalizations were reported, with children 1 to 4 years of age comprising the largest proportion of cases. Based on virologic data from EW 1-46, 5,262 samples were analyzed from suspected influenza cases, of which 52.8% were positive for influenza. Among the positive samples, 91.9% were influenza A(H1N1)pdm09.

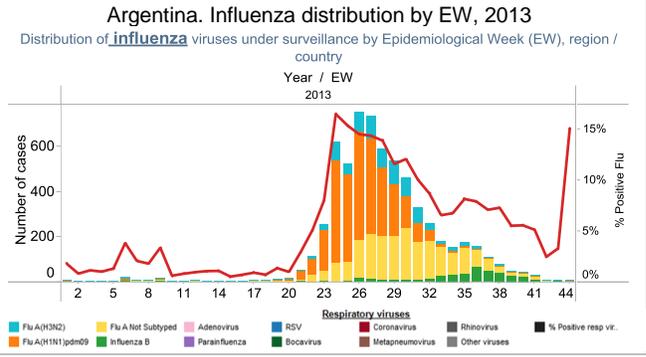
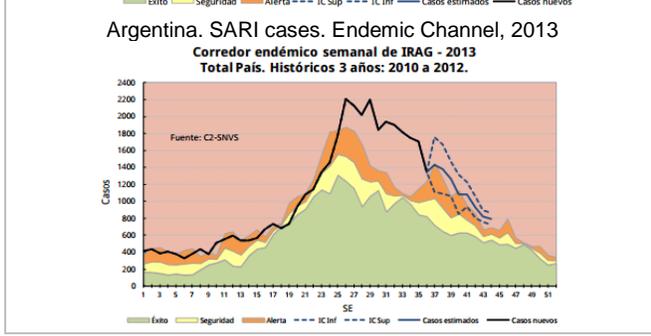
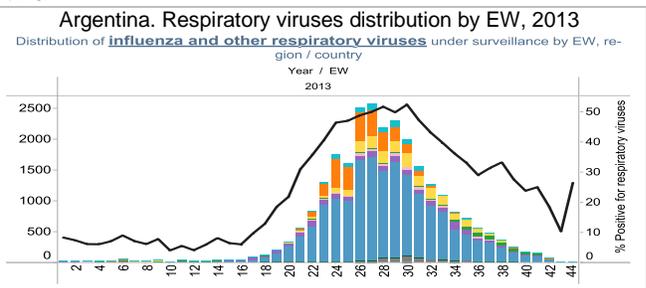
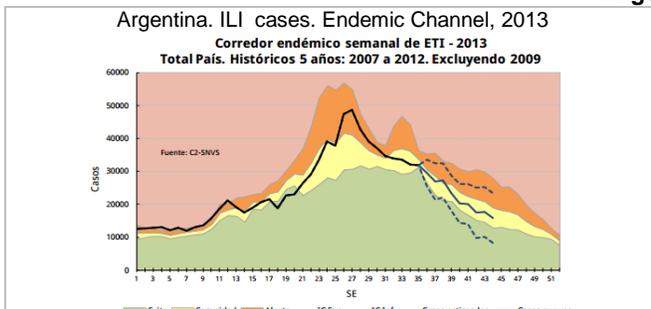
Venezuela



South America – Southern Cone and Brazil

In Argentina¹⁰, according to reports and calculated estimations, national ILI activity during EW 44 was within the security zone of the endemic channel and showed a decreasing trend since its peak in EW 26. The proportion of SARI-associated hospitalizations was within the epidemic zone of the endemic channel, but also showed a decreasing trend since EW 27. Based on laboratory data from EW 41-44, 1,346 samples were analyzed, of which 20.4% were positive for a respiratory virus and 4.4% for influenza. Among positive samples, RSV predominated (50.2%), but has been decreasing since peaking in EW 27.

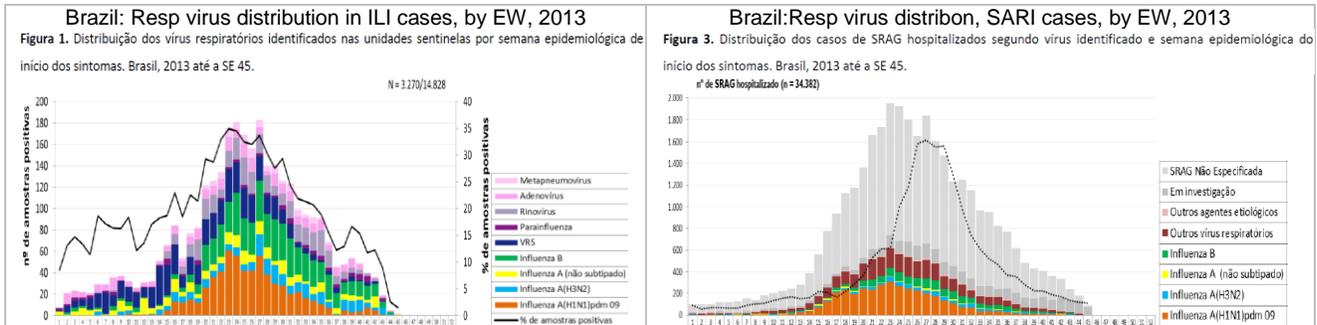
Argentina



⁹ Venezuela. Boletín epidemiológico, EW 46, 2013.
¹⁰ Argentina. Boletín integrado de vigilancia. SE 44.

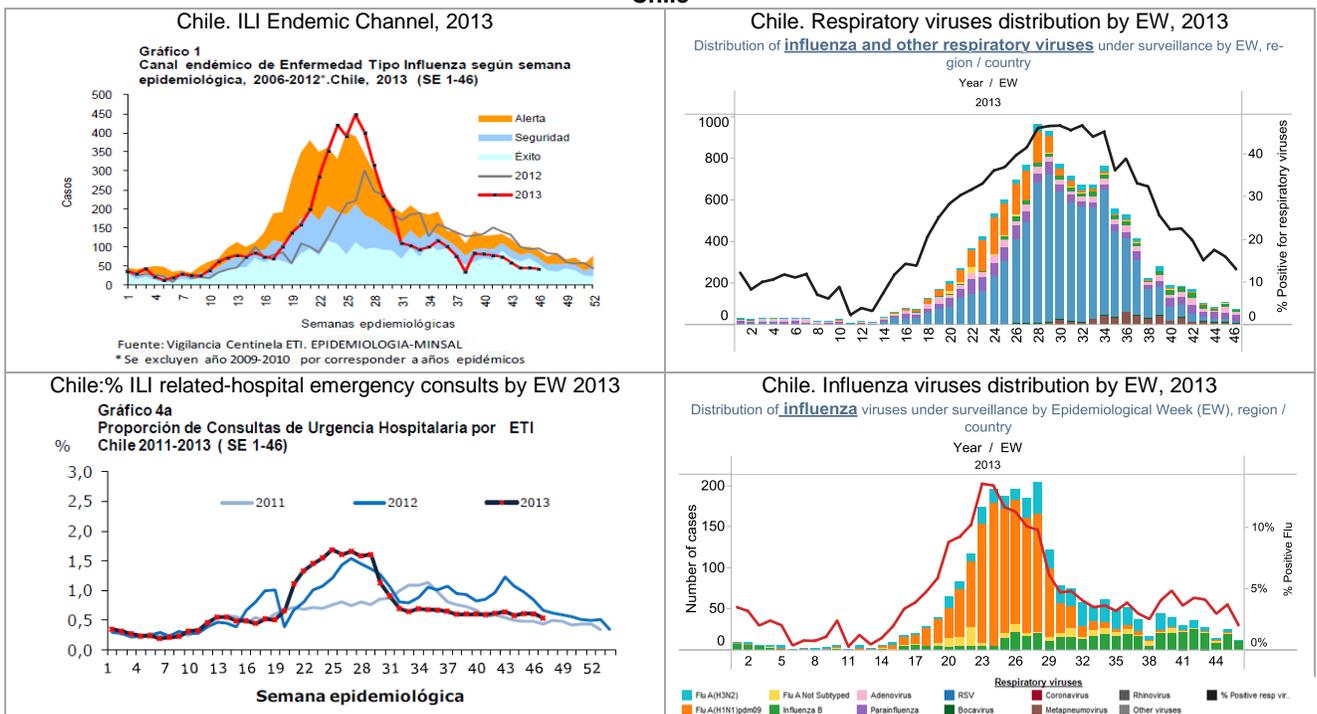
In Brazil¹¹, according to ILI sentinel surveillance data through EW 45, 14,828 samples have been analyzed, of which 22.1% were positive for influenza or another respiratory virus. Positivity has decreased since EW 27 and among positives samples during EW 45, adenovirus and influenza A (not subtyped) were detected. Based on universal SARI surveillance data during this same period, 34,382 SARI cases were reported and 17.0% were positive for influenza. Of these positive samples, influenza A(H1N1)pdm09 predominated (63.4%), followed by influenza B (22.3%) and A(H3N2) (10.9%). Additionally, in 2013, 4,032 SARI-associated deaths have been reported of which 23.4% were positive for influenza, and of these, 80.4% were associated with influenza A(H1N1)pdm09.

Brazil



In Chile¹² ILI activity during EW 46 (rate: 2.7 per 100,000 inhabitants) remained low and was within the success zone of the endemic channel. The proportion of ILI-associated hospital emergency consultations was 0.5%, and also maintained a low and stable level. Based on laboratory data from EW 45-46, 1,271 samples were tested, of which 14.6% were positive for a respiratory virus and 2.9% were positive for influenza. Among the positive samples, parainfluenza (33.0%), adenovirus (22.7%) and metapneumovirus (12.4%) were detected.

Chile



In Paraguay¹³ during EW 46, the ILI consultation rate (131.0 per 100,000 inhabitants) decreased compared to the previous EW and was higher than observed this time last year. The proportion of SARI-associated hospitalizations (3.7%) decreased compared to the previous week and children less than 5 years of age comprised the largest portion (57.0%) of these cases. Based on reference laboratory data from EW 43-46,

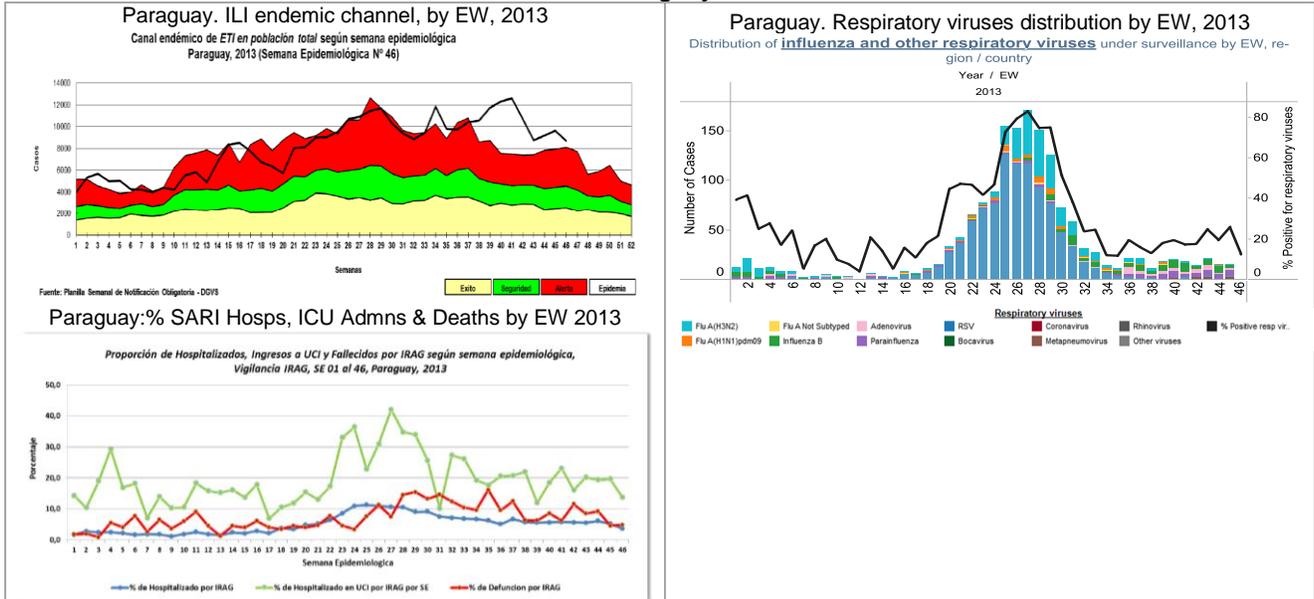
¹¹ Brasil. Boletim informativo. Secretaria de Vigilância em Saúde. SE 45, 2013.

¹² Chile. Informe de situación. EW 46. Available at: <http://epi.minsal.cl/>

¹³ Paraguay. Informe de situación. Vigilancia de ETI e IRAG. SE 46, 2013

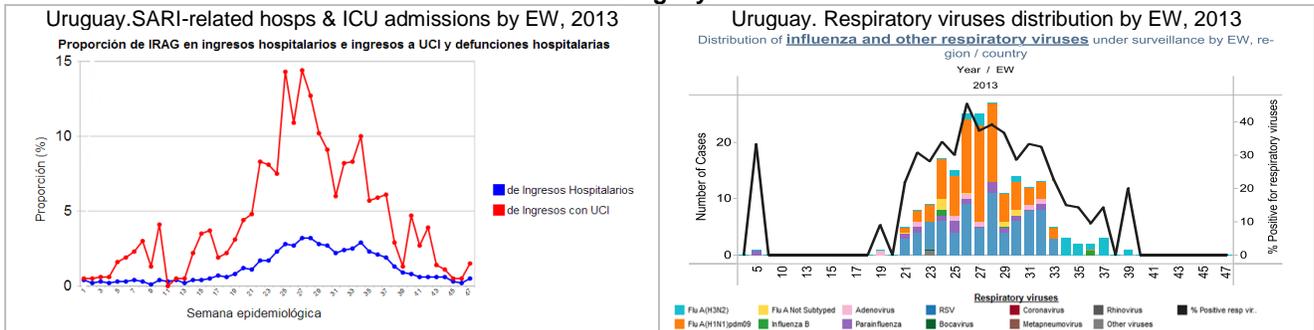
236 SARI samples were analyzed, of which 22.9% were positive for a respiratory virus and 8.5% were positive for influenza. Among influenza samples, 85.0% were influenza B and 15.0% were influenza A (all A(H3N2)). Among other respiratory viruses, parainfluenza (35.2% of positive samples) predominated, followed by metapneumovirus (16.7%) and adenovirus (11.1%).

Paraguay



In Uruguay¹⁴ during EW 46, the proportions of SARI-associated hospitalizations, ICU admissions and deaths were similar to the previous EW, and remained at low levels. Based on laboratory data from EW 43-46, 23 SARI samples were analyzed, of which none were positive for a respiratory virus.

Uruguay



¹⁴ Uruguay. Generador de gráficos de la división de epidemiología, Dirección General de Salud – Ministerio de Salud Pública