

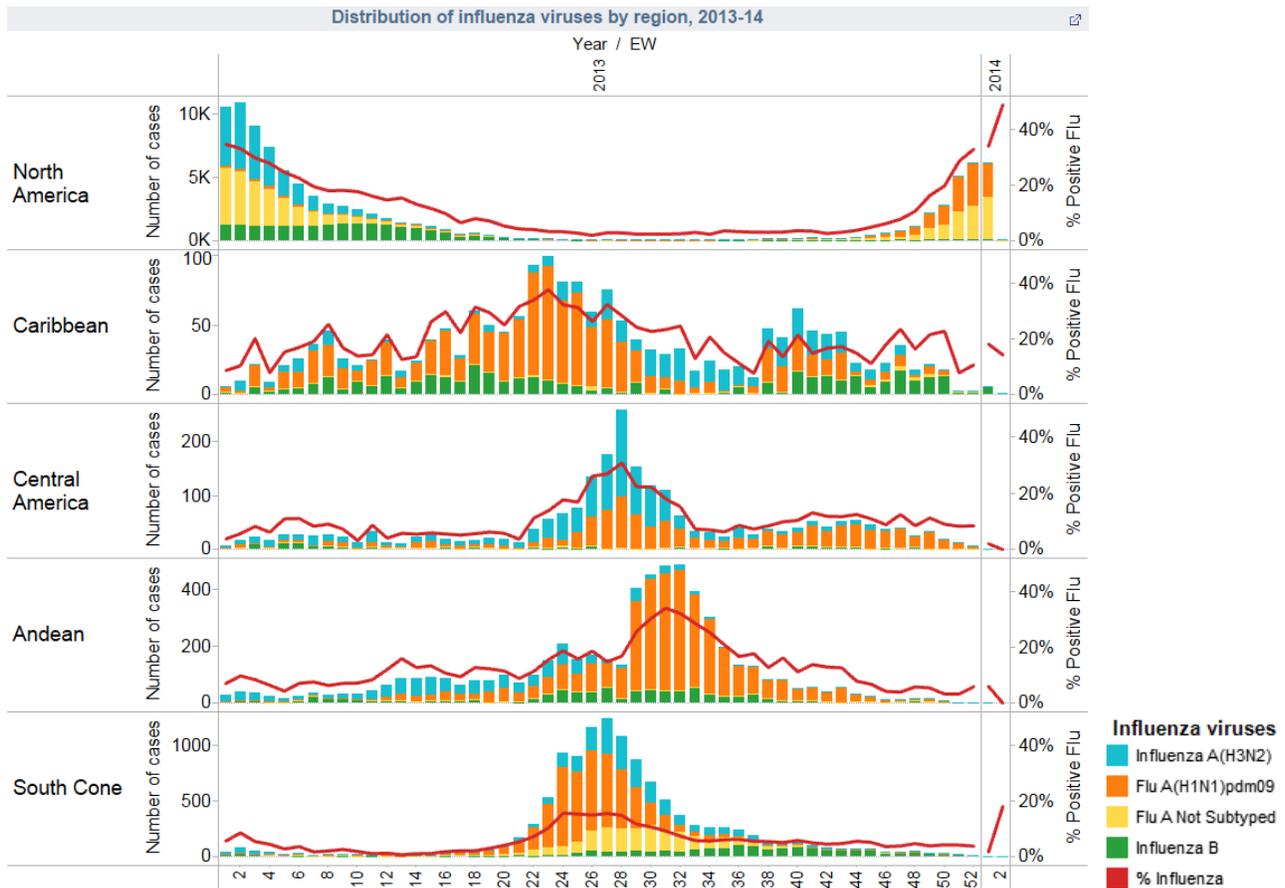
PAHO interactive influenza data: http://ais.paho.org/phis/viz/ed_flu.asp
Influenza Regional Reports: www.paho.org/reportesinfluenza

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

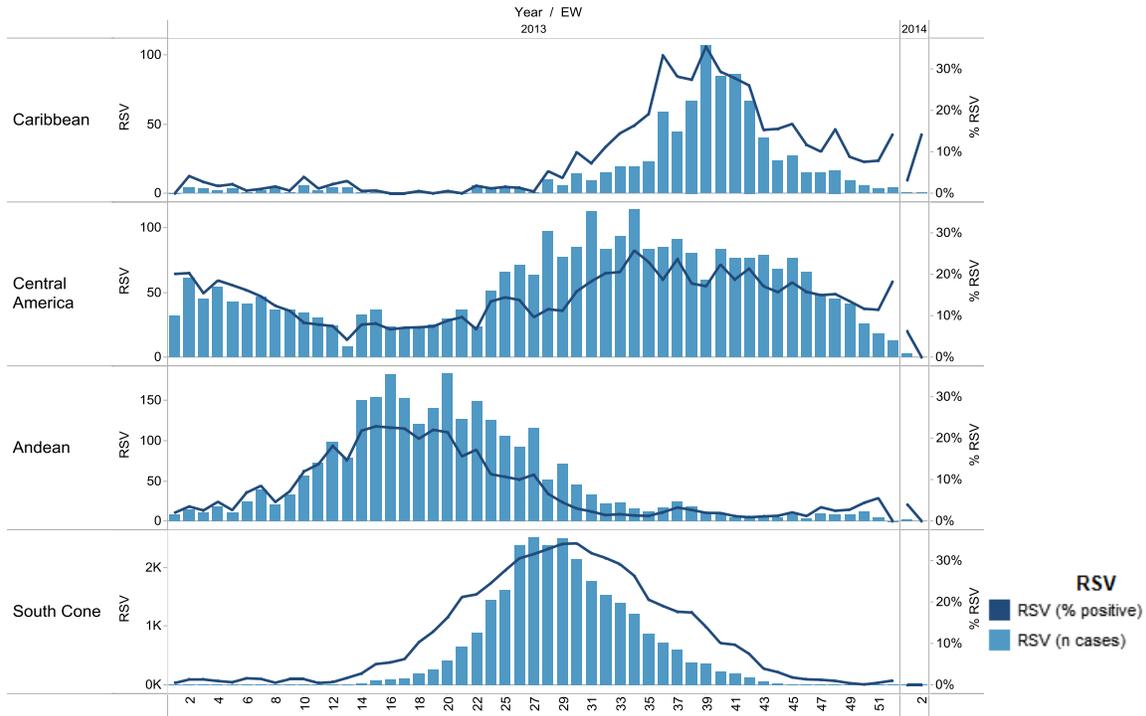
- **North America:** Influenza activity continued to increase in Canada, the United States and Mexico and was primarily associated with influenza A(H1N1)pdm09. In Canada, a fatal case of influenza A(H5N1) was reported in a patient with travel history to China. Close contacts have shown no signs of infection and continue to be monitored.
- **The Caribbean and Central America:** Influenza activity was low with a predominance of influenza B in Cuba and Dominican Republic, and influenza A(H1N1)pdm09 in Costa Rica, El Salvador, Honduras, Jamaica and Nicaragua. RSV continued circulating in some countries of the region, put at decreasing levels.
- **South America – Andean Countries:** Acute respiratory virus activity remained low in the region.
- **South America - South Cone and Brazil:** Acute respiratory virus activity was low and within the expected level for this time of year. Among the low levels of influenza, influenza B predominated (Brazil, Chile and Paraguay).

Influenza circulation by region. 2013-14



Respiratory syncytial virus (RSV) circulation by region. 2013-14

Respiratory Sincial Virus by region, 2013-14



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:

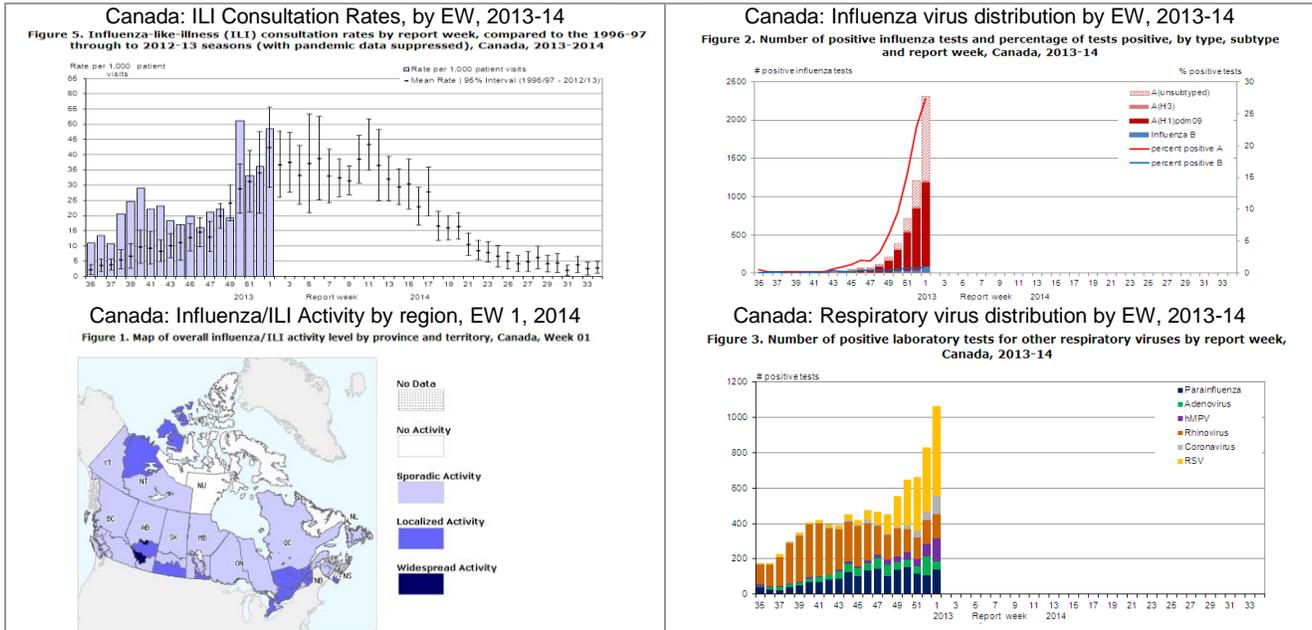
In Canada¹ during EW 1, influenza activity continued to increase. The national influenza-like illness (ILI) consultation rate was 48.5 per 1,000 patient visits, an increase compared to the previous week but within the expected levels for this time of year. Since the beginning of the 2013-14 influenza season, 882 influenza-associated hospitalizations have been reported and adults aged 45-64 years accounted for 33% of these cases. Compared to the 2012-13 season, when A(H3N2) was predominant, a significantly larger proportion of influenza cases this season has been reported among adults 20-64 years of age compared to those ≥65 years of age. To date this season, 33 deaths have been reported (compared to 51 during the same period of the 2012-13 season) and 97% were associated influenza A. The highest proportion of these deaths (64%) occurred among adults aged 20-64 years. Based on laboratory data for EW 1, the overall percentage of positive influenza tests was 28.4% (N=2,227), an increase compared to the previous week. Among the positive tests, 96.5% were influenza A, of which 49.5% were influenza A(H1N1)pdm09, 0.9% were A(H3N2) and 49.6% were not subtyped. Among other circulating respiratory viruses, RSV predominated.

The first confirmed case of influenza A(H5N1) was reported in Canada on January 8, 2014. The onset of symptoms was Dec 27, 2013 followed by admission to hospital on January 1, 2014. The case died on

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

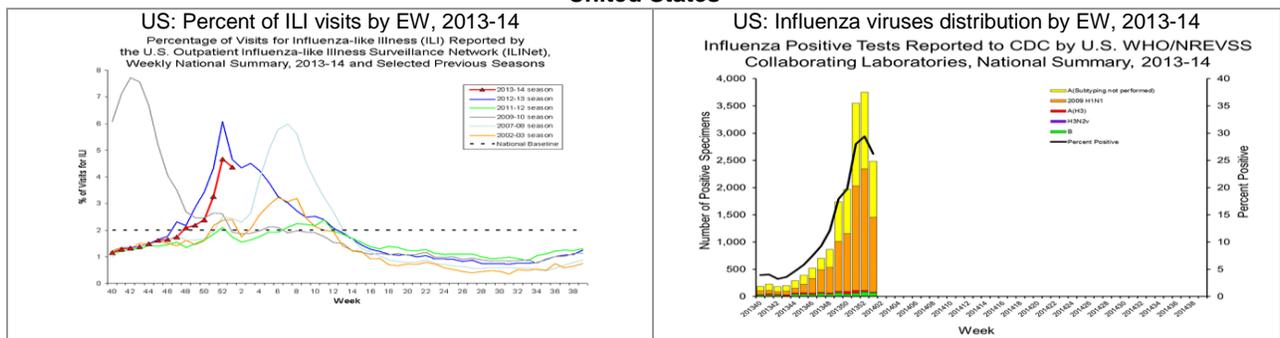
January 3, 2014. The case travelled to China during December 2013 but did not visit any farms or markets. The source of exposure is unknown at this time. One close contact who travelled with the case has shown no symptoms and other close contacts at home or in the hospital continue to be monitored by public health officials. There has been no evidence of human-to-human transmission.

Canada

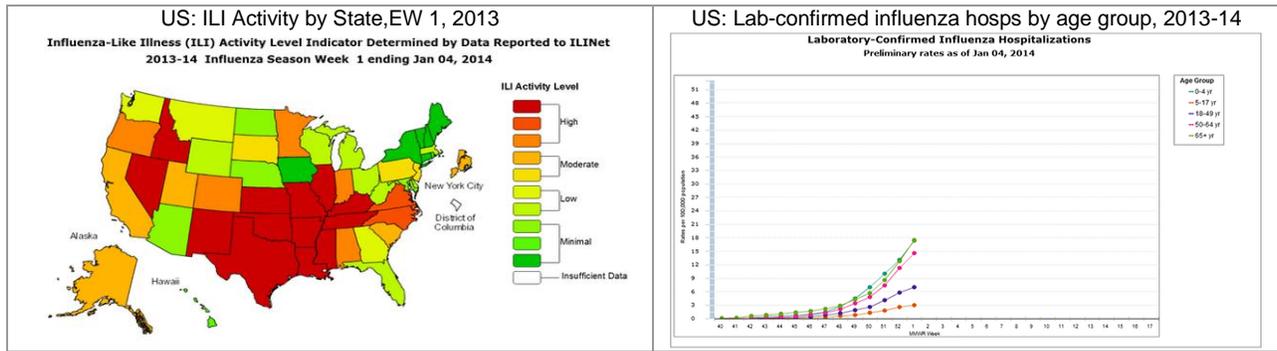


In the United States² during EW 1, influenza activity continued to increase. The proportion of outpatient visits for influenza-like illness (ILI) was 4.4%, above the national baseline of 2.0% but a decrease compared to the previous EW (4.7%). The increase in the percentage of patient visits for ILI in previous weeks may be influenced in part by a reduction in routine healthcare visits during the holidays, as has occurred in previous seasons. All 10 regions reported ILI activity above region-specific baseline levels. However, the proportion of deaths attributed to pneumonia and influenza for EW 1 (6.9%) was below the epidemic threshold. Four influenza-associated pediatric deaths were reported during EW 1 (10 deaths have been reported this season). Three of these deaths were associated with influenza A(H1N1)pdm09 and occurred in EW 52 and 1. One death occurred during EW 51 and was associated with influenza A (not subtyped). Since October 1, 2013, 2,622 laboratory confirmed influenza-associated hospitalizations have been reported (rate: 9.7 per 100,000 population). Although, children 0-4 years and adults 65 years and older are the most affected age groups, adults aged 18-64 years comprise 61% of the reported hospitalizations. According to laboratory data for EW 1, 9,482 samples were analyzed, of which 26.2% were positive for influenza. Among the positive samples, 97.4% were influenza A (56.7% were A(H1N1)pdm09, 0.8% were A(H3N2) and 42.5% were not subtyped) and 2.6% were influenza B. Based on antiviral resistance testing, 1.2% (13/1,100) of the influenza A(H1N1)pdm09 samples tested were oseltamivir resistant.

United States

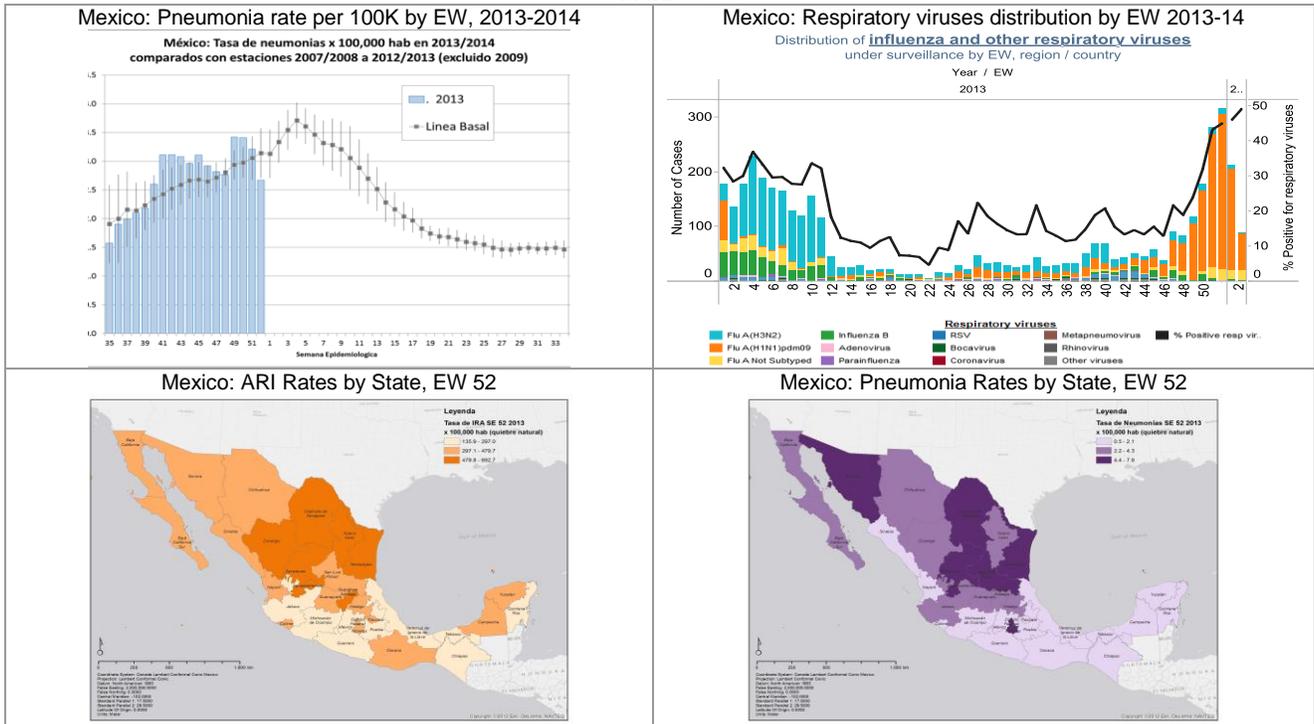


² USA: CDC FluView report. EW 1. Available at: <http://www.cdc.gov/flu/weekly/>



In Mexico³, influenza activity remained elevated. Although the number of ARI and pneumonia cases decreased during EW 52, this reduction may be influenced by a decrease in healthcare services utilization during the holidays, as has occurred in previous seasons. The highest levels of ARI activity were reported in Zacatecas, Nuevo Leon and Durango, and the highest levels of pneumonia activity were reported in Sonora, San Luis Potosi and Morelos. According to laboratory data, influenza positivity has been increasing for the last several weeks. During EW 1-2, 657 samples were analyzed, of which 46.6% were positive for influenza. Among the positive influenza samples, 98.7% were influenza A (83.1% were A(H1N1)pdm09 and 3.0% were A(H3N2)) and 1.3% were influenza B.

Mexico

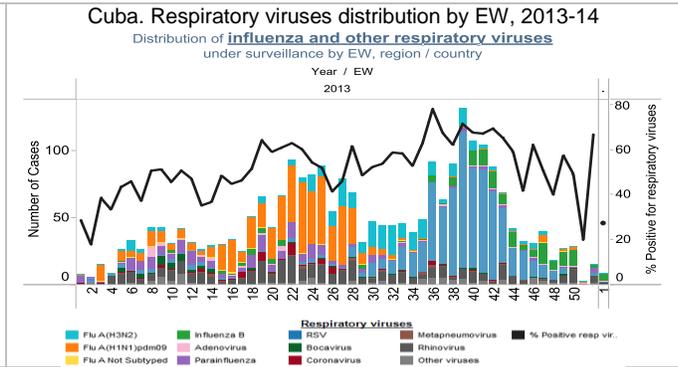
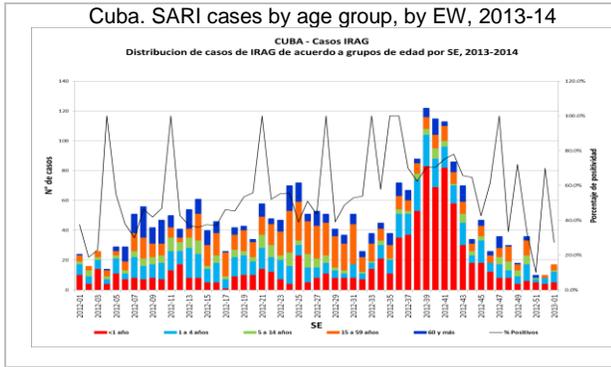


Caribbean

In Cuba during EW 1, the number of SARI-associated hospitalizations was similar to the previous EW and has shown a decreasing trend since peaking in EW 39 of 2013. Children 1-4 years 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 50-1, 131 samples were analyzed, of which 43.5% were positive for a respiratory virus and 19.2% were positive for influenza. Among positive samples, influenza B (36.8%), rhinovirus (28.1%), and parainfluenza (12.3%) were detected.

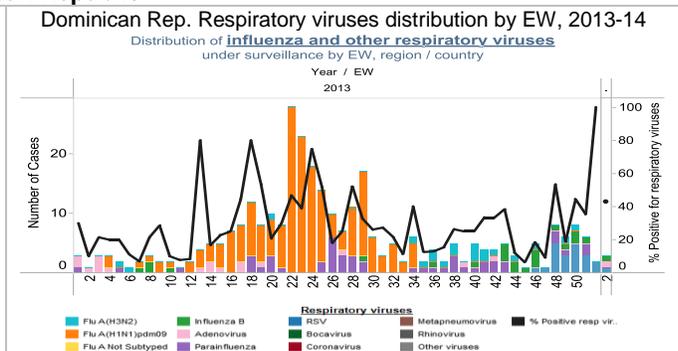
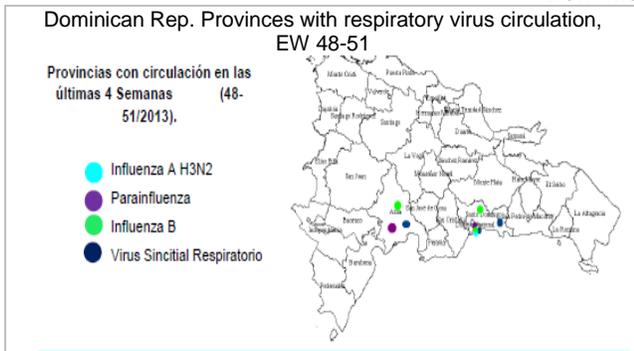
³ México. Dirección General de Epidemiología. Información epidemiológica. SE 52.

Cuba



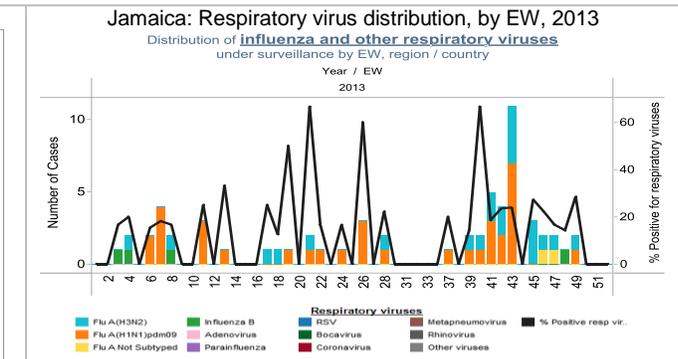
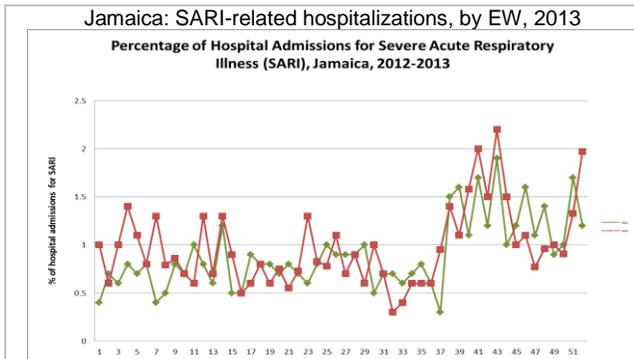
In the Dominican Republic⁴, during EW 1-51, 1,917 SARI cases were reported through sentinel surveillance, of which 22 were reported during EW 51. There were no SARI-associated deaths reported during EW 51 (65 deaths have been reported in 2013). According to laboratory data for EW 51-2, 26 samples were analyzed, of which 42.3% were positive for a respiratory virus and 7.7% were positive for influenza. Among positive influenza samples, 100% were influenza B. Among other respiratory viruses, RSV (54.5% of positive samples) predominated, followed by parainfluenza (18.2%).

Dominican Republic



In Jamaica, based on sentinel surveillance data for EW 52, the proportion of ARI-associated consultations (5.3%) decreased compared to the previous week while the proportion of SARI-associated hospitalizations (2.0%) increased slightly. No SARI-associated deaths were reported during this period. Based on laboratory data for EW 48-52, 17 samples were analyzed of which 11.8% were positive for influenza. Among the influenza positive samples (N=2), influenza A(H3N2) and A(H1N1)pdm09 were detected.

Jamaica



In Puerto Rico⁵ during EW 52, the number of influenza cases (n=31) continued a decreasing trend since peaking in EW 37. Of these, 93.5% were associated with influenza A and 6.5% with influenza B. Since the beginning of June 2013, 14,131 influenza cases have been reported and children aged 0-14 years

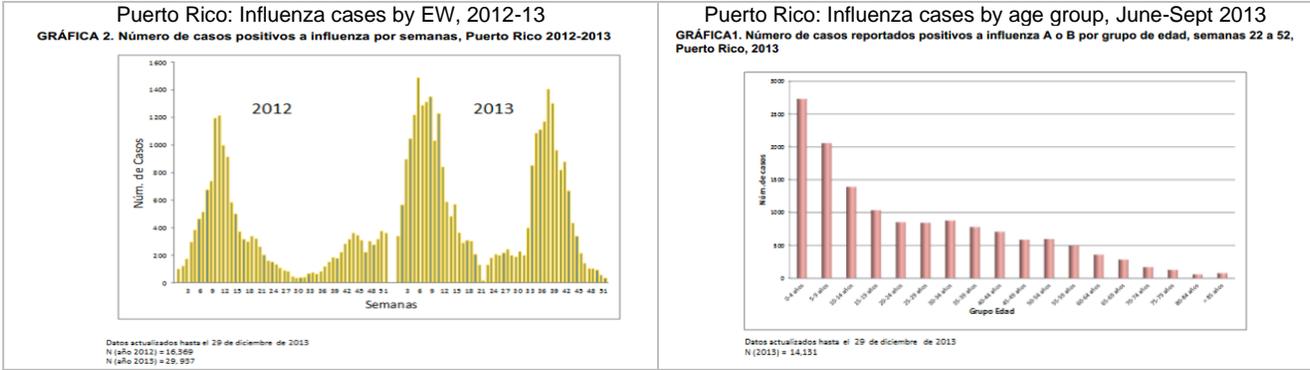
⁴ República Dominicana. Dirección Nacional de Vigilancia Epidemiológica. Boletín Semanal SE 51.

⁵ Puerto Rico. Departamento de Salud. Vigilancia de influenza de Puerto Rico SE 52.

<http://www.salud.gov.pr/influenza/Informes%20Influenza/Informe%20Influenza%20Semana%2052.pdf>.

accounted for 44% of those cases. During this same period, 772 influenza-associated hospitalizations and 16 influenza-associated deaths have been reported.

Puerto Rico

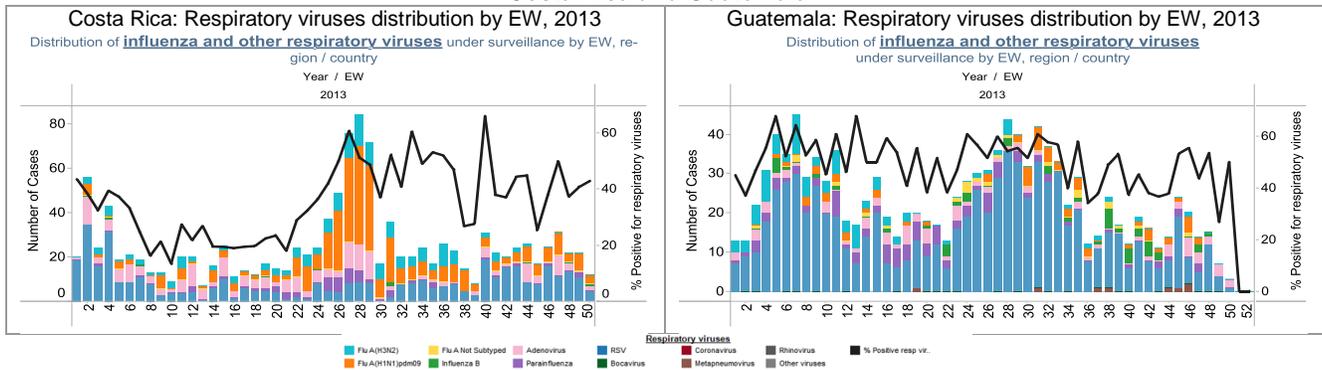


Central America

In Costa Rica, based on national laboratory data from EW 47-50, 203 samples were analyzed, of which 42.9% were positive for a respiratory virus and 13.8% were positive for influenza. Among influenza positive samples, 92.9% were influenza A (100% were A(H1N1)pdm09). Among other respiratory viruses, RSV predominated (48.3% of positive samples) followed by adenovirus (17.2%).

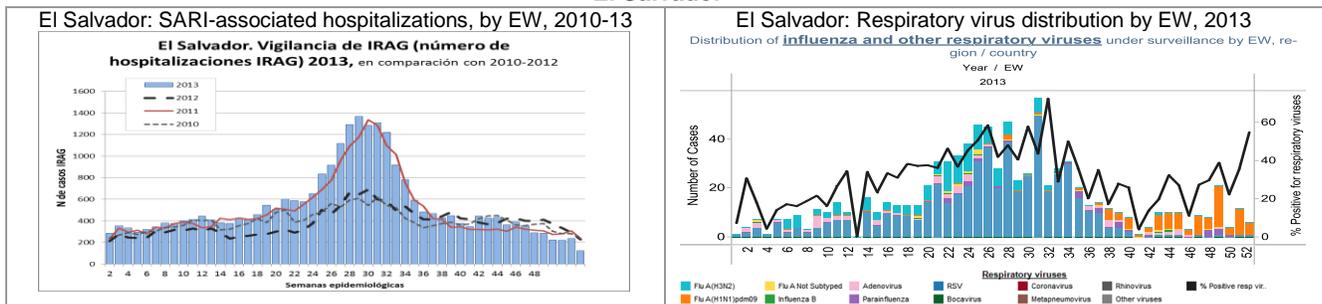
In Guatemala, based on laboratory data from EW 49-52, 35 samples were analyzed, of which 28.6% were positive for a respiratory virus. Among the positive samples, RSV (50%) and adenovirus (50%) were detected.

Costa Rica and Guatemala



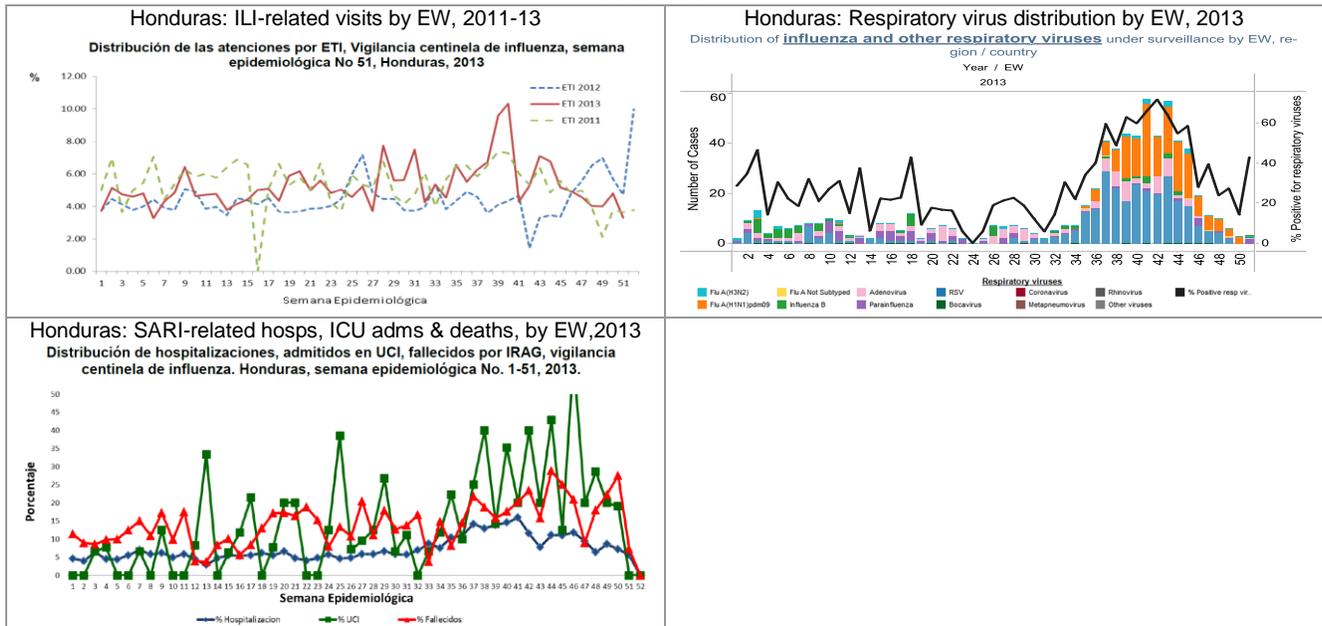
In El Salvador, during EW 52, the proportions of SARI-associated hospitalizations (4.3%), ICU admissions (0%) and deaths (4.4%) remained low, and were lower than what was observed in previous years (2010-2012). Based on national laboratory data from EW 49-52, 117 samples were analyzed, of which 36.8% were positive for a respiratory virus and 30.8% were positive for influenza. Among influenza positive samples, 100% were influenza A(H1N1)pdm09. Among other respiratory viruses, parainfluenza (7.0% of positive samples), RSV (7.0%) and adenovirus (2.3%) were detected.

El Salvador



In Honduras⁶, during EW 51, the proportions of ILI-associated visits (3.3%), SARI-associated hospitalizations (5.6%) and SARI-associated deaths (7.3%) decreased compared to the previous week. Based on national laboratory data for EW 48-51, 92 samples were analyzed, of which 23.9% were positive for a respiratory virus and 13.0% were positive for influenza. Among the positive samples, influenza A(H1N1)pdm09 (50.0%) RSV (27.3%) and parainfluenza (13.6%) were detected.

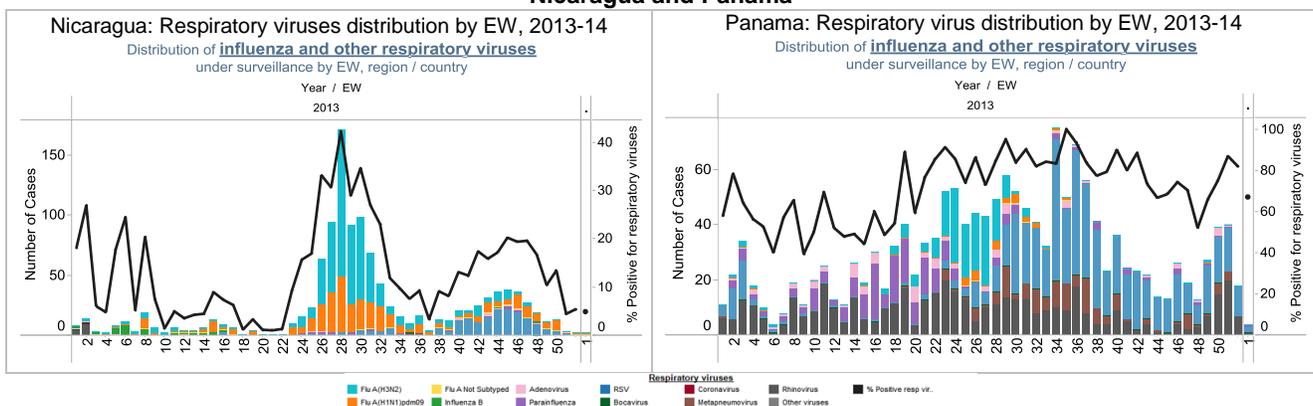
Honduras



In Nicaragua, according to national laboratory data from EW 50-1, 244 samples were analyzed of which 8.2% were positive for a respiratory virus and 4.9% were positive for influenza. Among influenza positive samples, 100% were influenza A(H1N1). Among other respiratory viruses, RSV (30.0%) and parainfluenza (10.0%) were detected.

In Panama, based on national laboratory data from EW 50-1, 126 samples were analyzed of which 80.2% were positive for a respiratory virus. Among these, RSV (45.5%) and rhinovirus (42.6%) predominated.

Nicaragua and Panama



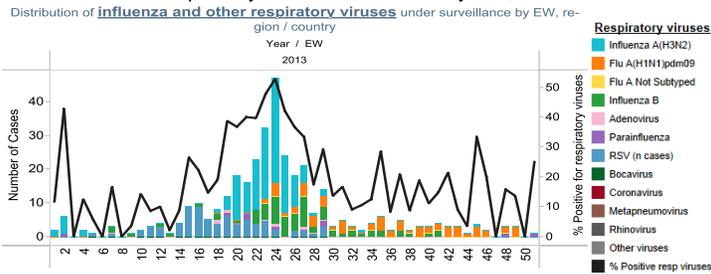
South America – Andean countries

In Bolivia, according to laboratory data from INLASA (La Paz) from EW 48-51, 52 samples were analyzed of which 13.5% were positive for a respiratory virus and 9.6% were positive for influenza. Among positive samples, influenza A(H1N1)pdm09 predominated (71.4%), followed by parainfluenza (28.6%).

⁶ Honduras. Influenza Bulletin, EW 51

Bolivia (La Paz)

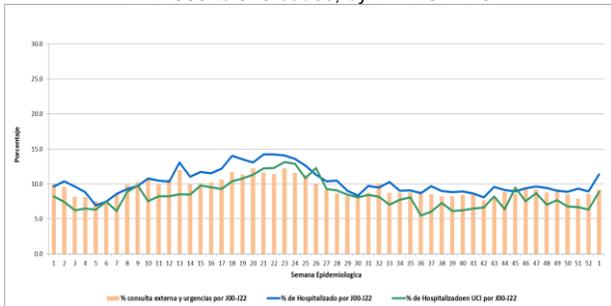
Bolivia (La Paz). INLASA. Respiratory viruses distribution by EW, 2013



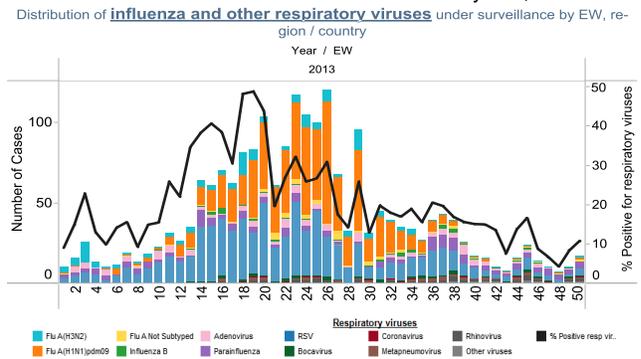
In Colombia, nationally during EW 1, the proportions of hospitalizations (11.4%), ICU admissions (8.9%), and outpatient and urgent visits (9.2%) with ARI-associated ICD-10 codes (J00 to J22) remained at low levels. Based on INS national laboratory data from EW 47-50, 594 samples were analyzed, of which 7.4% were positive for a respiratory virus and 0.8% were positive for influenza. Among the positive samples, parainfluenza (34.1%) and RSV (25.0%) 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

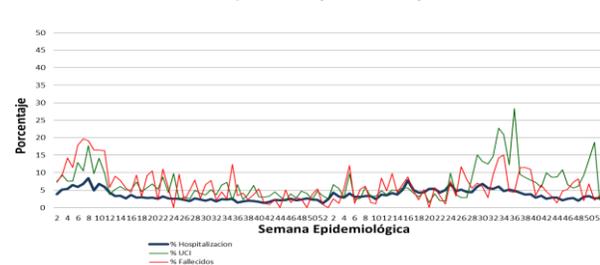


In Ecuador during EW 1, the proportion of SARI-associated hospitalizations (1.3%) and SARI-associated deaths (1.6%) decreased from the previous week, while the proportion of SARI-associated ICU admissions (4.7%) increased slightly. Based on national reference laboratory data from EW 50-1, 163 SARI samples were analyzed, of which 16.6% were positive for a respiratory virus and 8.0% were positive for influenza. Among the positive samples, influenza A(H1N1)pdm09 (48.1%) and RSV (40.7%) predominated.

Ecuador

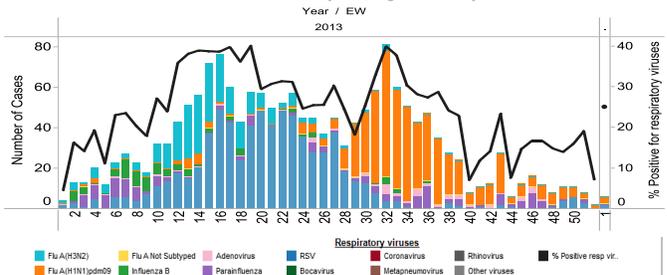
Ecuador. :% SARI Hosps, ICU Admns & Deaths by EW 2013

IRAG(%): hospitalizaciones, admisiones a UCI y Fallecidos. Ecuador, de la SE 01/2012 a SE 01/2014.



Ecuador. Respiratory viruses distribution by EW, 2013-14

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

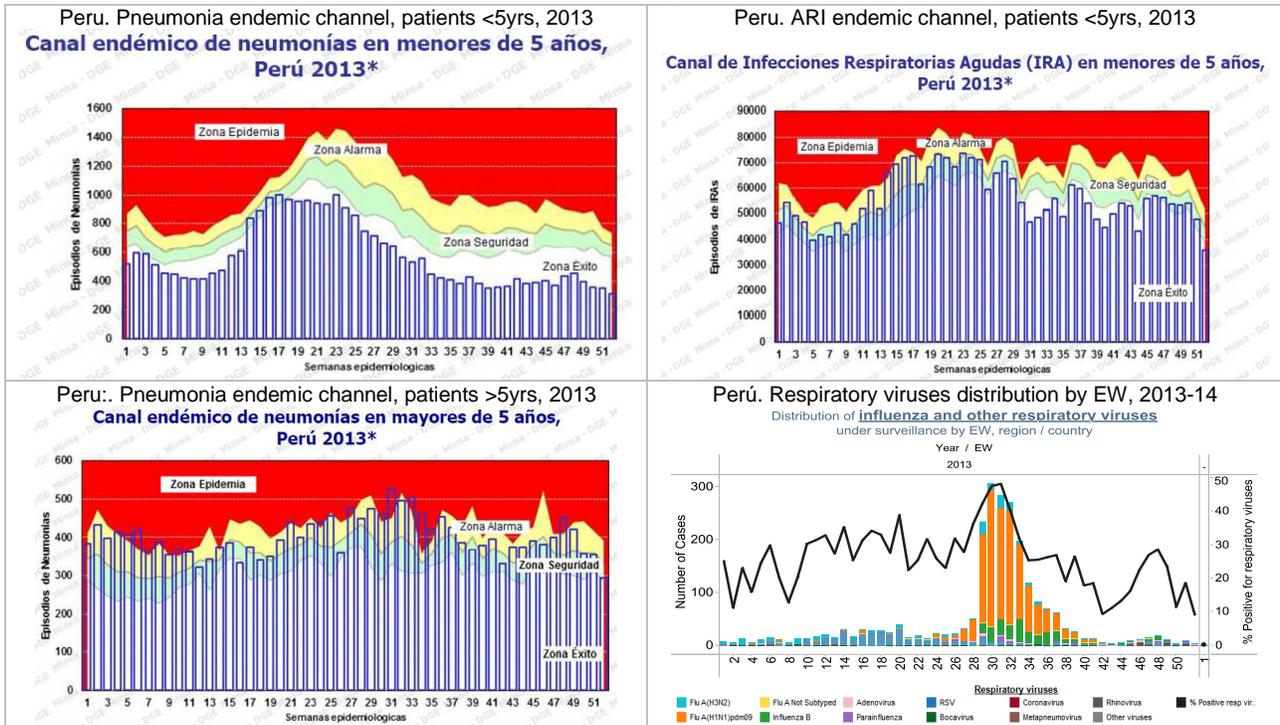


In Peru⁷ during EW 52 and among patients younger than 5 years of age, the number of pneumonia and ARI reports decreased compared to the previous EW and were within the success zone of the endemic channel. Among patients old than 5 years, the number of pneumonia reports decreased from the previous week and was within the security zone. All values were within the expected levels for this time of year. Based on national laboratory data from EW 50-1, 125 samples were analyzed, of which 11.2% were positive for a respiratory virus and 1.6% were positive for influenza. Among the positive influenza samples, 100% were

⁷ Perú. Sala de Situación de Salud. EW 52, 2013. Ministerio de Salud. Dirección General de Epidemiología

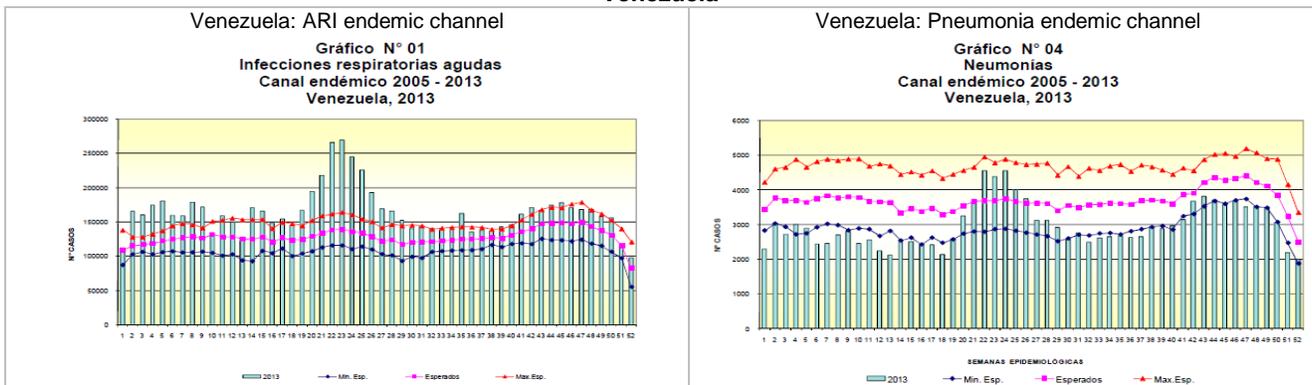
influenza B. Among other respiratory viruses, parainfluenza (35.7%), RSV (28.6%), and adenovirus (14.3%) were detected.

Peru



In Venezuela⁸ during EW 52, ARI and pneumonia activity decreased by 14.3% and 8.6%, respectively, compared to the previous EW. Both were within the expected values for this time of year. During EW 52, 87 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 1-52, 5,313 samples were analyzed from suspected influenza cases, of which 52.4% were positive for influenza. Among the positive samples, 91.7% were influenza A(H1N1)pdm09.

Venezuela



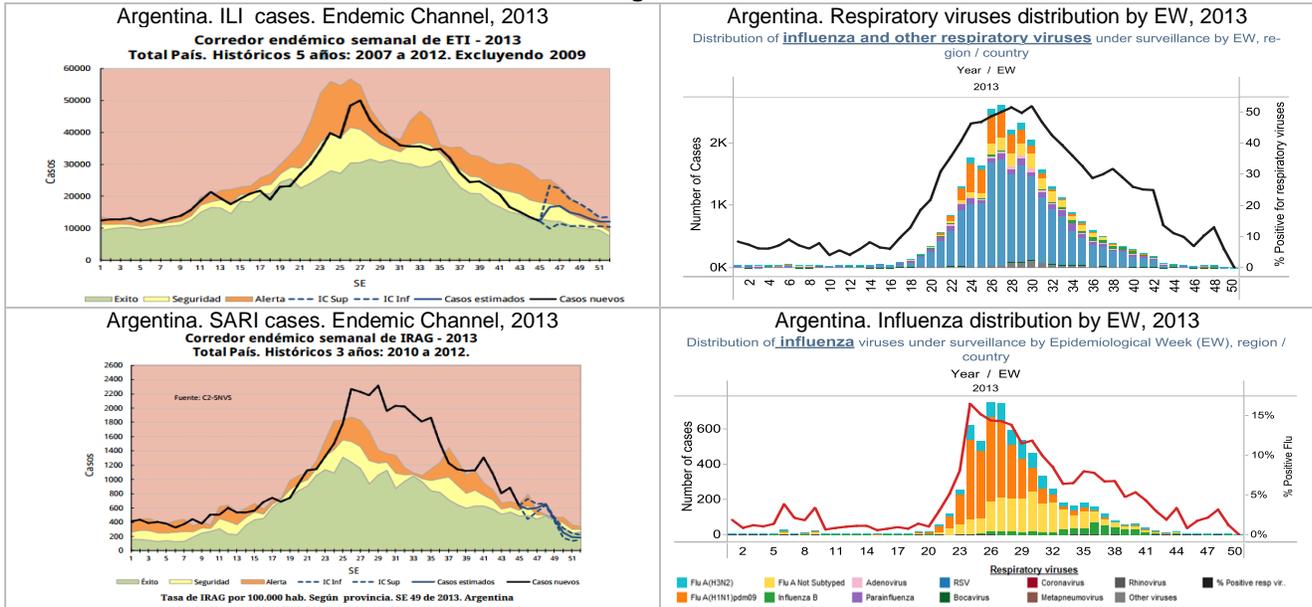
South America – Southern Cone and Brazil

In Argentina⁹, according to reports and calculated estimations, national ILI activity during EW 52 was within the alert zone of the endemic channel, but showed a decreasing trend since its peak in EW 26. The proportion of SARI-associated hospitalizations was within the success zone of the endemic channel, and showed a decreasing trend since EW 29. Based on laboratory data from EW 47-50, 748 samples were analyzed, of which 9.1% were positive for a respiratory virus and 2.0% for influenza. Among positive samples, parainfluenza (36.8%), RSV (20.6%) and adenovirus (17.6%) were detected.

⁸ Venezuela. Boletín epidemiológico, EW 52, 2013.

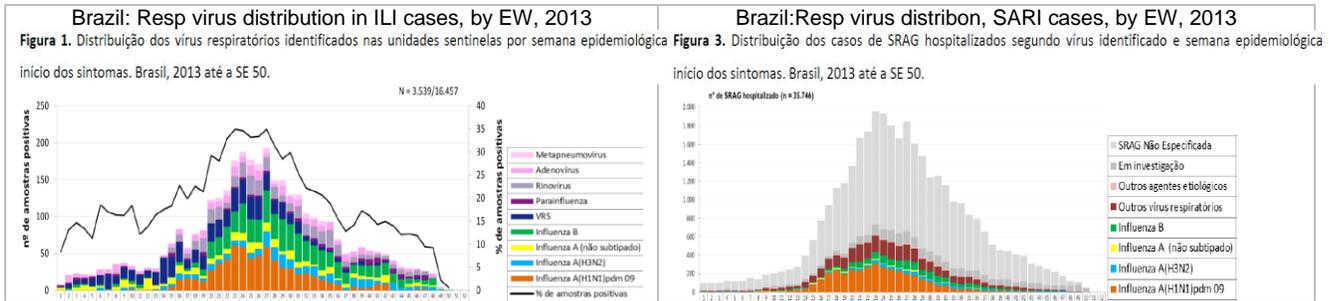
⁹ Argentina. Boletín integrado de vigilancia. SE 52.

Argentina



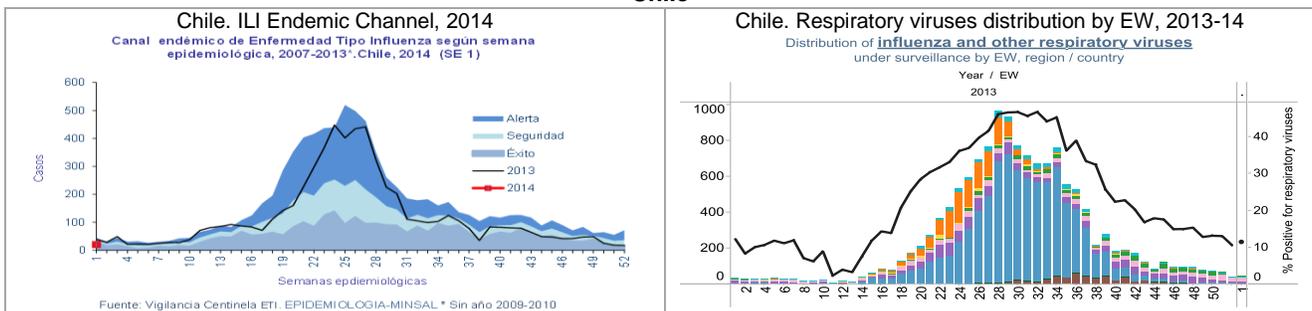
In Brazil¹⁰, according to ILI sentinel surveillance data through EW 50, 16,457 samples were analyzed, of which 21.5% were positive for influenza or another respiratory virus. During EW 50, 0.6% of samples were positive for a respiratory virus, and among these influenza B was detected. Based on universal SARI surveillance data during this same period, 35,746 SARI cases were reported and 16.6% were positive for influenza. Of these positive samples, influenza A(H1N1)pdm09 predominated (63.1%), followed by influenza B (22.5%) and A(H3N2) (11.2%). Additionally, through EW 50, 4,278 SARI-associated deaths have been reported of which 22.3% were positive for influenza, and of these, 80.5% were associated with influenza A(H1N1)pdm09.

Brazil



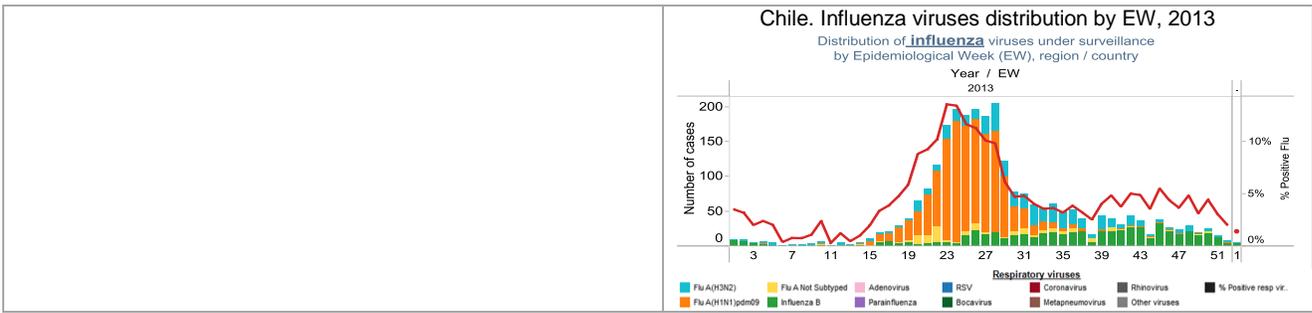
In Chile¹¹ ILI activity during EW 1 (rate: 1.2 per 100,000 inhabitants) remained low and was within the success zone of the endemic channel. Based on laboratory data from EW 52-1, 760 samples were analyzed, of which 10.9% were positive for a respiratory virus and 1.7% were positive for influenza. Among the positive samples, adenovirus (51.8%), parainfluenza (22.9%), and influenza B (10.8%) were detected.

Chile



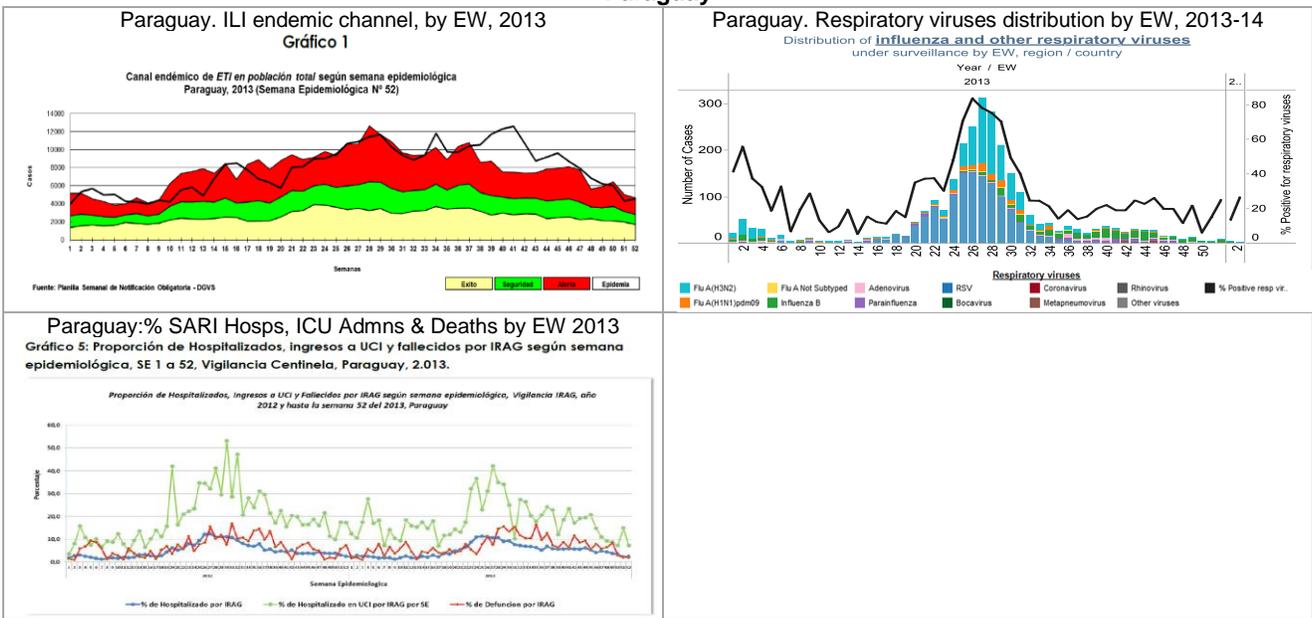
¹⁰ Brasil. Boletim informativo. Secretaria de Vigilância em Saúde. SE 50, 2013.

¹¹ Chile. Informe de situación. EW 1. Available at: <http://epi.minsal.cl/>



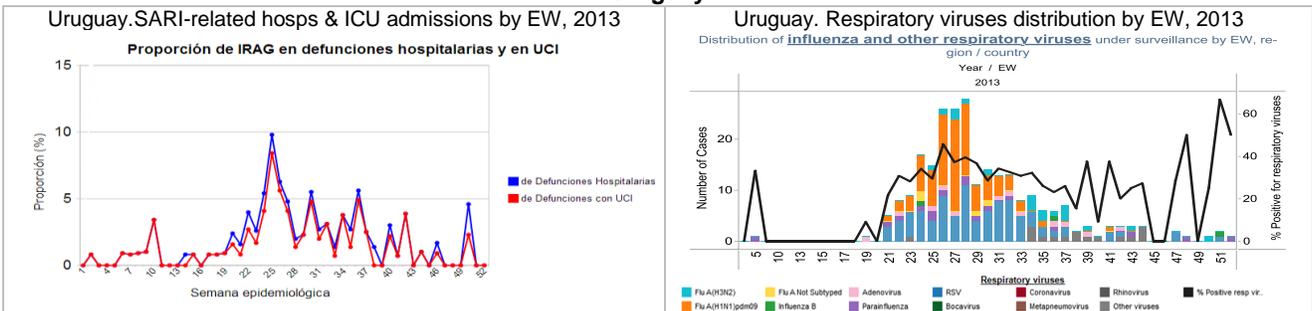
In Paraguay¹² during EW 52, the ILI consultation rate (68.4 per 100,000 inhabitants) increased slightly compared to the previous EW and was within the alert zone of the endemic channel. The proportion of SARI-associated hospitalizations (2.1%) was within the expected range for this time of year and children less than 5 years of age comprised the largest portion (58%) of these cases. Based on reference laboratory data from EW 51-2, 125 samples were analyzed, of which 19.2% were positive for a respiratory virus and 13.6% were positive for influenza. Among influenza samples, 94.1% were influenza B. Among other respiratory viruses, adenovirus (16.7% of positive samples) and parainfluenza (12.5%) were detected.

Paraguay



In Uruguay¹³ during EW 52, 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 49-52, 15 SARI samples were analyzed, of which 26.7% were positive for a respiratory virus and 13.3% for influenza. Among the samples positive for influenza, influenza A(H3N2) and influenza B were detected. Among the other respiratory viruses, parainfluenza and RSV were detected.

Uruguay



¹² Paraguay. Informe de situación. Vigilancia de ETI e IRAG. SE 52, 2013

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