

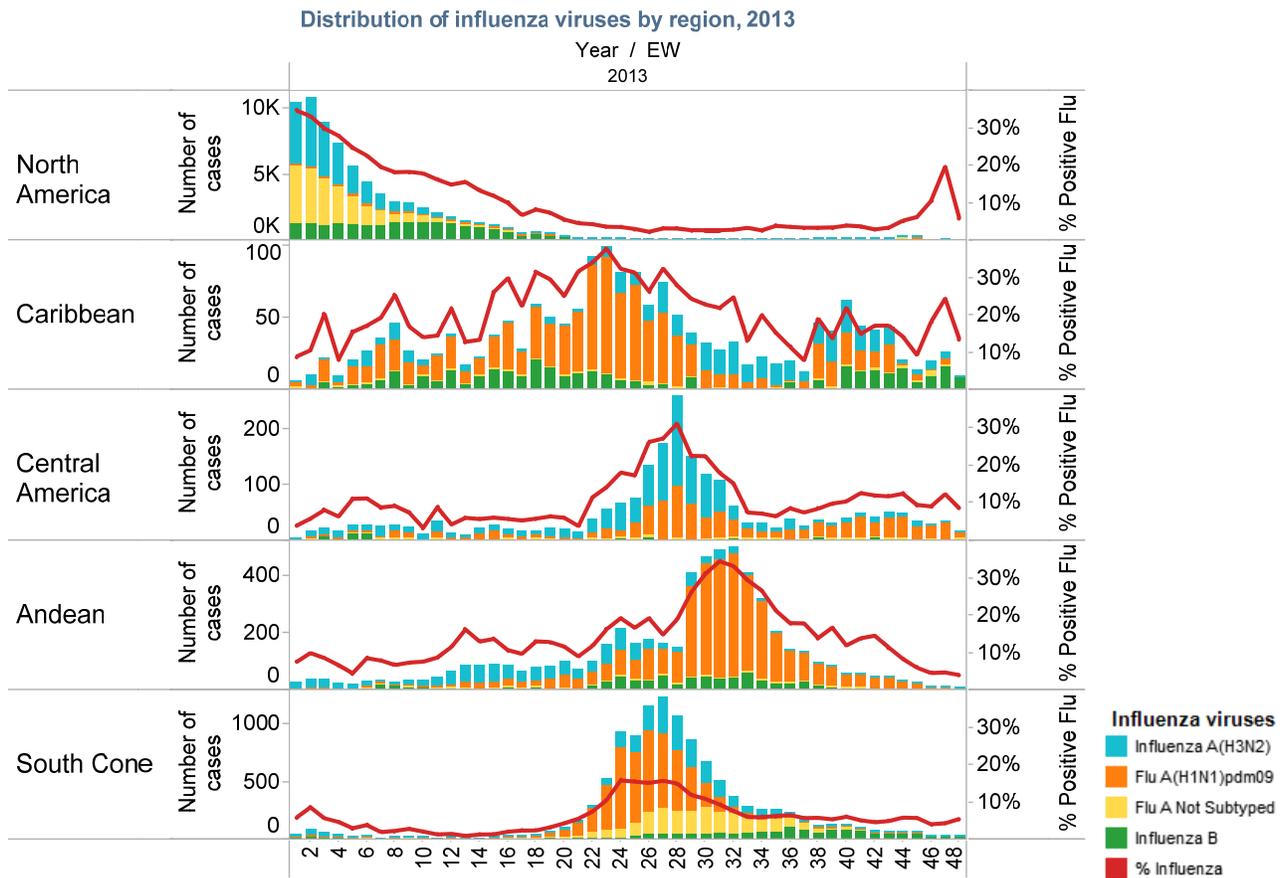
PAHO interactive influenza data: http://ais.paho.org/phis/viz/ed_flu.asp
Influenza Regional Reports: www.paho.org/reportesinfluenza

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

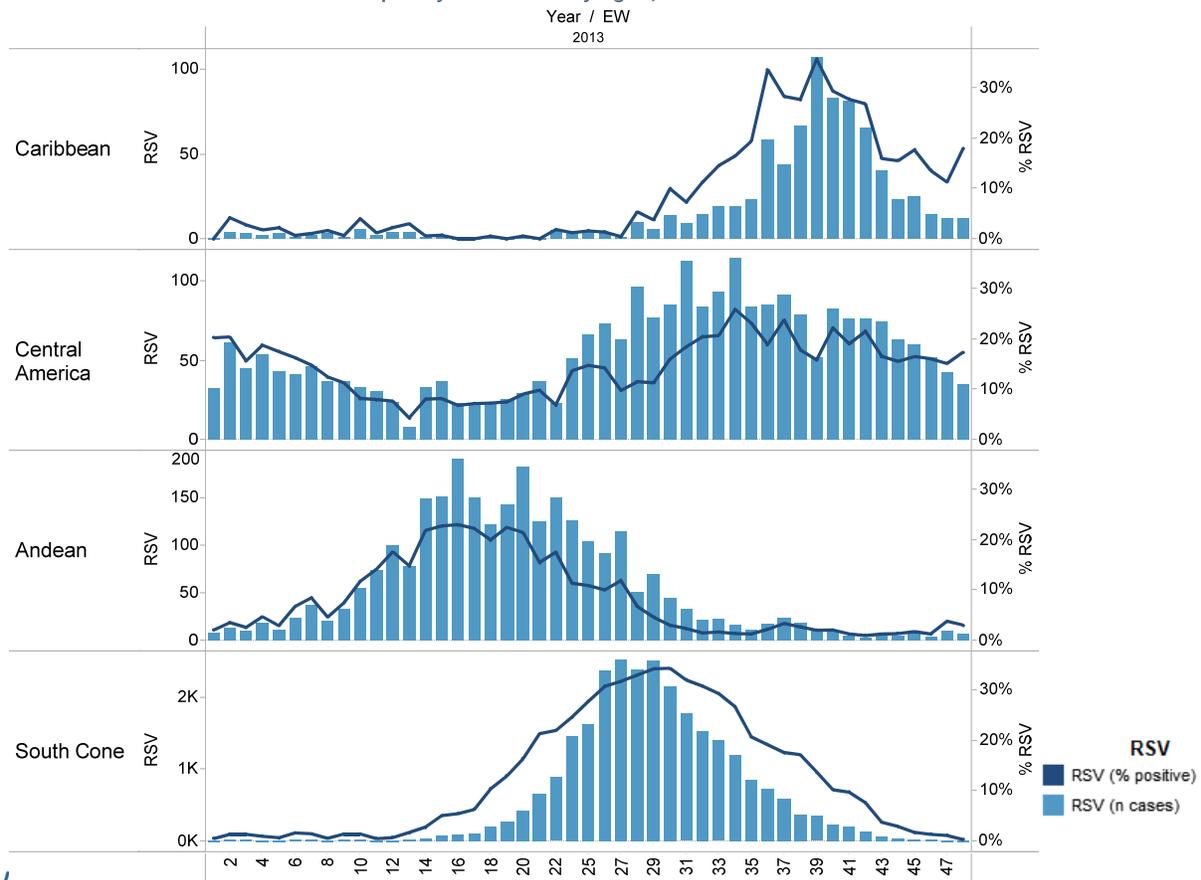
- **North America:** Influenza activity remained low, although some indicators in Canada, the United States and Mexico showed slight increasing trends. Among circulating influenza viruses, influenza A predominated.
- **The Caribbean and Central America:** RSV continued to be the predominant circulating virus in most countries of the region. Among influenza viruses, influenza B predominated in Cuba and Dominican Republic while influenza A predominated in Costa Rica, El Salvador, Guatemala, Honduras, Jamaica and Nicaragua.
- **South America – Andean Countries:** Acute respiratory virus activity remained low in most countries in the region. Among circulating respiratory viruses, parainfluenza (Bolivia (La Paz), Colombia, Ecuador), RSV (Colombia, Peru), influenza A(H1N1)pdm09 (Ecuador) and influenza B (Peru) were detected.
- **South America - South Cone and Brazil:** Acute respiratory virus activity was low and within the expected level for this time of year. Parainfluenza continued to circulate in the region, and as well as RSV (Argentina), influenza B (Chile, Paraguay) and adenovirus (Argentina, Chile).

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

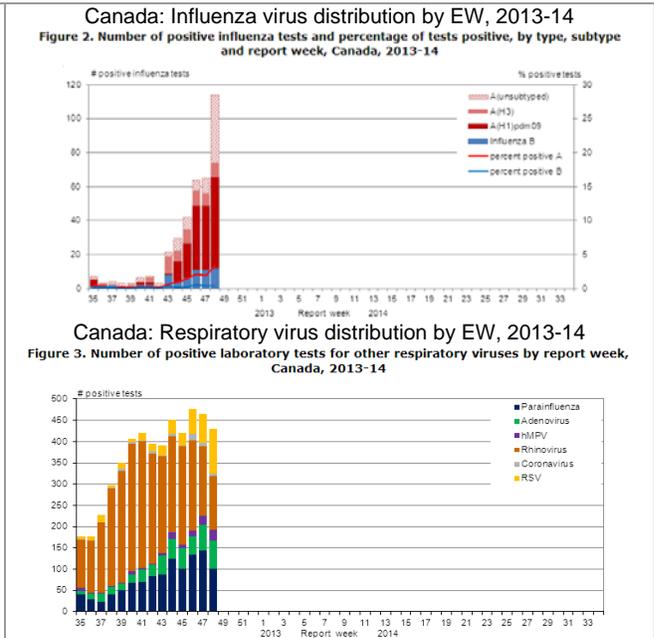
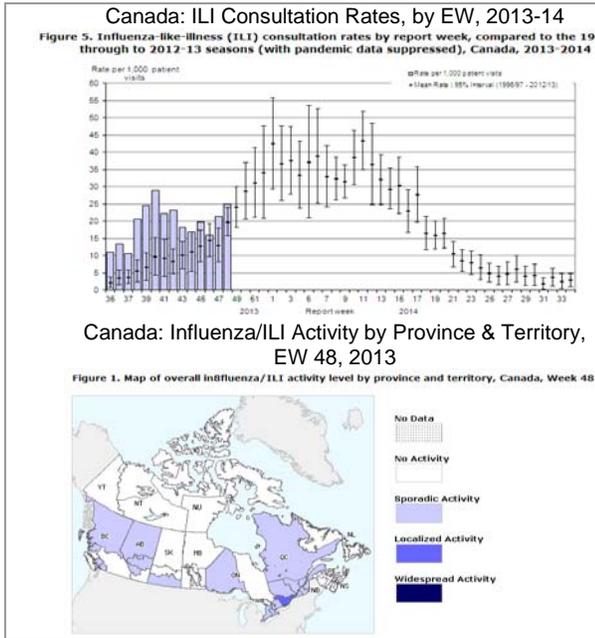
EPIDEMIOLOGIC AND VIROLOGIC UPDATE OF INFLUENZA & OTHER RESPIRATORY VIRUSES BY COUNTRY

North America:

In Canada¹, during EW 48 influenza activity continued its increasing trend. The national influenza-like illness (ILI) consultation rate was 24.9 per 1,000 patient visits, an increase compared to the previous week. To date this season, 52 influenza-associated hospitalizations have been reported (28 pediatric and 24 adult), of which three required ICU admission (2 pediatric and 1 adult). No influenza-associated deaths were reported. Based on laboratory data for EW 48, the overall percentage of positive influenza tests was 3.7% (N=114), an increase compared to the previous week. Among the positive tests, 89.5% were influenza A, of which 52.9% were influenza A(H1N1)pdm09. Among other respiratory viruses, rhinovirus continued to predominate.

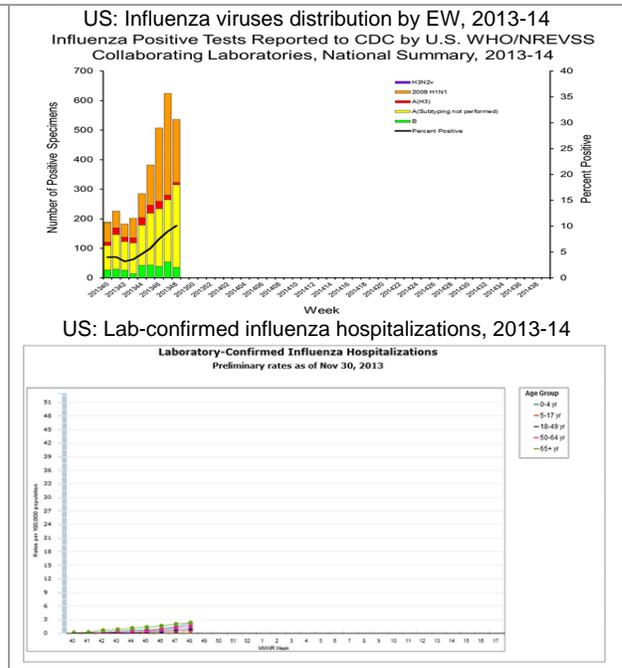
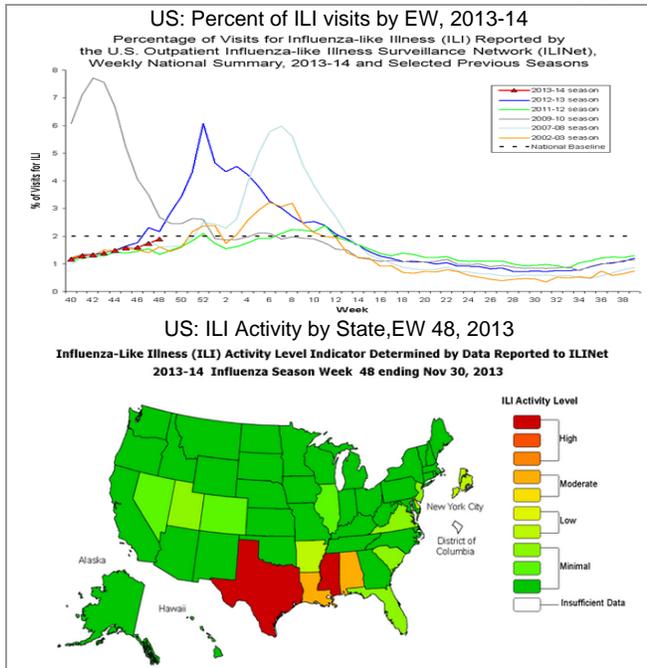
¹ Canada: FluWatch Report. EW 48. Available at <http://www.phac-aspc.gc.ca/fluwatch/>

Canada



In the United States² during EW 48, influenza activity increased slightly, with 1.2% of outpatient visits associated with ILI and 5.8% of deaths associated with pneumonia and influenza. One influenza-associated pediatric death was reported during EW 48. The death occurred during EW 47 and was associated with influenza A(H1N1)pdm09. Since October 1, 2013 there have been 333 laboratory confirmed influenza-associated hospitalizations reported and corresponds to a rate of 1.2 per 100,000 population. According to laboratory data for EW 48, 5,306 samples were analyzed, of which 10.1% were positive for influenza. Among the positive samples, 93.5% were influenza A (42.5% were A(H1N1)pdm09) and 6.5% were influenza B. Based on antiviral resistance testing, 2.3% (6/265) of the influenza A(H1N1)pdm09 samples tested were oseltamivir resistant.

United States



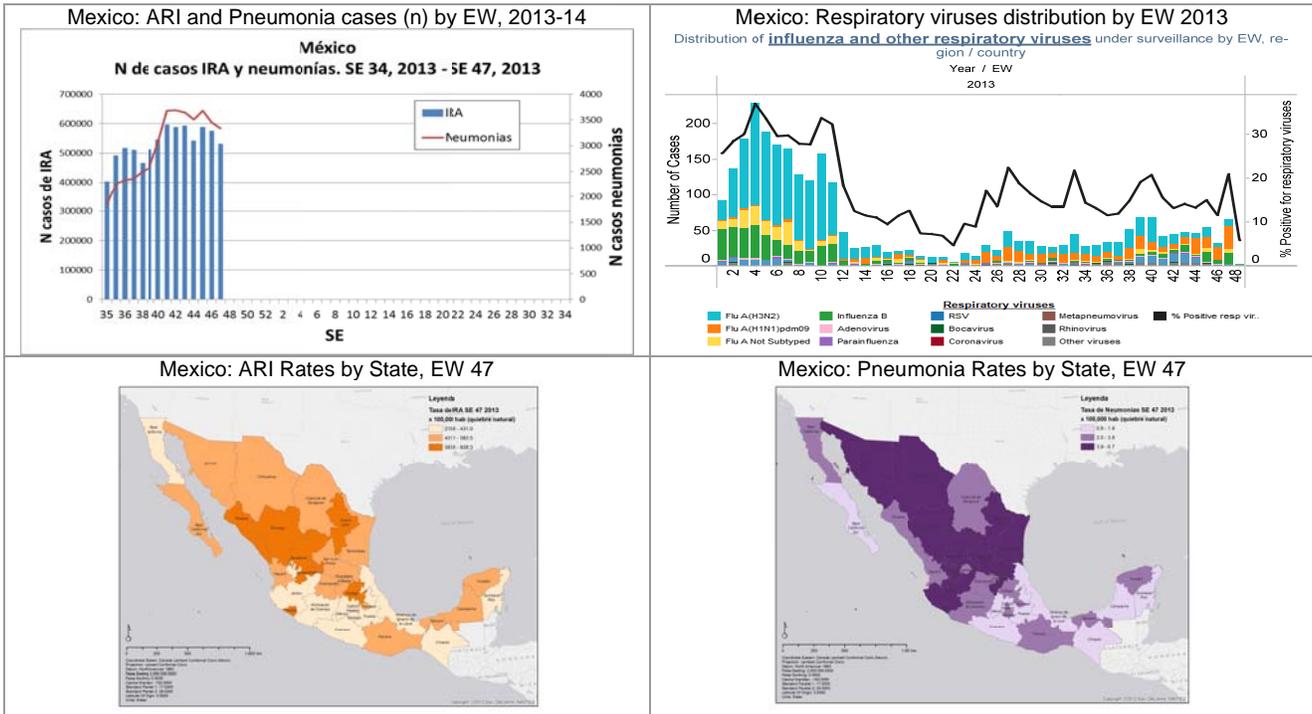
In Mexico³, during EW 47 the number of ARI and pneumonia cases decreased by 7.9% and 3.4%, respectively, from the previous week. The highest levels of ARI activity were reported in Zacatecas,

² USA: CDC FluView report. EW 48. Available at: <http://www.cdc.gov/flu/weekly/>

³ México. Dirección General de Epidemiología. Información epidemiológica. SE 47.

Aguascalientes and Colima, and the highest levels of pneumonia activity were reported in Zacatecas, Tamaulipas, Quintana Roo and Sonora. According to laboratory data from EW 45-48, 1,032 samples were tested, of which 15.4% were positive for a respiratory virus and 14.1% for influenza. Among the positive influenza samples, 76.7% were influenza A (60.7% were A(H1N1)pdm09 and 25.0% were A(H3N2)) and 23.3% were influenza B. Among other respiratory viruses, RSV was detected (4.4% of positive samples).

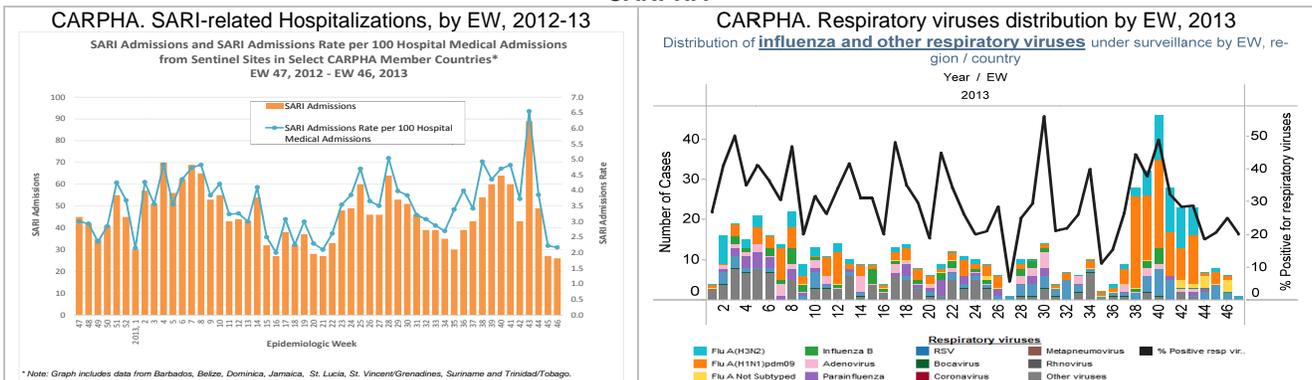
Mexico



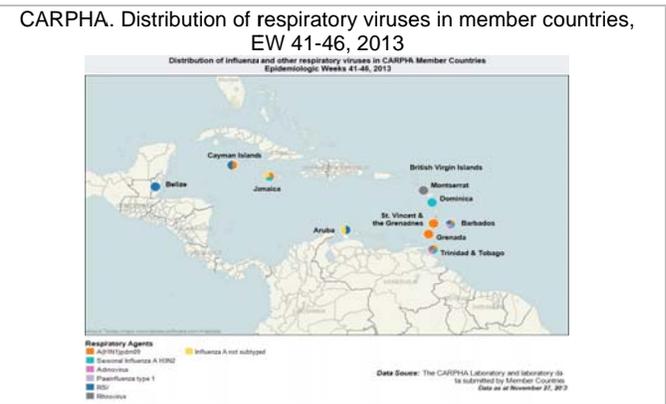
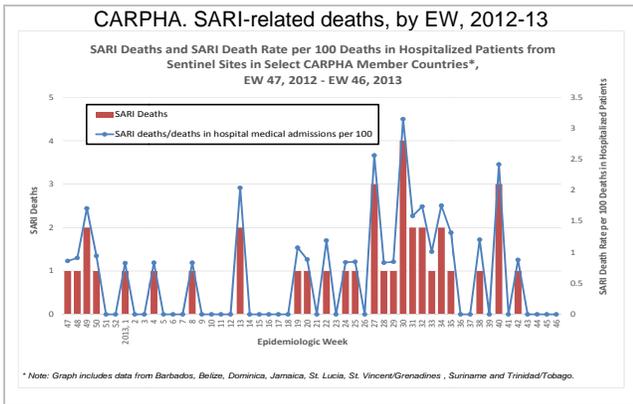
Caribbean

CARPHA⁴ received weekly SARI/ARI data from the following countries for EW 46: Belize, Dominica, Jamaica, St. Vincent & the Grenadines and Trinidad & Tobago. During this time, the proportion of SARI-associated hospitalizations was 2.2%, with children 6 months to 4 years having the highest rate of SARI admissions (7.2 per 1,000 hospital admissions). There were no SARI-associated deaths reported during EW 46. According to laboratory data from EW 44-47, 106 samples were tested, of which 20.8% were positive for a respiratory virus and 11.3% were positive for influenza. Among the positive samples, influenza A (54.5%) and RSV (40.9%) predominated. For cases with dates of onset between EW 41-46, the following viruses were reported by member countries: influenza A(H1N1)pdm09 (Barbados, Cayman Islands, Grenada, Jamaica, St. Vincent & the Grenadines, Trinidad & Tobago), influenza A(H3N2) (Barbados, Dominica, Jamaica, Trinidad & Tobago), influenza A, not subtyped (Aruba, Jamaica), RSV (Aruba, Barbados, Belize, Cayman Islands), adenovirus (Barbados, Trinidad & Tobago), rhinovirus (Montserrat, Trinidad & Tobago), and parainfluenza 1 (Barbados).

CARPHA

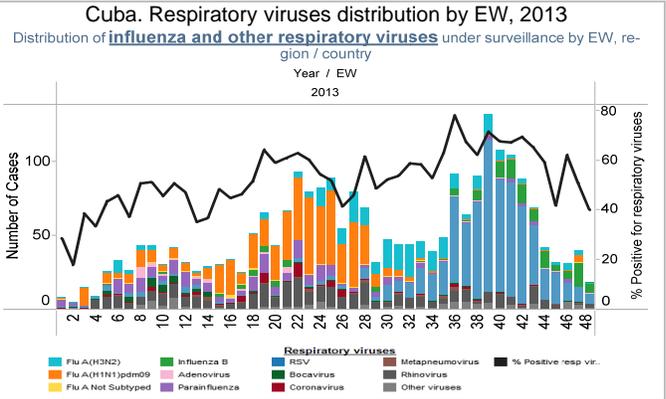
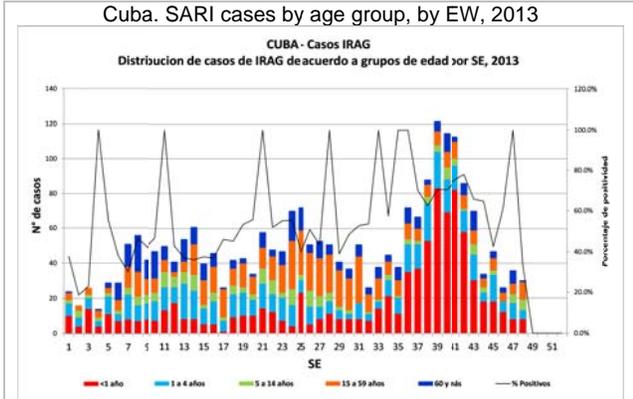


⁴ Caribbean Public Health Agency (CARPHA) EW 46



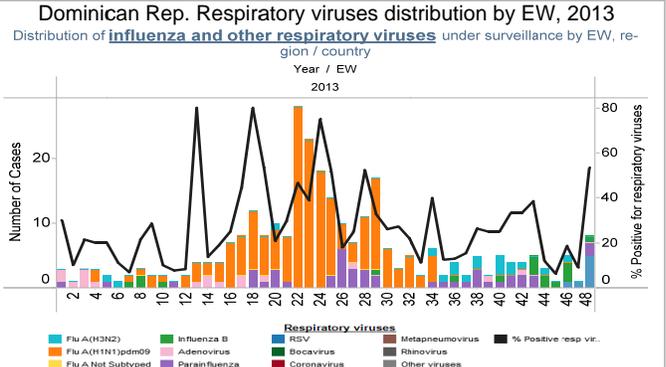
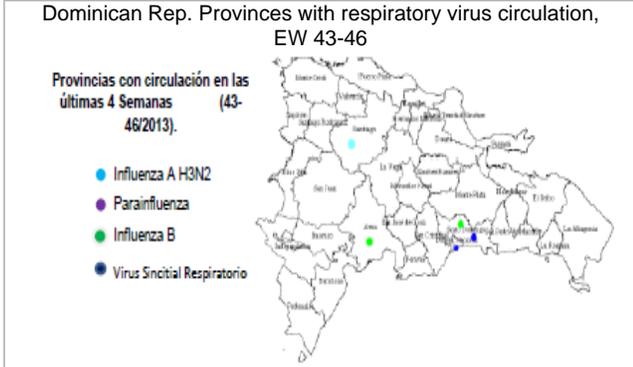
In Cuba during EW 48, the number of SARI-associated hospitalizations decreased compared to the previous EW and has shown a decreasing trend since peaking in EW 39. Persons 15 to 59 years of age comprised the largest proportion of these cases. One SARI-associated death was reported during this period and tested negative for a respiratory virus. According to national laboratory data for EW 45-48, 251 samples were analyzed, of which 48.2% were positive for a respiratory virus and 18.7% were positive for influenza. RSV remained the predominant circulating virus (41.3% of the positives), and among influenza viruses, influenza B predominated.

Cuba



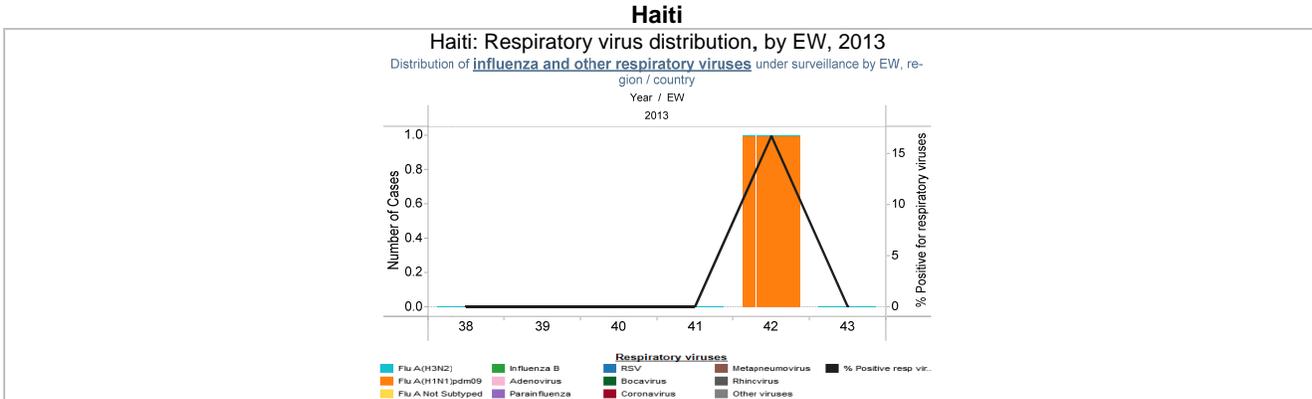
In the Dominican Republic⁵, the cumulative ILI rate for EW 1-47 was 1,962 per 10,000 inhabitants, and is 13% less than what was reported this period last year. During this period 1,667 SARI cases were reported through sentinel surveillance, of which 32 were reported during EW 47. There were no SARI-associated deaths reported during EW 47. According to laboratory data for EW 45-48, 69 samples were analyzed, of which 21.7% were positive for a respiratory virus and 8.7% were positive for influenza. Among positive influenza samples, 83.3% were influenza B and 16.7% were influenza A (all influenza A(H3N2)). Among other respiratory viruses, RSV (46.7% of positive samples) predominated.

Dominican Republic

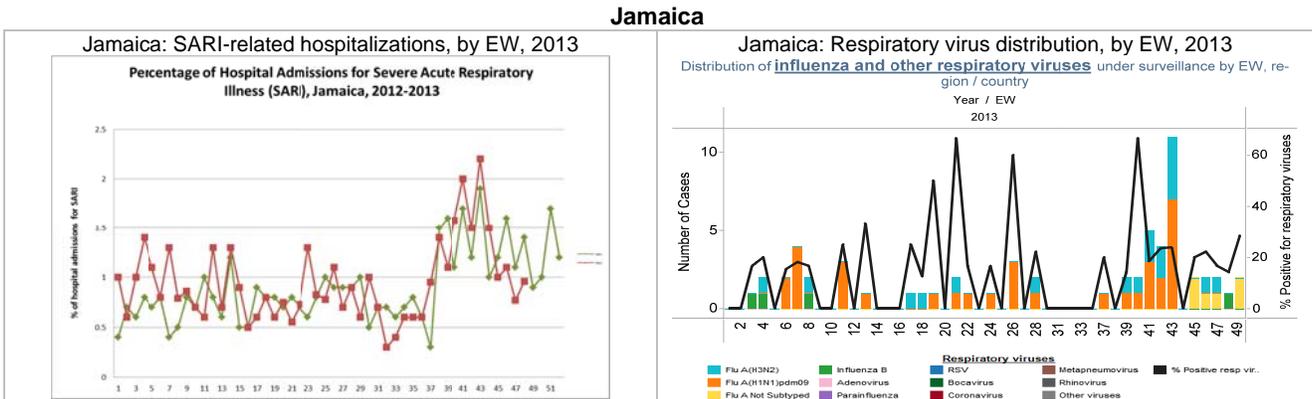


⁵ República Dominicana. Dirección Nacional de Vigilancia Epidemiológica. Boletín Semanal SE 47.

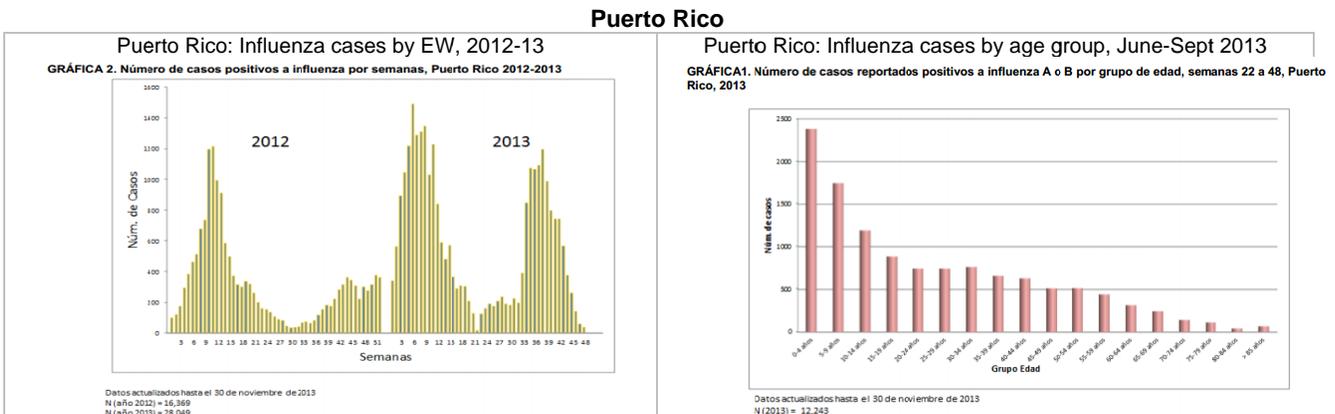
In Haiti, based on data from the national public health laboratory for EW 38-43, 34 samples from sentinel surveillance were analyzed. Of these, one (2.9%) tested positive and it was for influenza A(H1N1)pdm09.



In Jamaica, based on sentinel surveillance data for EW 48, the proportion of ARI-associated consultations (6.7%) decreased compared to the previous week while the proportion of SARI-associated hospitalizations (1.0%) increased slightly. No SARI-associated deaths were reported during this period. Based on laboratory data for EW 45-48, 38 samples were analyzed of which 18.4% were positive for influenza. Among the influenza positive samples, 85.7% were influenza A (33.3% were A(H3N2)) and 14.3% were influenza B.



In Puerto Rico⁶ during EW 48, the number of influenza cases (n=35) continued a decreasing trend since peaking in EW 37. Of these, 60% were associated with influenza A and 40% with influenza B. Since the beginning of June, 12,243 influenza cases have been reported and children aged 0-14 years accounted for 43% of those cases. Since June, 748 influenza-associated hospitalizations and 16 influenza-associated deaths have been reported.



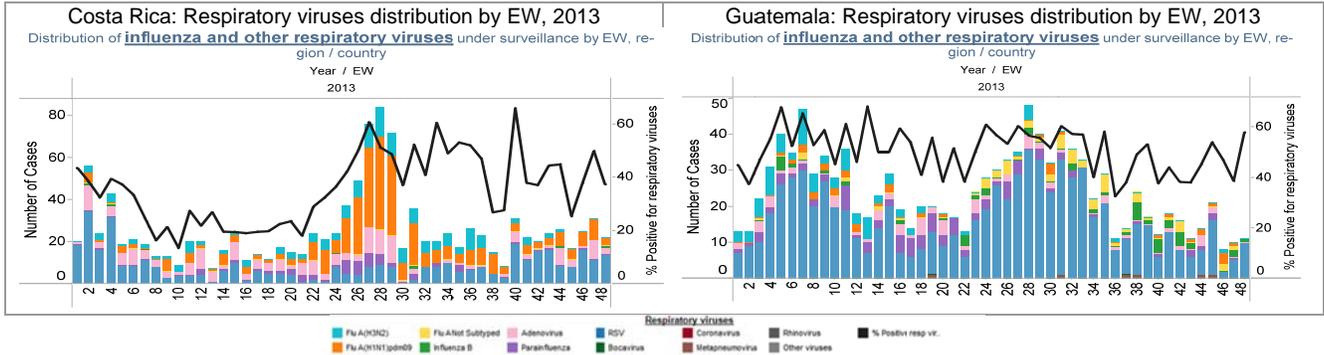
⁶ Puerto Rico. Departamento de Salud. Vigilancia de influenza de Puerto Rico SE 48. <http://www.salud.gov.pr/influenza/Informes%20Influenza/Informe%20Influenza%20Semana%2048.pdf>

Central America

In Costa Rica, based on national laboratory data from EW 45-48, 254 samples were analyzed, of which 37.4% were positive for a respiratory virus and 10.6% were positive for influenza. Among influenza positive samples, 96.3% were influenza A (100% were A(H1N1)pdm09). Among other respiratory viruses, RSV predominated (52.6% of positive samples) followed by adenovirus (17.9%).

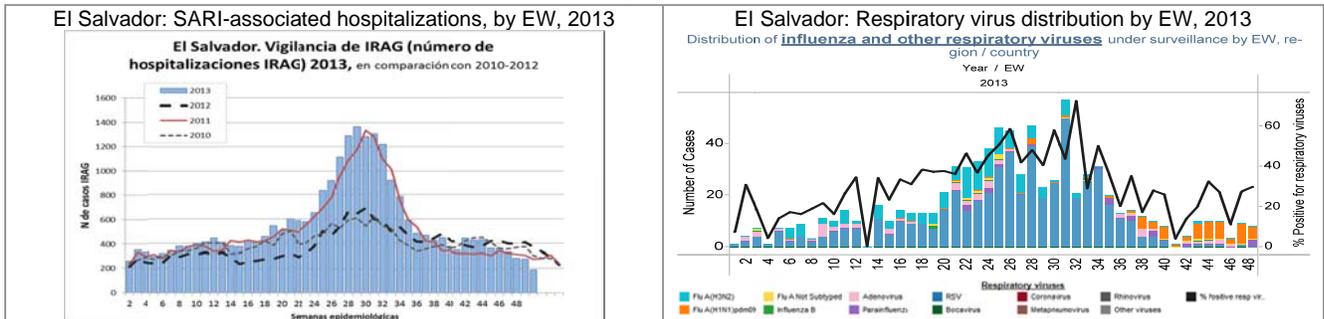
In Guatemala, based on laboratory data from EW 45-48, 101 samples were analyzed, of which 49.5% were positive for a respiratory virus and 11.9% were positive for influenza. Among influenza positive samples, 75% were influenza A (55.6% were A(H1N1)pdm09) and 25% were influenza B. Among the other respiratory viruses, RSV predominated (64.0% of positive samples).

Costa Rica and Guatemala



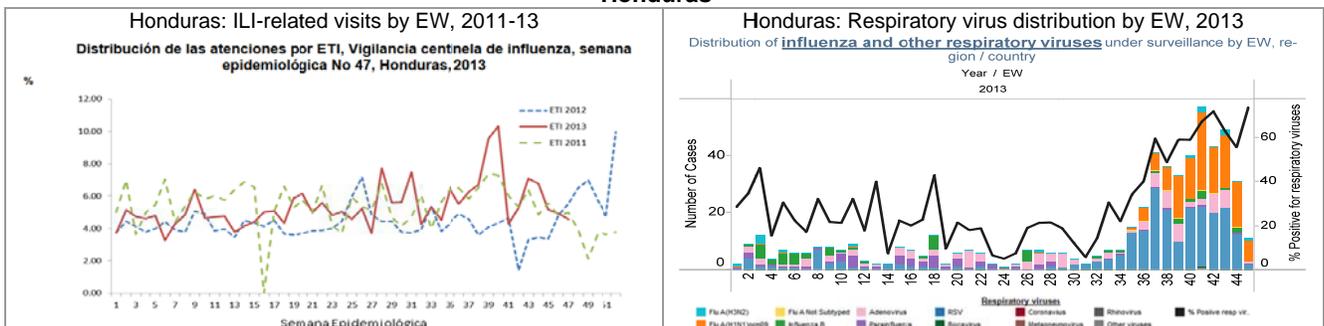
In El Salvador, during EW 49, the proportion of SARI hospitalizations (4.3%), SARI ICU admissions (12.5%) and SARI deaths (8.5%) remained low and lower than what was observed in previous years (2010-2012). Based on national laboratory data from EW 45-48, 124 samples were analyzed, of which 24.2% were positive for a respiratory virus and 17.7% were positive for influenza. Among influenza positive samples, 100% were influenza A(H1N1)pdm09. Among other respiratory viruses, adenovirus and RSV were detected.

El Salvador



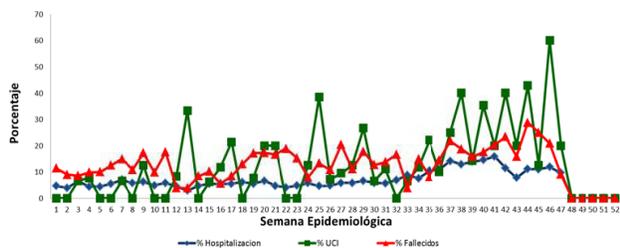
In Honduras⁷, during EW 47, the proportion of ILI-associated visits (4.6%) as well as SARI-associated hospitalizations (9.7%) and deaths (9.1%) decreased compared to the previous week. Based on national laboratory data for EW 42-45, 209 samples were analyzed, of which 64.1% were positive for a respiratory 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 47

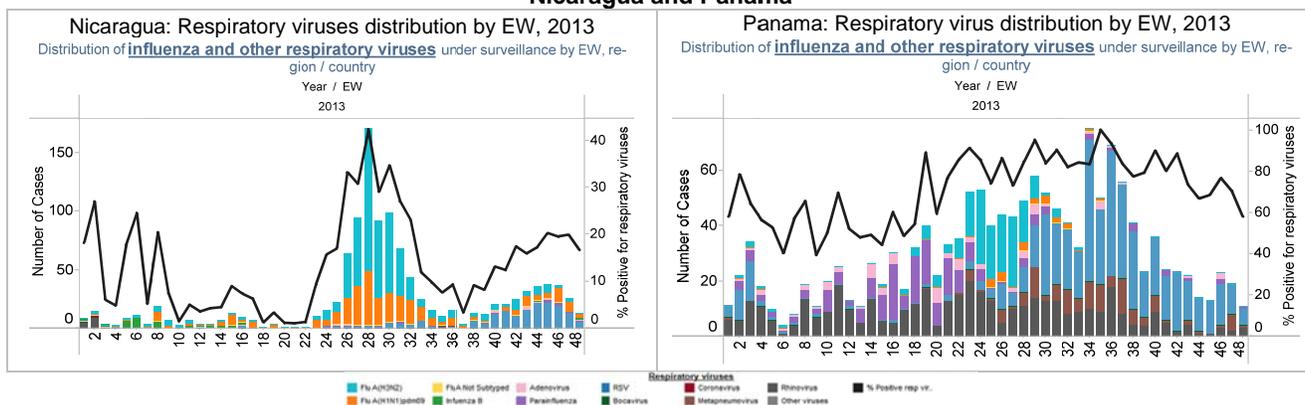
Honduras: SARI-related hosps, ICU adms & deaths, by EW,2013
 Distribución de hospitalizaciones, admitidos en UCI, fallecidos por IRAG, vigilancia centinela de influenza. Honduras, semana epidemiológica No. 1-47, 2013.



In Nicaragua, based on national laboratory data from EW 45-48, 582 samples were analyzed of which 19.4% were positive for a respiratory virus (increasing positivity has been observed since EW 39) and 7.7% were positive for influenza. Among influenza positive samples, 91.1% were influenza A (68.3% were A(H1N1) and 31.7% were A(H3N2)). Among other respiratory viruses, RSV predominated (52.2% of positive samples).

In Panama, based on national laboratory data from EW 45-48, 95 samples were analyzed, of which 69.5% were positive for a respiratory virus. Among positive samples, RSV (66.7%) predominated, followed by rhinovirus (13.6%) and metapneumovirus (12.1%)

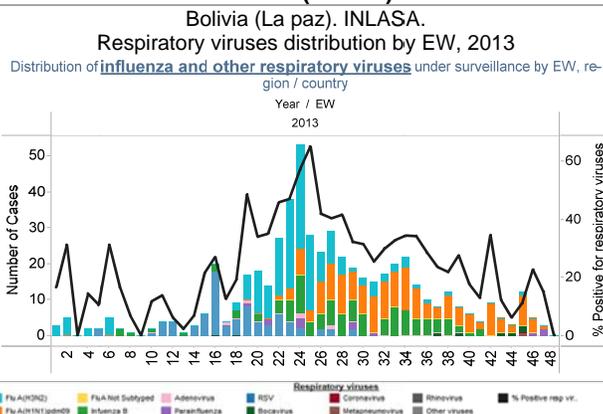
Nicaragua and Panama



South America – Andean countries

In Bolivia, according to laboratory data from INLASA (La Paz) from EW 45-48, 152 samples were analyzed of which 13.2% were positive for a respiratory virus and 9.2% were positive for influenza. Among positive samples, influenza A(H1N1)pdm09 predominated (65.0%), followed by parainfluenza (15.0%).

Bolivia (La Paz)

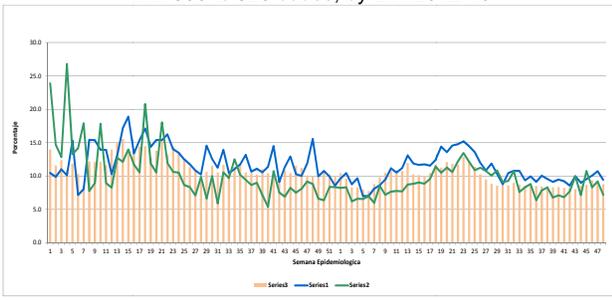


In Colombia, nationally during EW 48, the proportions of hospitalizations (9.4%), ICU admissions (7.2%) and deaths (8.8%) with ARI-associated ICD-10 codes (J00 to J22) remained at low levels. Based on INS national laboratory data from EW 45-48, 621 samples were analyzed, of which 8.9% were positive for a respiratory

virus and 1.0% were positive for influenza. Among the positive samples, RSV (27.3%) and parainfluenza (25.5%) predominated.

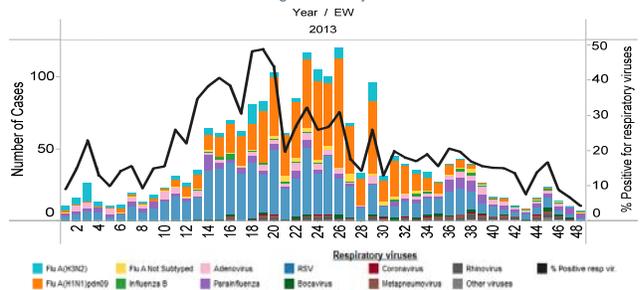
Colombia

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



Colombia: Influenza and ORV distribution by EW, 2013

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

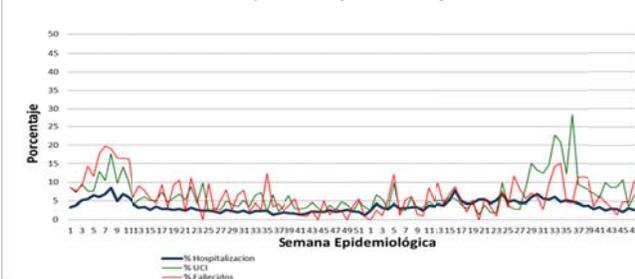


In Ecuador during EW 47, the proportion of SARI-associated hospitalizations (2.6%) and ICU admissions (6.7%) remained similar to what was observed during the previous week. Based on national reference laboratory data from EW 44-47, 285 SARI samples were analyzed, of which 14.4% were positive for a respiratory virus and 7.0% were positive for influenza. Among the positive samples, influenza A(H1N1)pdm09 (48.8%) and parainfluenza (39.0%) predominated.

Ecuador

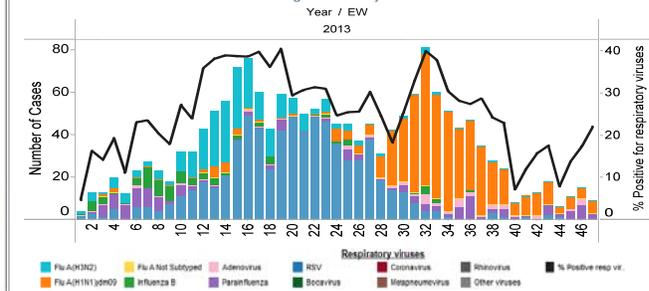
Ecuador. :% SARI Hosps, ICU Adms & Deaths by EW 2013

IRAG(%): hospitalizaciones, admisiones a UCI y Fallecidos. Ecuador, de la SE 01/2012 a SE 47/2013.



Ecuador. Respiratory viruses distribution by EW, 2013

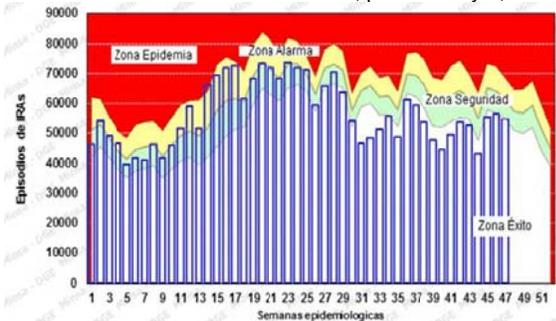
Distribution of **influenza and other respiratory viruses** under surveillance by EW, region / country



In Peru⁸ during EW 47, the number pneumonia reports in patients older than 5 years of age decreased compared to the previous EW. Among children younger than 5 years, the number of pneumonia reports increased from the previous week. However, both are within the expected levels for this time of year. Based on national laboratory data from EW 45-48, 226 samples were analyzed, of which 23.5% were positive for a respiratory virus and 9.3% were positive for influenza. Among the positive samples, influenza B predominated (32.1%), followed by RSV (26.4%) and metapneumovirus (15.1%).

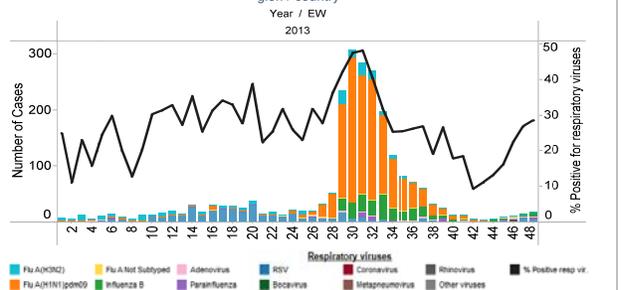
Peru

Peru: Pneumonia endemic channel, patients >5yrs, 2013

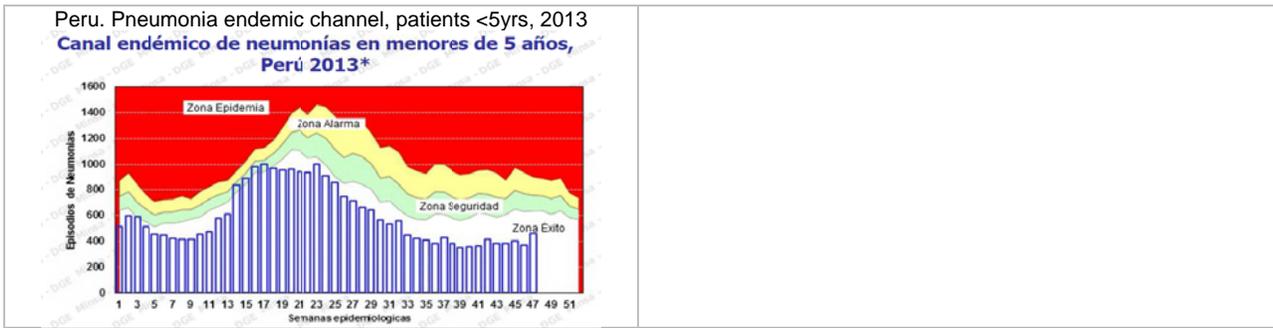


Perú. Respiratory viruses distribution by EW, 2013

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

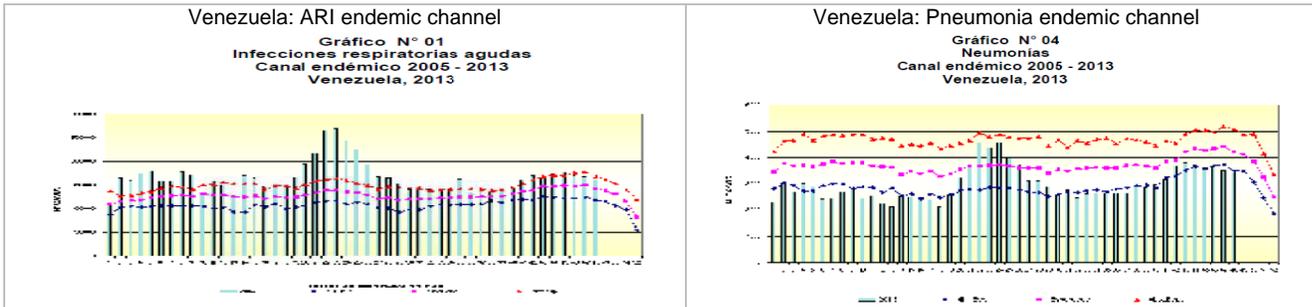


⁸ Perú. Sala de Situación de Salud. EW 47, 2013. Ministerio de Salud. Dirección General de Epidemiología



In Venezuela⁹ during EW 48, ARI and pneumonia activity decreased by 4.4% and 2.2%, respectively, compared to the previous EW. Both were within the expected values for this time of year. During EW 48, 119 SARI-associated hospitalizations were reported, with children less than 1 year of age comprising the largest proportion of cases. Based on virologic data from EW 1-48, 5,298 samples were analyzed from suspected influenza cases, of which 52.6% were positive for influenza. Among the positive samples, 91.7% were influenza A(H1N1)pdm09.

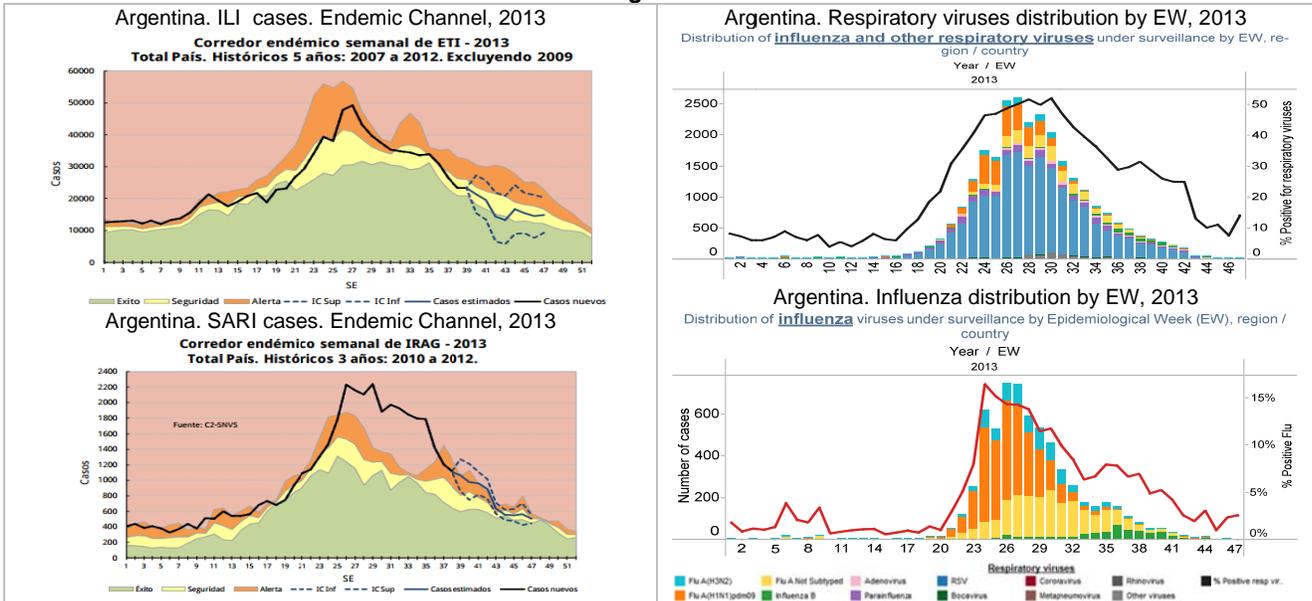
Venezuela



South America – Southern Cone and Brazil

In Argentina¹⁰, according to reports and calculated estimations, national ILI activity during EW 46 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 alert zone of the endemic channel, but also showed a decreasing trend since EW 26. Based on laboratory data from EW 44-47, 1,289 samples were analyzed, of which 10.2% were positive for a respiratory virus and 2.3% for influenza. Among positive samples, RSV (25.8%), parainfluenza (25.8%) and adenovirus (15.9%) were detected.

Argentina

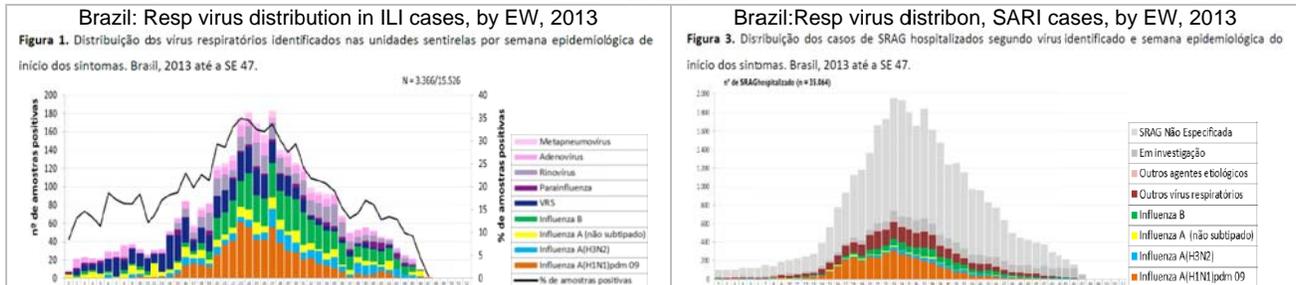


⁹ Venezuela. Boletín epidemiológico, EW 48, 2013.

¹⁰ Argentina. Boletín integrado de vigilancia. SE 46.

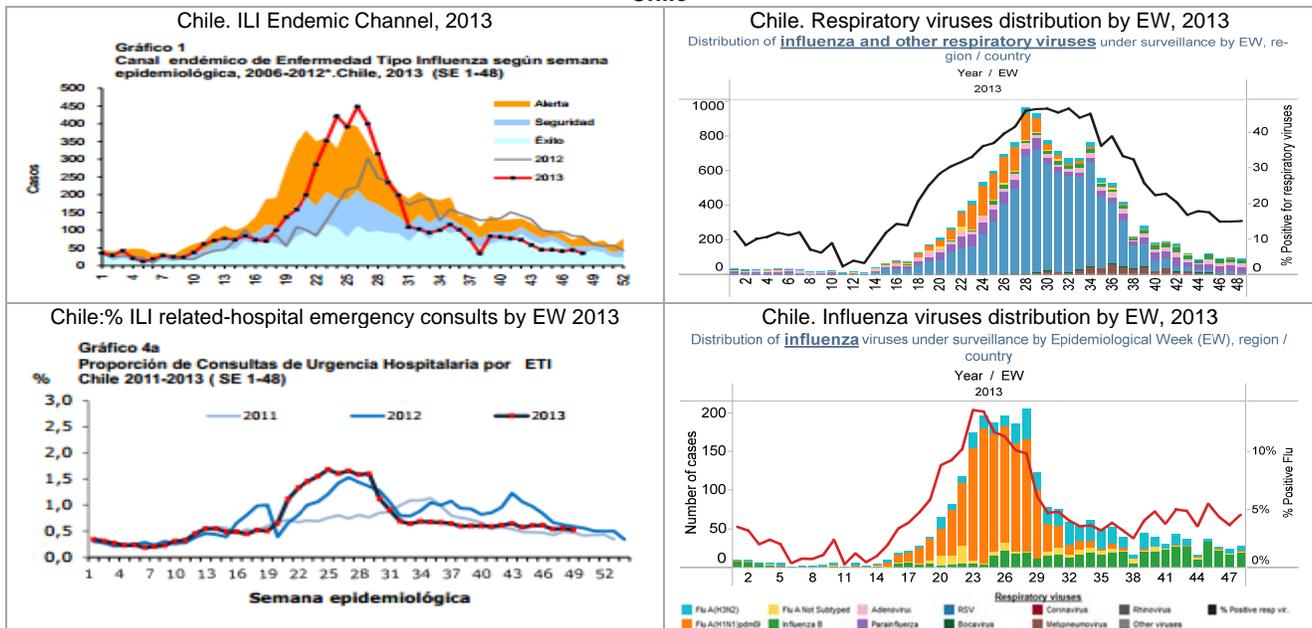
In Brazil¹¹, according to ILI sentinel surveillance data through EW 47, 15,526 samples were analyzed, of which 21.7% were positive for influenza or another respiratory virus. Positivity has decreased since EW 27 and during EW 47 0.5% of samples were positive for a respiratory virus. Based on universal SARI surveillance data during this same period, 35,064 SARI cases were reported and 16.8% were positive for influenza. Of these positive samples, influenza A(H1N1)pdm09 predominated (63.4%), followed by influenza B (22.3%) and A(H3N2) (11.0%). Additionally, to date in 2013, 4,134 SARI-associated deaths have been reported of which 23.0% were positive for influenza, and of these, 80.5% were associated with influenza A(H1N1)pdm09.

Brazil



In Chile¹² ILI activity during EW 48 (rate: 2.3 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 47-48, 1,277 samples were tested, of which 15.0% were positive for a respiratory virus and 4.1% were positive for influenza. Among the positive samples, parainfluenza (39.8%), adenovirus (22.0%) and influenza B (19.4%) were detected.

Chile



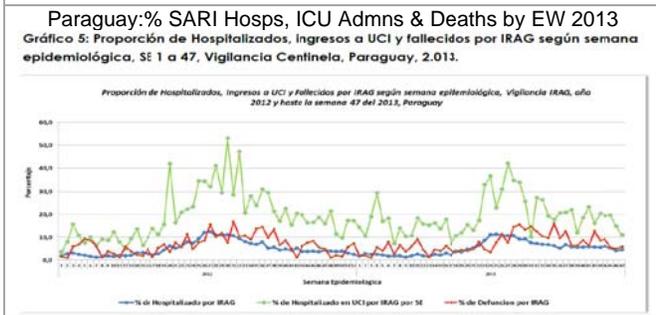
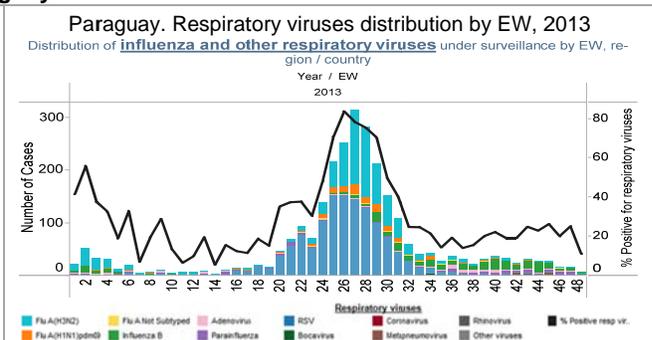
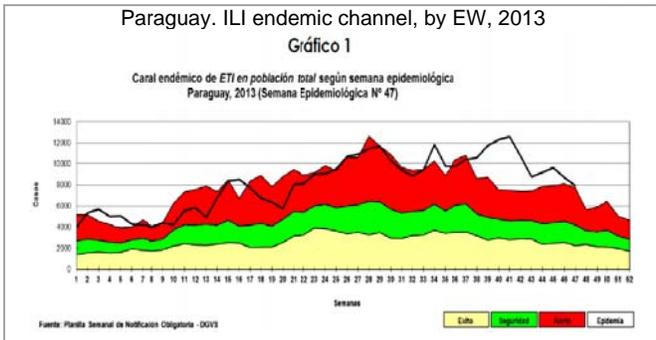
In Paraguay¹³ during EW 47, the ILI consultation rate (119 per 100,000 inhabitants) decreased compared to the previous EW and bordered on the alert zone of the endemic channel. The proportion of SARI-associated hospitalizations (4.5%) was within the expected range for this time of year and children less than 5 years of age comprised the largest portion (56.0%) of these cases. Based on reference laboratory data from EW 45-48, 288 samples were analyzed, of which 21.9% were positive for a respiratory virus and 11.1% were positive for influenza. Among influenza samples, 87.5% were influenza B and 12.5% were influenza A (75.0% A(H3N2)). Among other respiratory viruses, parainfluenza (30.2% of positive samples) predominated, followed by metapneumovirus (17.5%).

¹¹ Brasil. Boletim informativo. Secretaria de Vigilância em Saúde. SE 47, 2013.

¹² Chile. Informe de situación. EW 48. Available at: <http://epi.minsal.cl/>

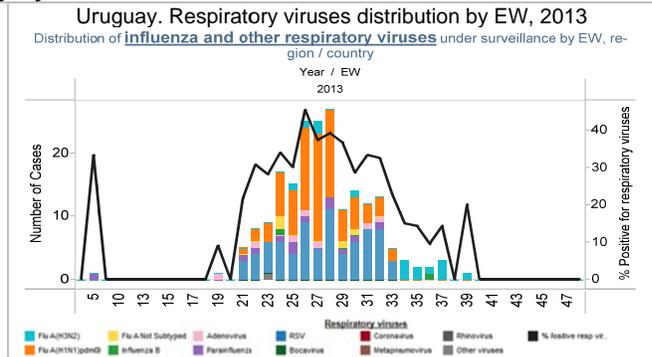
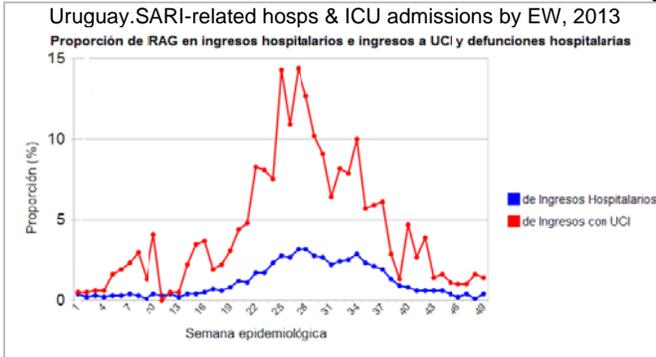
¹³ Paraguay. Informe de situación. Vigilancia de ETI e IRAG. SE 47, 2013

Paraguay



In Uruguay¹⁴ during EW 47, 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 45-48, 12 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