Regional Update EW 52, 2013

Influenza and other respiratory viruses
(January 7, 2014)

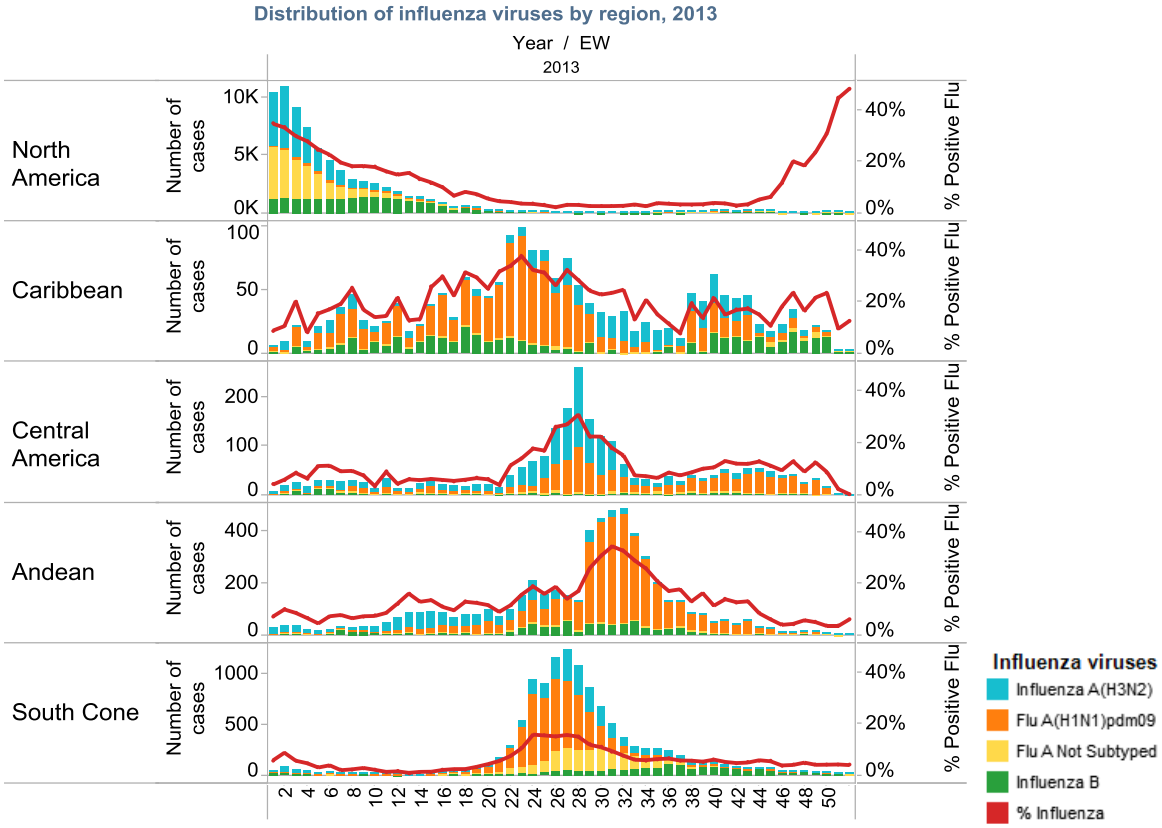
PAHO interactive influenza data: http://ais.paho.org/phip/viz/ed_flu.asp
Influenza Regional Reports: www.paho.org/reportesinfluenza

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.

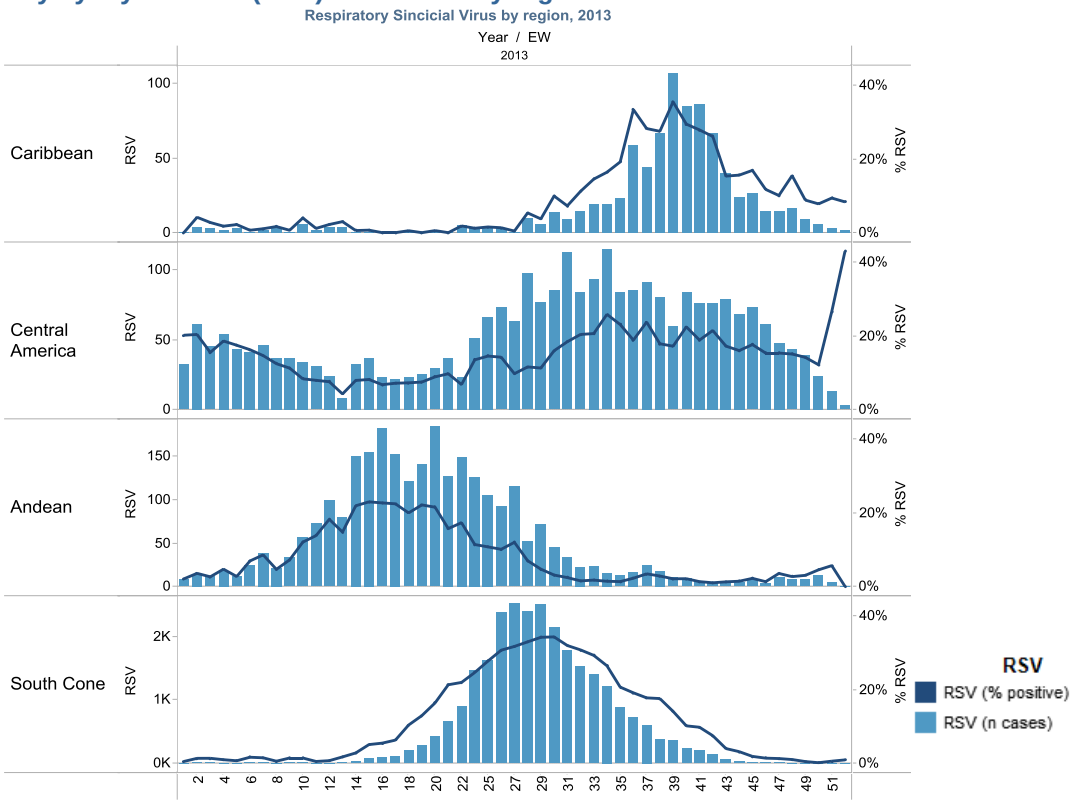
WEEKLY SUMMARY

- North America: Influenza activity continued to increase in Canada, the United States and Mexico and was primarily associated with influenza A(H1N1)pdm09. Compared to the 2012-13 season when influenza A(H3N2) predominated, a smaller proportion of hospitalizations and laboratory confirmed influenza cases this season in Canada and the United States are adults > 65 years of age.
- 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, and Nicaragua. RSV continued circulating in 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



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

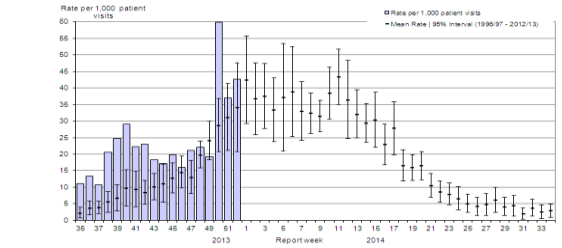
North America:

In Canada[1], during EW 51-52 influenza activity continued to increase. The national influenza-like illness (ILI) consultation rate was 42.6 per 1,000 patient visits during EW 52, an increase compared to the previous week. Since the beginning of the 2013-14 influenza season, 486 influenza-associated hospitalizations have been reported, of which 59 (12.1%) required an ICU admission. During this same period, 17 influenza-associated deaths were reported (2 pediatric and 15 adult) and of these 13 (76.5%) were associated with influenza A(H1N1)pdm09. Based on laboratory data for EW 52, the overall percentage of positive influenza tests was 23.6% (N=1,115), an increase compared to the previous week. Among the positive tests, 96.8% were influenza A, of which 55.6% were influenza A(H1N1)pdm09. Compared to the 2012-13 season, when A(H3N2) was predominant, a significantly greater proportion of influenza cases this season have been reported among adults 20-64 years of age compared to those ≥65 years of age. Among other currently circulating respiratory viruses, RSV predominated.

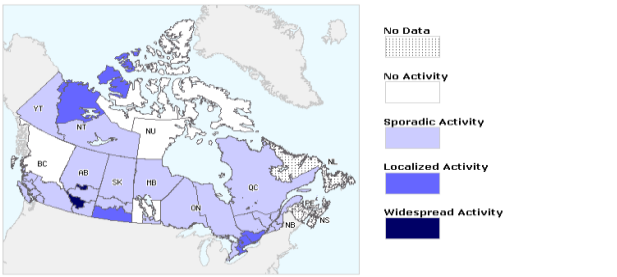
[1] Canada: FluWatch Report. EW 51-52. Available at http://www.phac-aspc.gc.ca/fluwatch/

Canada

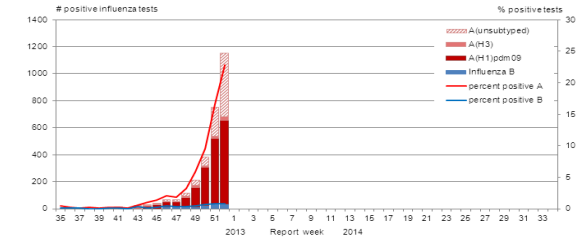
Canada: ILI Consultation Rates, by EW, 2013-14



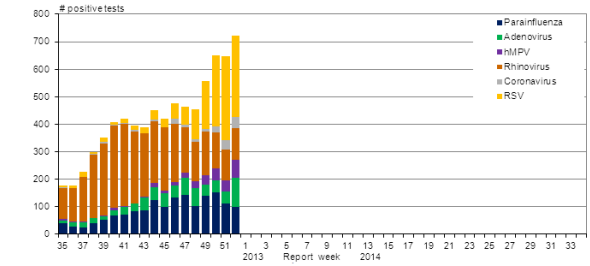
Canada: Influenza/ILI Activity by region, EW 52, 2013



Canada: Influenza virus distribution by EW, 2013-14



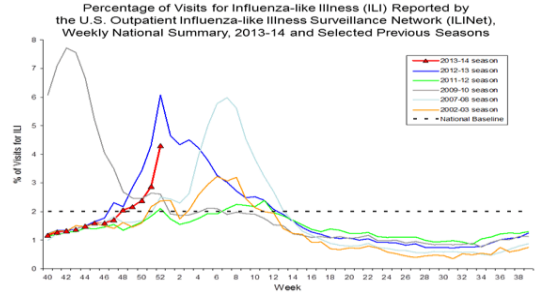
Canada: Respiratory virus distribution by EW, 2013-14



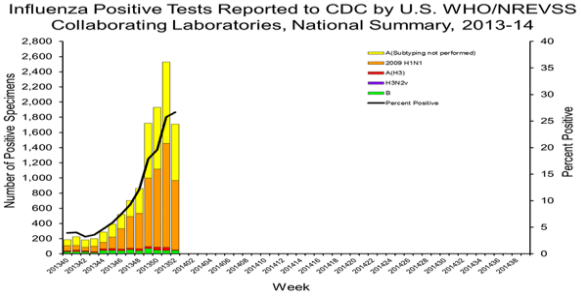
In the United States[2] during EW 52, influenza activity continued to increase. The proportion of outpatient visits for influenza-like illness (ILI) was 4.3%, above the national baseline of 2.0%. All 10 regions reported ILI at or above region-specific baseline levels. However, the proportion of deaths attributed to pneumonia and influenza (P&I) for EW 52 (6.5%) was below the epidemic threshold. Two influenza-associated pediatric deaths were reported during EW 52 (6 deaths have been reported this season). One death occurred during EW 50 and was associated with influenza A (not subtyped), while the other occurred during EW 51 and was associated with influenza A(H1N1)pdm09. Since October 1, 2013 there have been 1,583 laboratory confirmed influenza-associated hospitalizations reported, corresponding to a rate of 5.8 per 100,000 population. According to laboratory data for EW 52, 6,419 samples were analyzed, of which 26.7% were positive for influenza. Among the positive samples, 97.4% were influenza A (54.9% were A(H1N1)pdm09) and 2.6% were influenza B. Based on antiviral resistance testing, 1.1% (10/910) of the influenza A(H1N1)pdm09 samples tested were oseltamivir resistant.

United States

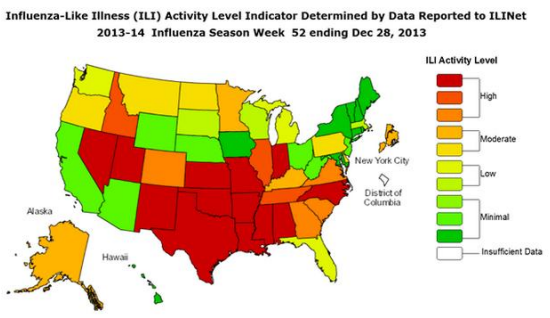
US: Percent of ILI visits by EW, 2013-14



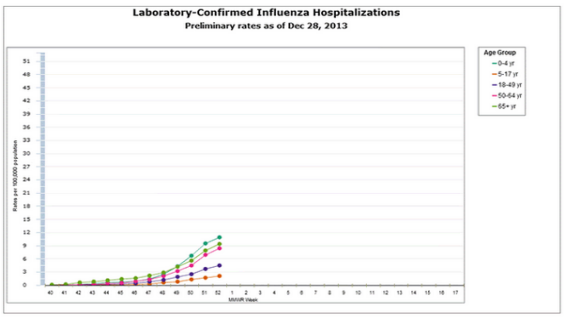
US: Influenza viruses distribution by EW, 2013-14



US: ILI Activity by State,EW 52, 2013



US: Lab-confirmed influenza hosps by age group, 2013-14

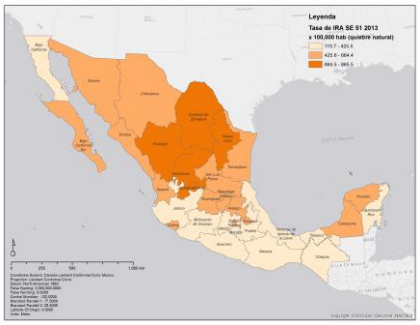


[2] USA: CDC FluView report. EW 52. Available at: http://www.cdc.gov/flu/weekly/

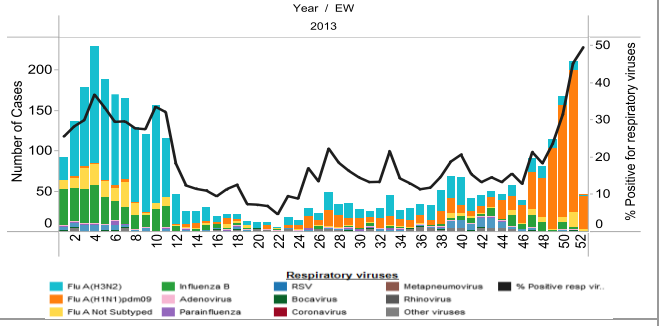
In Mexico[3], influenza activity continued increasing during the last few weeks. The highest levels of ARI activity were reported in Zacatecas, Nuevo Leon and Durango, and the highest levels of pneumonia activity were reported in Zacatecas, Colima and San Luis Potosi. According to laboratory data, influenza positivity has progressively increased from 12% (in EW 46) to 48% (in EW 52). During EW 49-52, 1,591 samples were analyzed and among the positive influenza samples (n=537), 97.2% were influenza A (87.5% were A(H1N1)pdm09 and 6.3% were A(H3N2)) and 2.8% were influenza B.

Mexico

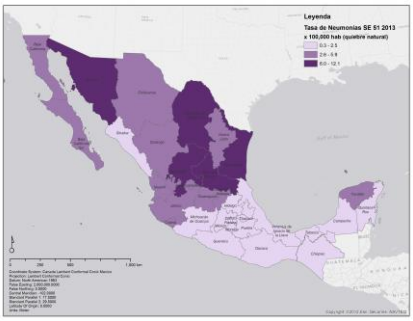
Mexico: ARI Rates by State, EW 51



Mexico: Respiratory viruses distribution by EW 2013



Mexico: Pneumonia Rates by State, EW 51

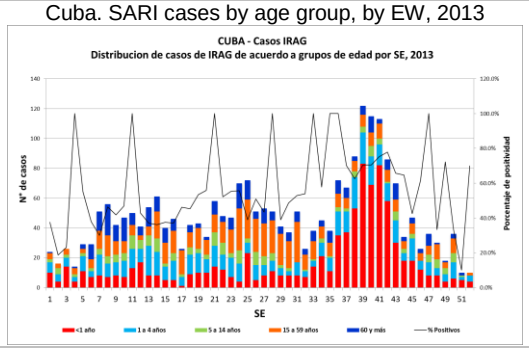


Caribbean

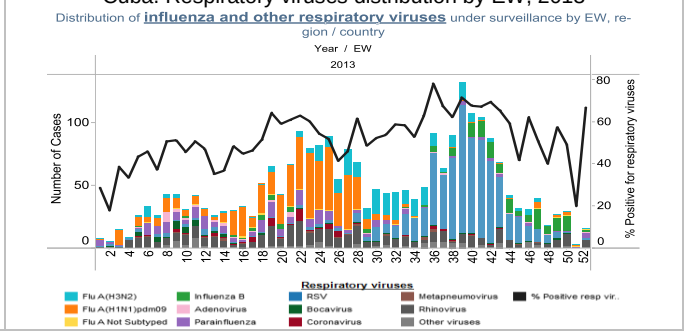
In Cuba during EW 52, the number of SARI-associated hospitalizations was similar to the previous EW and has shown a decreasing trend since peaking in EW 39. Children less than 4 years of age comprised the largest proportion of these cases. No SARI-associated deaths were reported during this period. According to national laboratory data for EW 49-52, 145 samples were analyzed, of which 51.7% were positive for a respiratory virus and 22.8% were positive for influenza. Among positive samples, influenza B (34.7%), rhinovirus (28.0%), and RSV (10.7%) were detected.

Cuba

Cuba. SARI cases by age group, by EW, 2013



Cuba. Respiratory viruses distribution by EW, 2013



In the Dominican Republic[4], 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 48-51, 82 samples were analyzed, of which 34.1% were positive for a respiratory virus and 8.5% were positive for influenza. Among positive

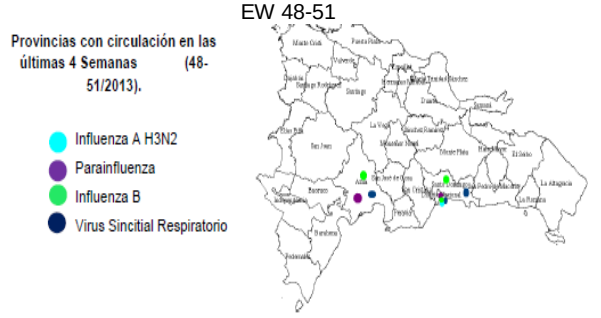
[3] México. Dirección General de Epidemiología. Información epidemiológica. SE 51.

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

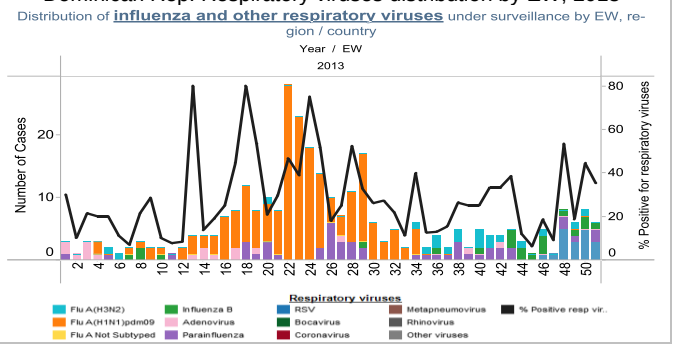
influenza samples, 71.4% were influenza B and 28.6% were influenza A (all influenza A(H3N2)). Among other respiratory viruses, RSV (57.1% of positive samples) predominated, followed by parainfluenza (17.9%).

Dominican Republic

Dominican Rep. Provinces with respiratory virus circulation, EW 48-51



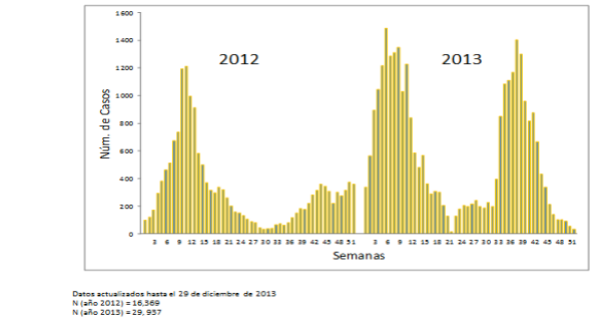
Dominican Rep. Respiratory viruses distribution by EW, 2013



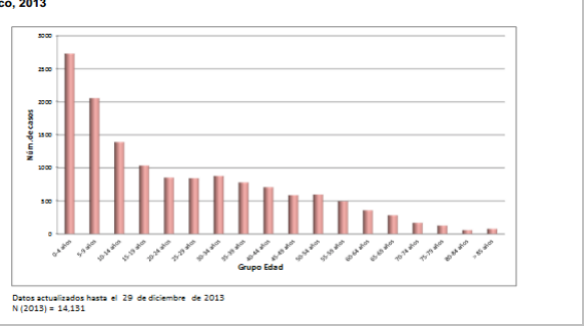
In Puerto Rico[5] during EW 52, the number of influenza cases (n=31) continued a decreasing trend since peaking in EW 37. Of these, 93.5% were associated with influenza A and 6.5% with influenza B. Since the beginning of June 2013, 14,131 influenza cases have been reported and children aged 0-14 years accounted for 44% of those cases. During this same period, 772 influenza-associated hospitalizations and 16 influenza-associated deaths have been reported.

Puerto Rico

Puerto Rico: Influenza cases by EW, 2012-13



Puerto Rico: Influenza cases by age group, June-Sept 2013

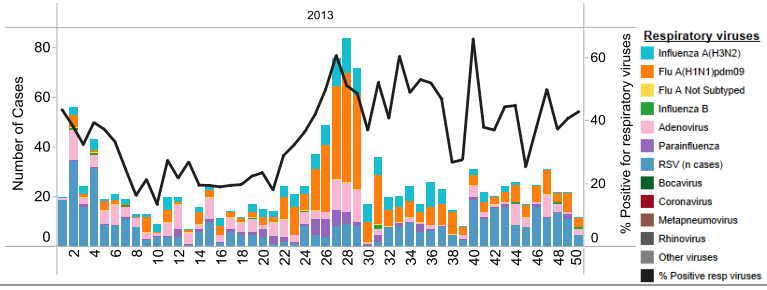


Central America

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%).

Costa Rica

Costa Rica: Respiratory viruses distribution by EW, 2013



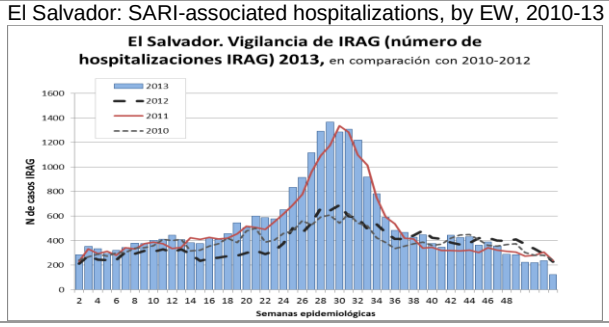
In El Salvador, during EW 52, the proportions of SARI-associated hospitalizations (4.3%), ICU admissions (0%) and deaths (4.4%) remained low, and were lower than what was observed in previous years (2010-

[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.

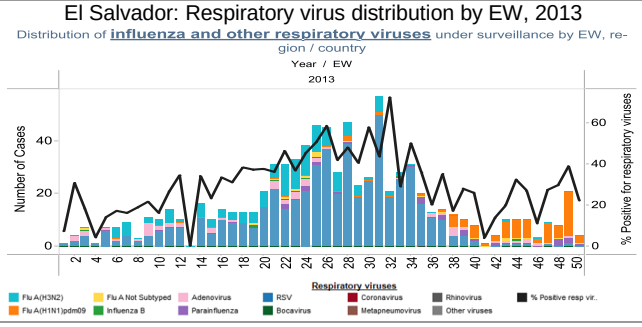
2012). Based on national laboratory data from EW 47-50, 132 samples were analyzed, of which 31.8% were positive for a respiratory virus and 25.5% were positive for influenza. Among influenza positive samples, 100% were influenza A(H1N1)pdm09. Among other respiratory viruses, parainfluenza predominated (14.3% of positive samples) followed by RSV and adenovirus.

El Salvador

El Salvador: SARI-associated hospitalizations, by EW, 2010-13



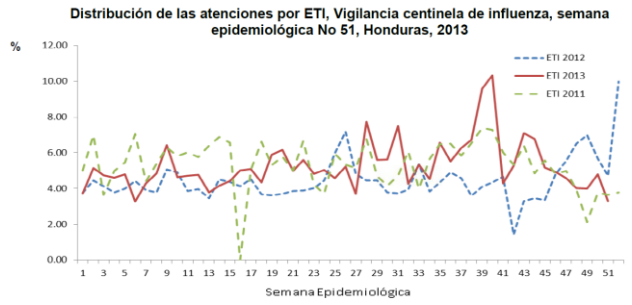
El Salvador: Respiratory virus distribution by EW, 2013



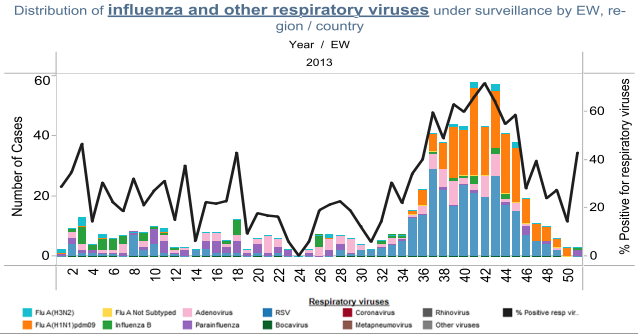
In Honduras[6], during EW 51, the proportions of ILI-associated visits (3.3%), SARI-associated hospitalizations (5.6%) and SARI-associated deaths (7.3%) decreased compared to the previous week. Based on national laboratory data for EW 48-51, 92 samples were analyzed, of which 23.9% were positive for 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

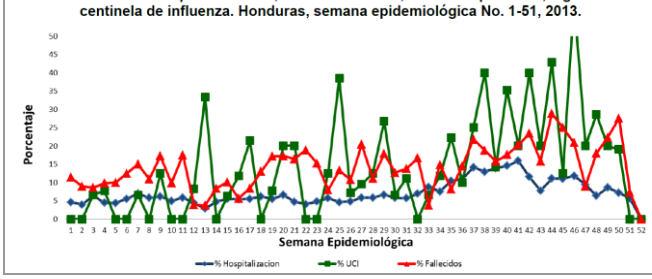
Honduras: ILI-related visits by EW, 2011-13



Honduras: Respiratory virus distribution by EW, 2013



Honduras: SARI-related hosps, ICU adms & deaths, by EW,2013



In Nicaragua, based on national laboratory data from EW 47-50, 434 samples were analyzed of which 15.4% were positive for a respiratory virus and 7.4% were positive for influenza. Among influenza positive samples, 93.8% were influenza A (86.7% were A(H1N1) and 13.3% were A(H3N2)). Among other respiratory viruses, RSV predominated (46.3% of positive samples).

In Panama, based on national laboratory data from EW 48-51, 150 samples were analyzed, of which 70.7% were positive for a respiratory virus. Among positive samples, RSV (48.1%) predominated, followed by rhinovirus (38.7%).

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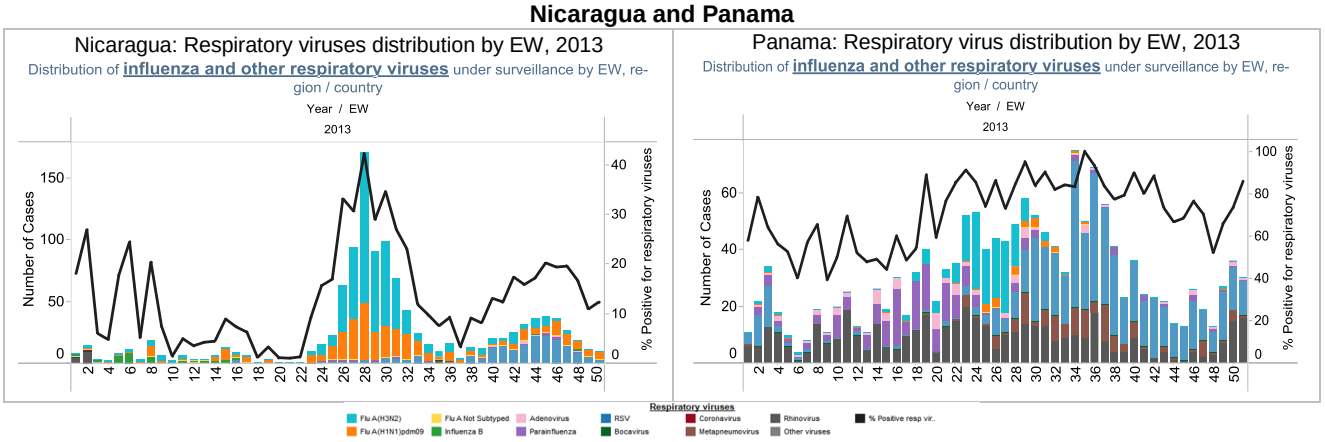
[6] Honduras. Influenza Bulletin, EW 51

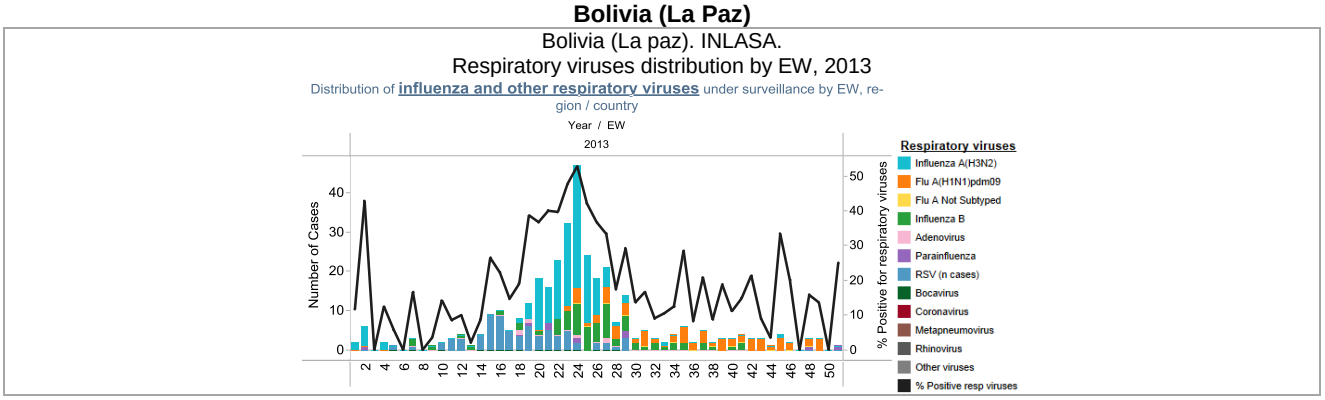
Nicaragua and Panama



South America – Andean countries

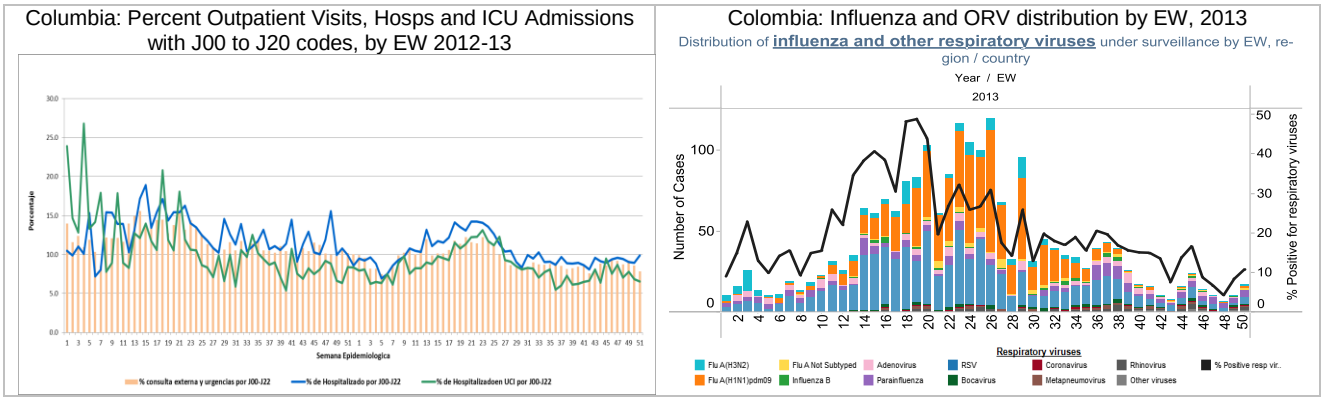
In Bolivia, according to laboratory data from INLASA (La Paz) from EW 48-51, 52 samples were analyzed of which 13.5% were positive for a respiratory virus and 9.6% were positive for influenza. Among positive samples, influenza A(H1N1)pdm09 predominated (71.4%), followed by parainfluenza (28.6%).

Bolivia (La Paz)



In Colombia, nationally during EW 51, the proportions of hospitalizations (9.9%), ICU admissions (6.5%) and deaths (7.8%) 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.

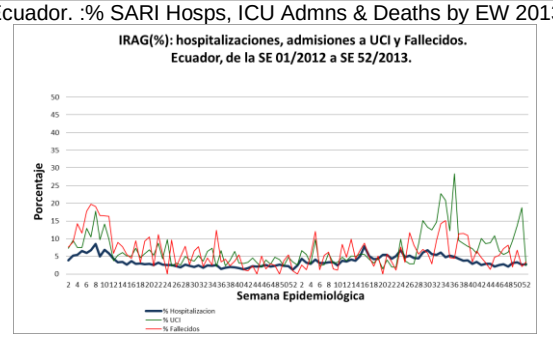
Colombia



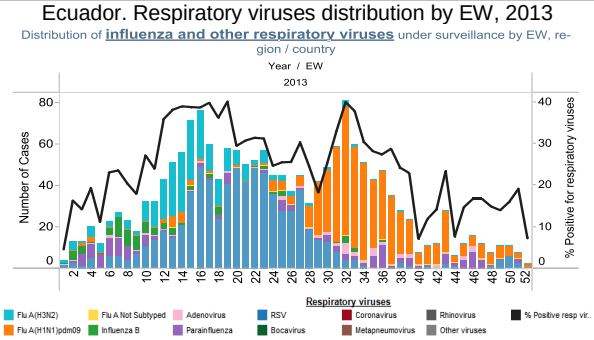
In Ecuador during EW 52, the proportion of SARI-associated hospitalizations (2.8%) and ICU admissions (2.4%) decreased from the previous week, while the proportion of SARI-associated deaths (3.4%) increased slightly. Based on national reference laboratory data from EW 49-52, 218 SARI samples were analyzed, of which 14.7% were positive for a respiratory virus and 7.3% were positive for influenza. Among the positive samples, influenza A(H1N1)pdm09 (53.5%) and RSV (40.6%) predominated.

Ecuador

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



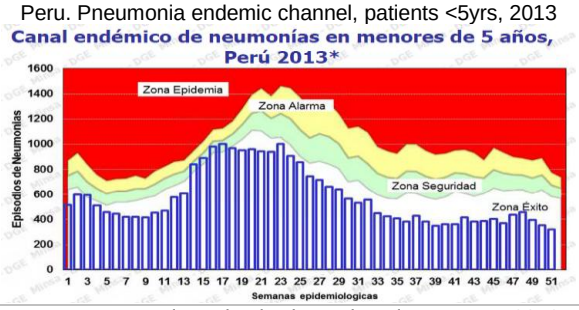
Ecuador. Respiratory viruses distribution by EW, 2013



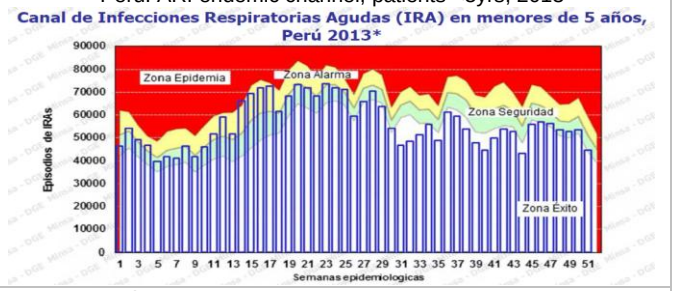
In Peru[7] during EW 51 and among patients younger than 5 years of age, the number of pneumonia and ARI reports decreased compared to the previous EW and were within the success zone of the endemic channel. Among patients old than 5 years, the number of pneumonia reports decreased from the previous week 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 49-52, 147 samples were analyzed, of which 17.0% were positive for a respiratory virus and 3.4% were positive for influenza. Among the positive influenza samples, 100% were influenza B. Among other respiratory viruses, RSV (24.0%), parainfluenza (24.0%) and human metapneumovirus (20.0%) were detected.

Peru

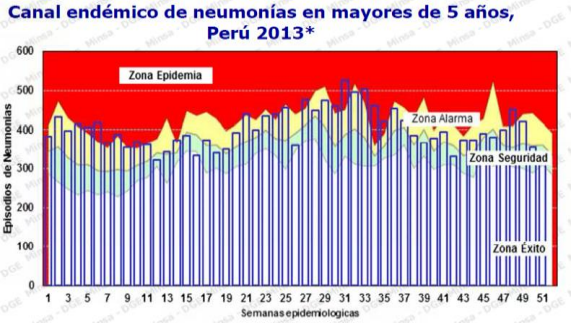
Peru. Pneumonia endemic channel, patients <5yrs, 2013



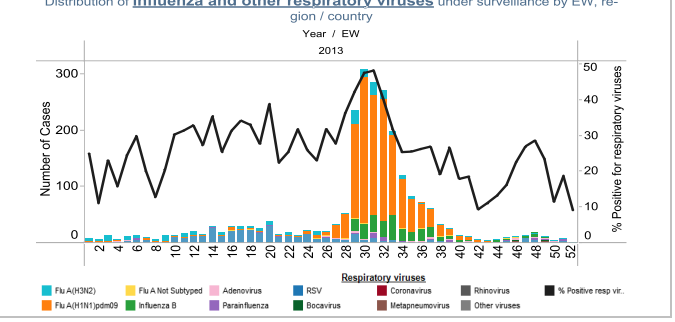
Peru. ARI endemic channel, patients <5yrs, 2013



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



Perú. Respiratory viruses distribution by EW, 2013

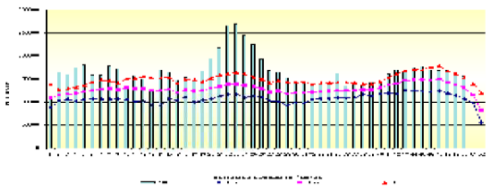


In Venezuela[8] during EW 50, ARI and pneumonia activity decreased by 1.0% and 12.8%, respectively, compared to the previous EW. Both were within the expected values for this time of year. During EW 50, 74 SARI-associated hospitalizations were reported, with children less than 1 year of age comprising the largest proportion of cases. Based on virologic data from EW 1-50, 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.

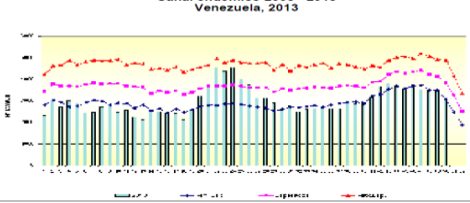
[7] Perú. Sala de Situación de Salud. EW 51, 2013. Ministerio de Salud. Dirección General de Epidemiología
[8] Venezuela. Boletín epidemiológico, EW 49, 2013.

Venezuela

Venezuela: ARI endemic channel



Venezuela: Pneumonia endemic channel

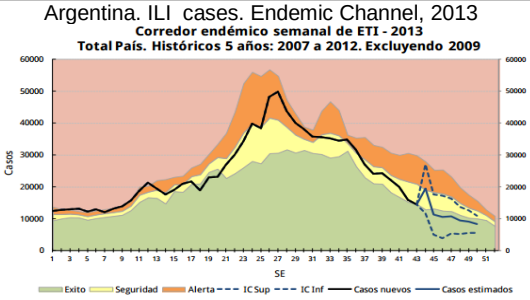


South America – Southern Cone and Brazil

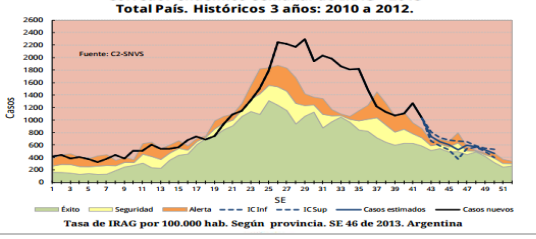
In Argentina[9], according to reports and calculated estimations, national ILI activity during EW 49 was within the success zone of the endemic channel and continued a decreasing trend since its peak in EW 26. The proportion of SARI-associated hospitalizations was within the alert zone of the endemic channel, but also showed a decreasing trend since EW 26. Based on laboratory data from EW 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.

Argentina

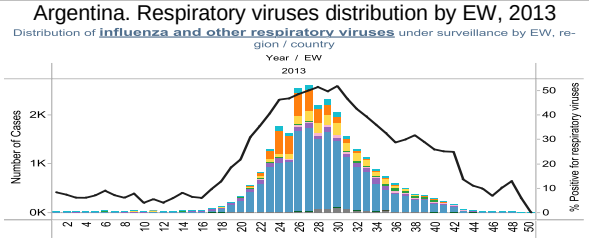
Argentina. ILI cases. Endemic Channel, 2013



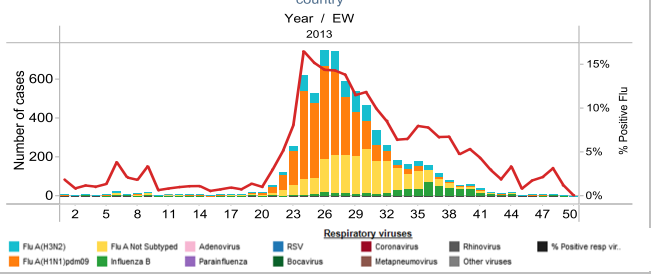
Argentina. SARI cases. Endemic Channel, 2013



Argentina. Respiratory viruses distribution by EW, 2013



Argentina. Influenza distribution by EW, 2013

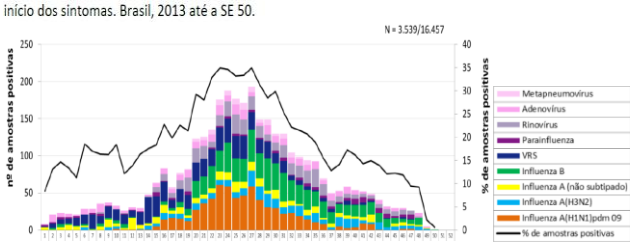


In Brazil[10], according to ILI sentinel surveillance data through EW 50, 16,457 samples were analyzed, of which 21.5% were positive for influenza or another respiratory virus. During EW 50, 0.6% of samples were positive for a respiratory virus, and among these influenza B was detected. Based on universal 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)pmd09.

Brazil

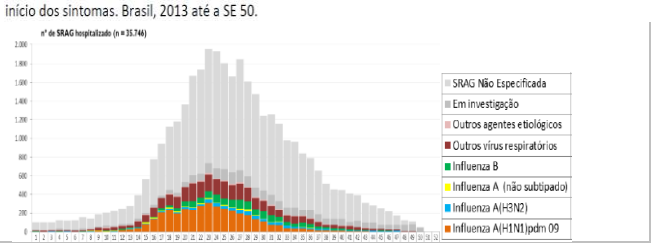
Brazil: Resp virus distribution in ILI cases, by EW, 2013

Figura 1. Distribuição dos vírus respiratórios identificados nas unidades sentinelas por semana epidemiológica início dos sintomas. Brasil, 2013 até a SE 50.



Brazil:Resp virus distribon, SARI cases, by EW, 2013

Figura 3. Distribuição dos casos de SRAG hospitalizados segundo vírus identificado e semana epidemiológica início dos sintomas. Brasil, 2013 até a SE 50.

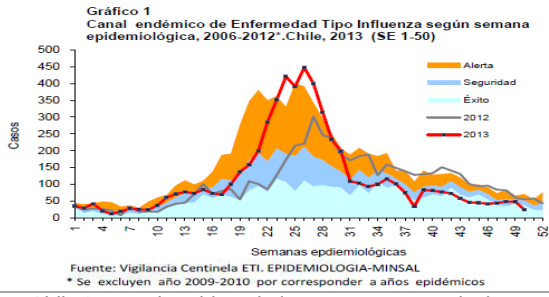


[9] Argentina. Boletin integrado de vigilancia. SE 49.
[10] Brasil. Boletim informativo. Secretaria de Vigilância em Saúde. SE 50, 2013.

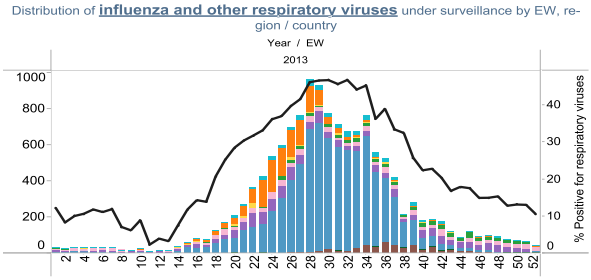
In Chile[11] ILI activity during EW 50 (rate: 1.5 per 100,000 inhabitants) remained low and was within the success zone of the endemic channel. The proportion of ILI-associated hospital emergency consultations was 0.5%, and also maintained a low and stable level. Based on laboratory data from EW 51-52, 892 samples were tested, of which 11.9% were positive for a respiratory virus and 2.6% were positive for influenza. Among the positive samples, adenovirus (46.2%), parainfluenza (17.0%), and influenza B (16.0%) were detected.

Chile

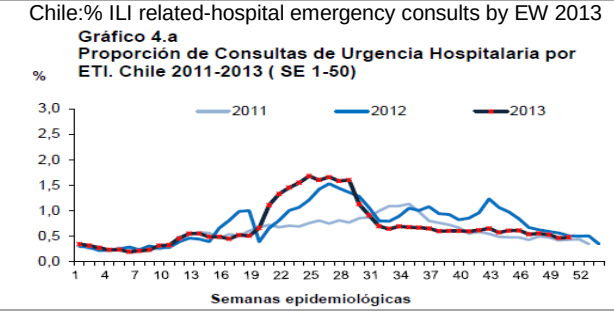
Chile. ILI Endemic Channel, 2013



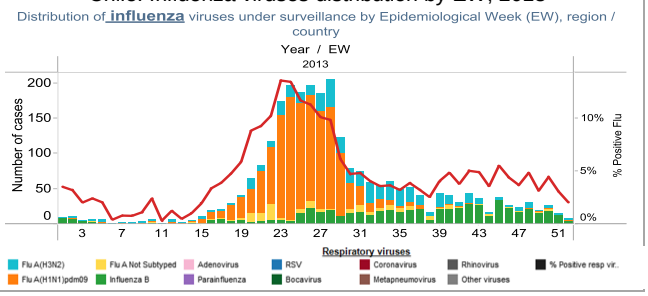
Chile. Respiratory viruses distribution by EW, 2013



Chile:% ILI related-hospital emergency consults by EW 2013



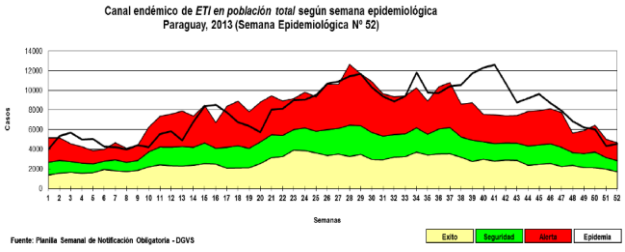
Chile. Influenza viruses distribution by EW, 2013



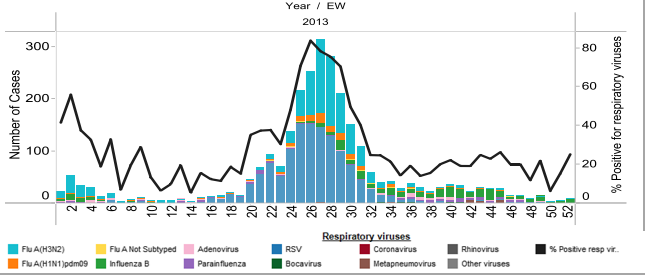
In Paraguay[12] during EW 52, the ILI consultation rate (68.4 per 100,000 inhabitants) increased slightly compared to the previous EW and was within the alert zone of the endemic channel. The proportion of SARI-associated hospitalizations (2.1%) was within the expected range for this time of year and children less than 5 years of age comprised the largest portion (58%) of these cases. Based on reference laboratory data from EW 49-52, 201 samples were analyzed, of which 16.4% were positive for a respiratory virus and 11.9% were positive for influenza. Among influenza samples, 100% were influenza B. Among other respiratory viruses, parainfluenza, adenovirus and human metapneumovirus were detected.

Paraguay

Paraguay. ILI endemic channel, by EW, 2013



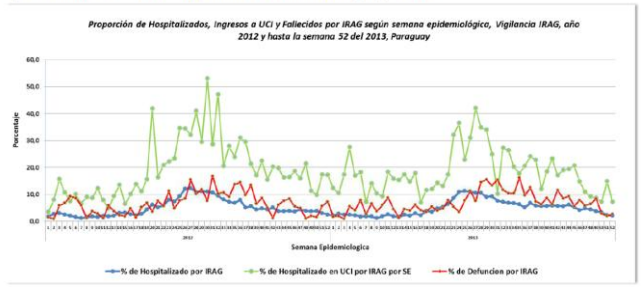
Paraguay. Respiratory viruses distribution by EW, 2013



[11] Chile. Informe de situación. EW 50. Available at: http://epi.minsal.cl/

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

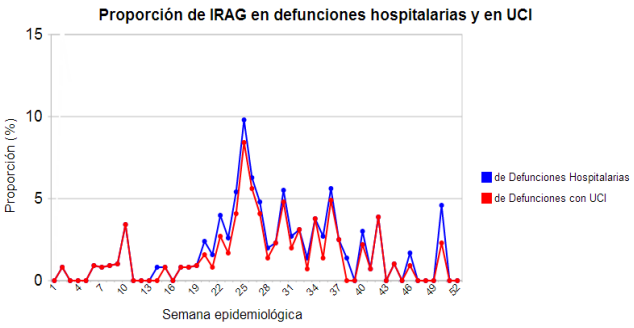
Paraguay:% SARI Hosps, ICU Admns & Deaths by EW 2013



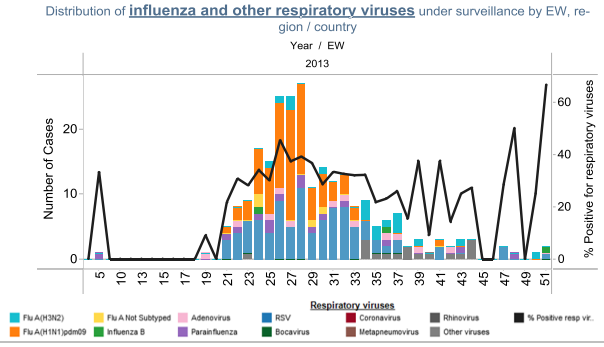
In Uruguay[13] during EW 52, the proportions of SARI-associated hospitalizations, ICU admissions and deaths were similar to the previous EW, and remained at low levels. Based on laboratory data from EW 49-52, 13 SARI samples were analyzed, of which two were positive for influenza (one A(H3N2) and one influenza B) and one was positive for RSV.

Uruguay

Uruguay.SARI-related hosps & ICU admissions by EW, 2013



Uruguay. Respiratory viruses distribution by EW, 2013



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