Regional Update EW 10, 2014

Influenza and other respiratory viruses
(March 19, 2014)

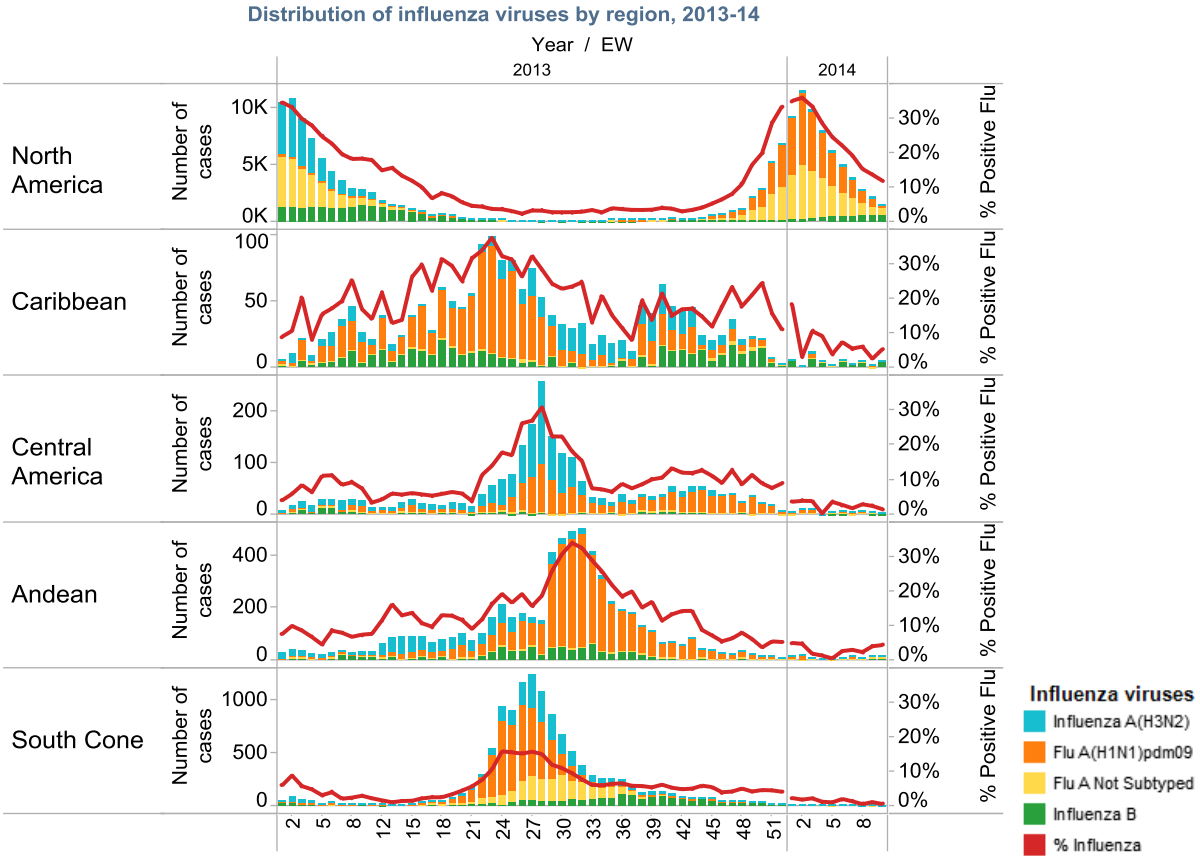
PAHO interactive influenza data: http://ais.paho.org/phip/viz/ed_flu.asp
Influenza Regional Reports: www.paho.org/reportesinfluenza

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.

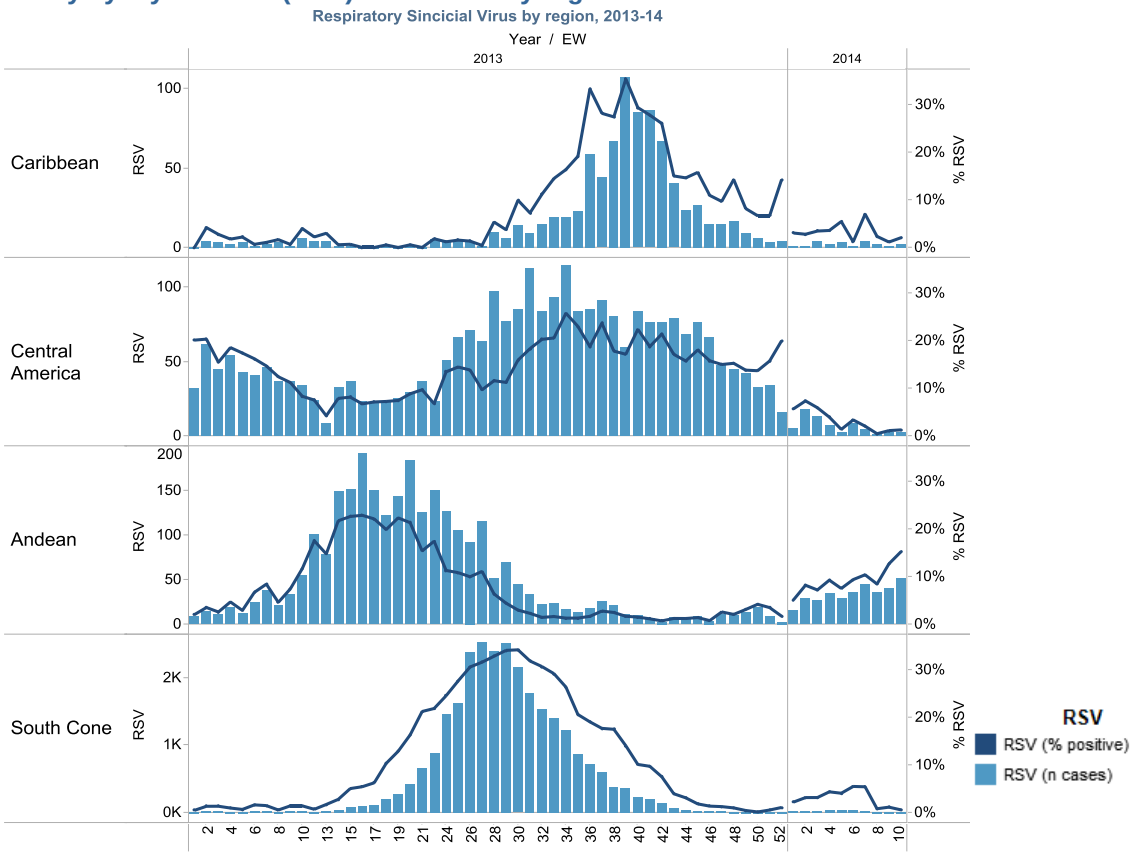
WEEKLY SUMMARY

- North America: Influenza activity continued to decrease in the region. Influenza A(H1N1)pdm09 remained the predominant circulating virus in the region but circulation of influenza B continued to increase. Among other respiratory viruses, RSV circulation remained high in Canada and the United States.
- The Caribbean and Central America: Influenza and other respiratory virus activity in the region remained low.
- South America – Andean Countries: Acute respiratory illness activity, and influenza and other respiratory virus activity remained low in the region with the exception of Colombia where RSV circulation continued to increase.
- South America - South Cone and Brazil: Acute respiratory illness activity as well as influenza and other respiratory virus activity was low and within the expected level for this time of year in all countries of the region.

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:

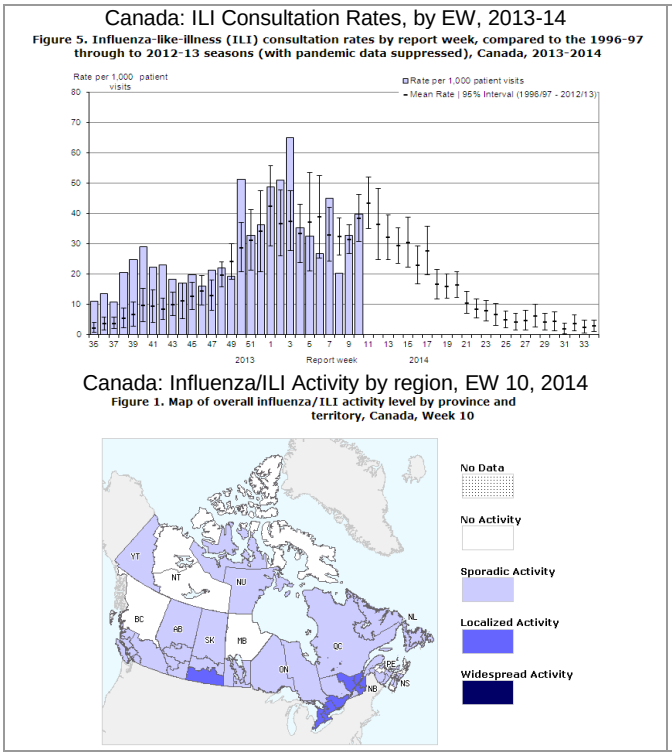
In Canada[1] during EW 10, influenza activity continued to decline. The national influenza-like illness (ILI) consultation rate was 39.8 per 1,000 patient visits, an increase compared to the previous week, but within the expected range for this time of year. Since the beginning of the 2013-14 influenza season, 3,450 influenza-associated hospitalizations have been reported and most of them have been associated with influenza A (94.5%). The majority (57.7%) of these cases have been adults ≥45 years of age. There have been 316 ICU admissions reported and of these, 66.5% were among adults 20-64 years of age. To date this season, 189 deaths have been reported (compared to 269 during the same period of the 2012-13 season) and 94.5% were associated with influenza A. The highest proportion of these deaths (50.3%) occurred among adults 20-64 years of age, followed by adults ≥65 years (40.2%). Based on laboratory data for EW 10, the overall percentage of positive influenza tests was 12.5% (N=752), a decrease compared to the previous week. However, influenza B continued to increase. Among the positive tests, 50.0% were

[1] Canada: FluWatch Report. EW 10. Available at http://www.phac-aspc.gc.ca/fluwatch/

influenza A (29.9% influenza A(H1N1)pdm09, 0.5% A(H3N2) and 69.6% not subtyped) and 50.0% were influenza B. Among other circulating respiratory viruses, RSV continued to predominate.

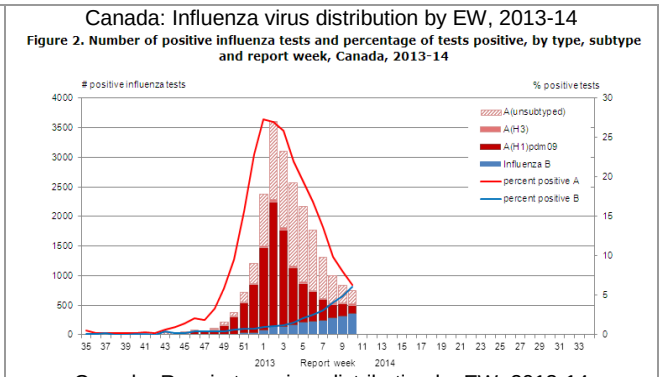
Canada

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

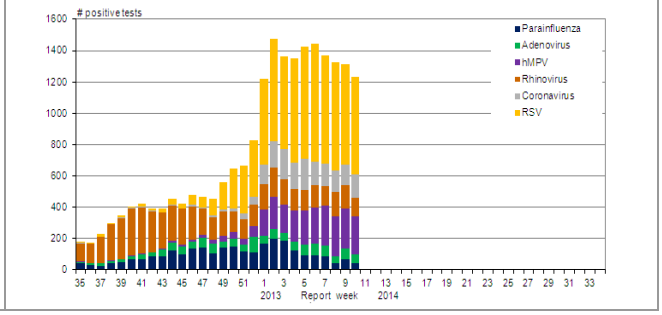


Canada: Influenza/ILI Activity by region, EW 10, 2014

Canada: Influenza virus distribution by EW, 2013-14



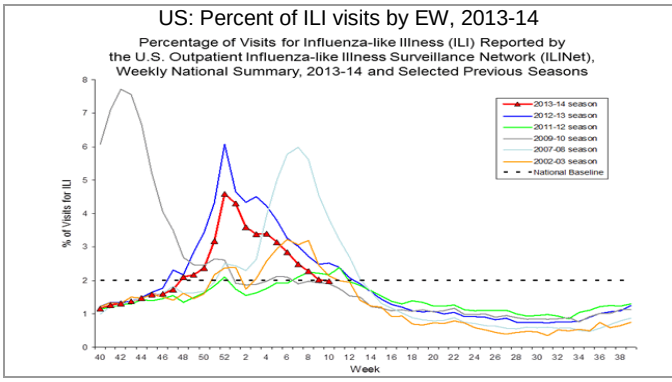
Canada: Respiratory virus distribution by EW, 2013-14



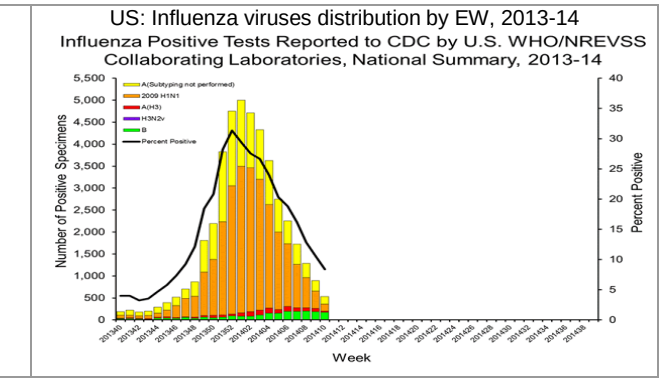
In the United States[2] during EW 10, influenza activity continued to decrease. The proportion of outpatient visits for influenza-like illness (ILI) was 2.0%, equal to the national baseline and the previous EW. Four of the 10 regions reported ILI activity above their region-specific baseline levels. The proportion of deaths attributed to pneumonia and influenza for EW 10 (6.9%) decreased from the previous EW and was below the epidemic threshold (7.4%). A total of 68 influenza-associated pediatric deaths have been reported this season, of which three were reported during EW 10. Of these, two deaths were associated with influenza A(H1N1)pdm09 and occurred during EW 52 and 7 and one death was associated with influenza A (not subtyped) and occurred during EW 6. Since October 1, 2013, 7,910 laboratory confirmed influenza-associated hospitalizations have been reported (rate: 29.2 per 100,000 population) and the majority (94.0%) have been associated with influenza A. The highest hospitalization rates were among adults ≥65 years followed by adults 50-64 years and children 0-4 years. However, adults aged 18-64 years comprised more than 60% of the reported hospitalizations. According to laboratory data for EW 10, 6,372 samples were analyzed, of which 8.4% were positive for influenza. Among the positive samples, 67.7% were influenza A (42.3% A(H1N1)pdm09, 8.6% A(H3) and 49.2% not subtyped) and 32.3% were influenza B. Based on antiviral resistance testing, 1.0% (40/4,155) of the influenza A(H1N1)pdm09 samples tested were oseltamivir resistant. Among other circulating respiratory viruses, RSV activity was high with percent positivity of 16.2%.

United States

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

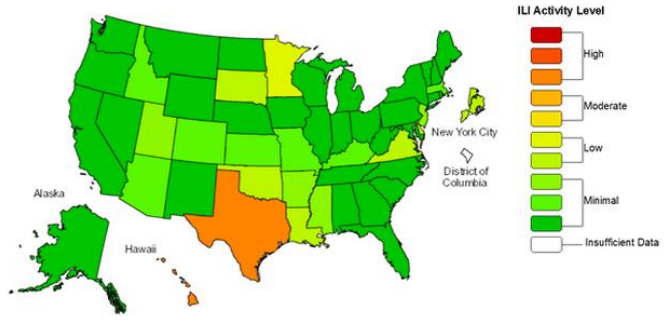


US: Influenza viruses distribution by EW, 2013-14

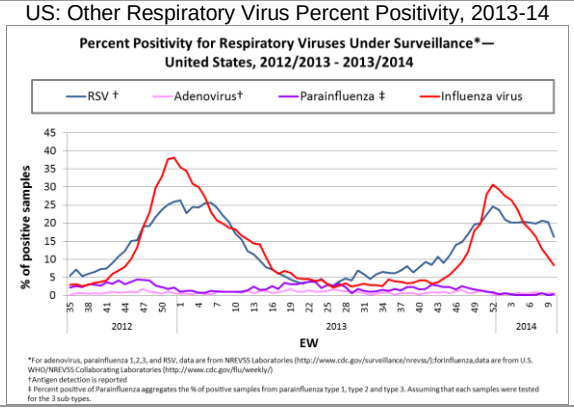


[2] USA: CDC FluView report. EW 10. Available at: http://www.cdc.gov/flu/weekly/

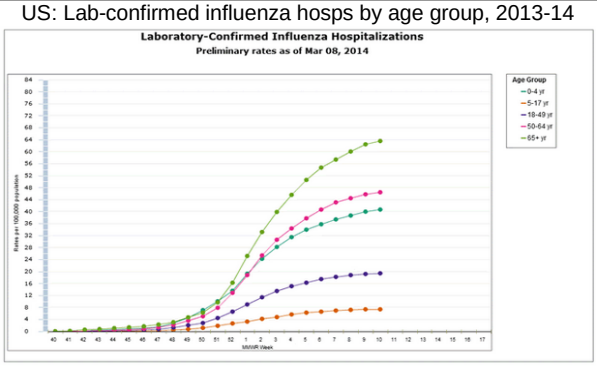
US: ILI Activity by State,EW 10, 2013



US: Other Respiratory Virus Percent Positivity, 2013-14



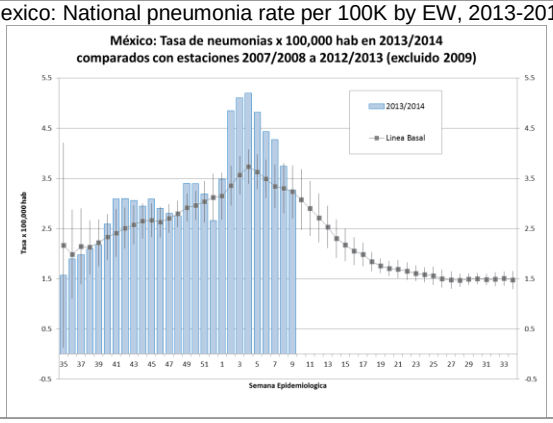
US: Lab-confirmed influenza hosps by age group, 2013-14



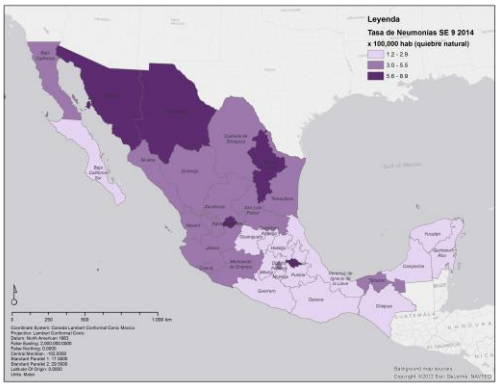
In Mexico[3] during EW 9, influenza activity continued to decrease. The pneumonia rate decreased for the fifth consecutive week and was within the expected level for this time of year. ARI decreased from the previous week and was within the security zone of the endemic channel. The highest levels of ARI activity were reported in Aguascalientes, Zacatecas and Durango, and the highest levels of pneumonia activity were reported in Nuevo Leon, Chihuahua and Tlaxcala. Nationally through March 13, 2014, the proportion of ILI/SARI-associated medical visits was 1.7%, a decrease compared to the previous EW. During this same period, 695 influenza-associated deaths were reported, of which 90.9% were associated with influenza A(H1N1)pdm09. According to laboratory data during EW 9-10, 898 samples were analyzed, of which 21.5% were positive for influenza. Among the positive influenza samples, 89.6% were influenza A (71.1% A(H1N1)pdm09 and 22.5% A(H3N2)) and 10.4% were influenza B.

Mexico

Mexico: National pneumonia rate per 100K by EW, 2013-2014

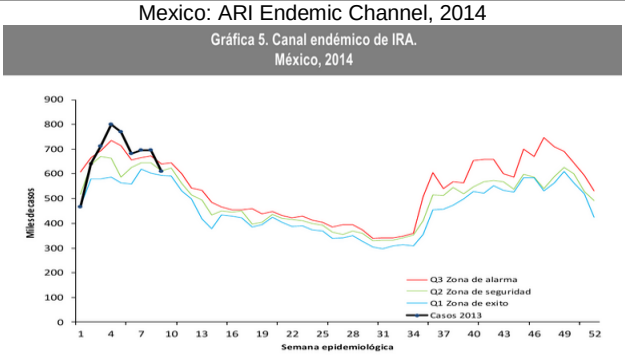


Mexico: Pneumonia Rates by State, EW 9



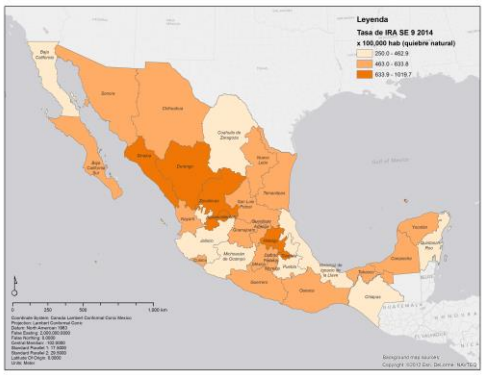
[3] México. Dirección General de Epidemiología. Información epidemiológica. Informes Epidemiológicos Semanales 2014.

Mexico: ARI Endemic Channel, 2014



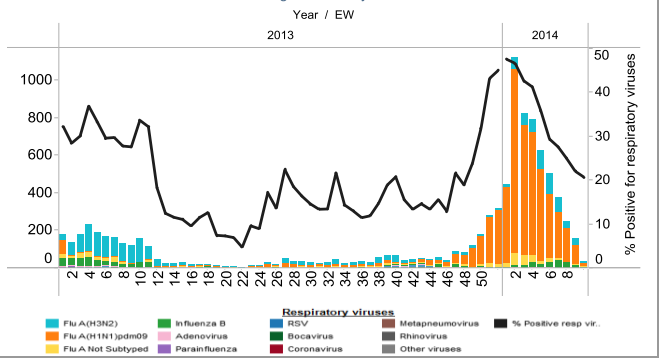
2.Fuente: SINAVE/DGE/Sistema de Notificación Semanal de Casos Nuevos, acceso al 13/3/2014

Mexico: ARI Rates by State, EW 9



Mexico: Respiratory viruses distribution by EW 2013-14

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

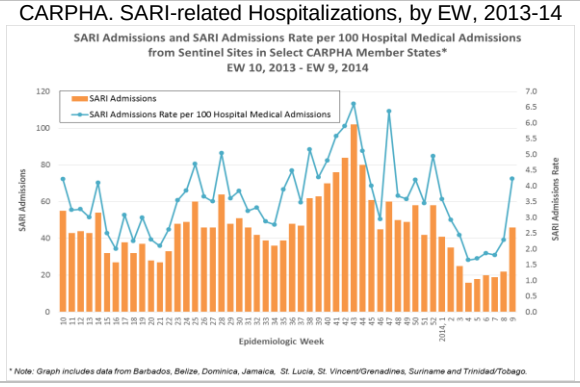


Caribbean

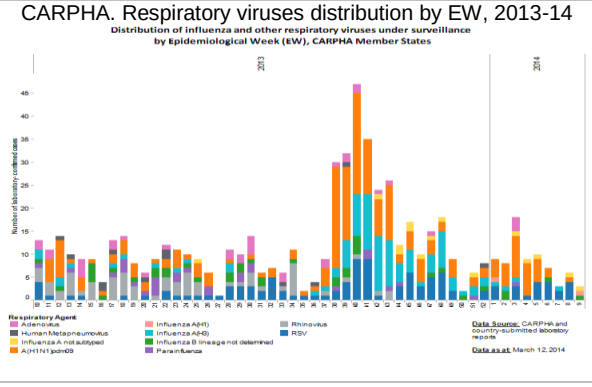
CARPHA[4] received weekly SARI/ARI data from the following countries for EW 8-9: Barbados, Jamaica, St Vincent & the Grenadines, and Trinidad & Tobago. The proportion of SARI-associated hospitalizations during EW 9 was 4.2%, an increase compared to the previous EW. Children 6 months to four years of age had the highest rate of SARI admissions (12.7%). One SARI-associated death was reported by Barbados during this period. According to laboratory data from EW 4-9, the following viruses were detected: influenza A(H1N1)pdm09 (Anguilla, Belize, Bermuda), influenza A(H3) (Trinidad & Tobago), influenza A, not subtyped (Aruba, Jamaica), influenza B (Trinidad & Tobago), and RSV (Aruba, Barbados).

CARPHA

CARPHA. SARI-related Hospitalizations, by EW, 2013-14

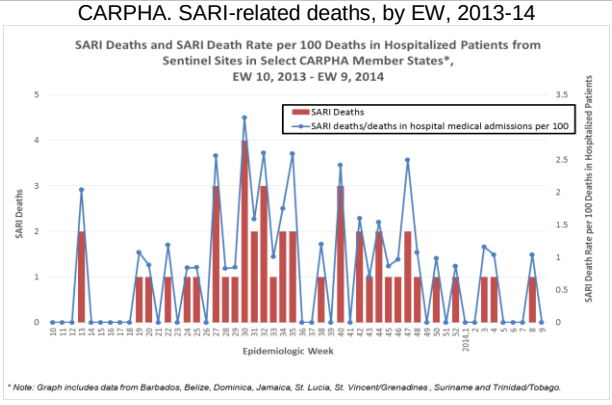


CARPHA. Respiratory viruses distribution by EW, 2013-14

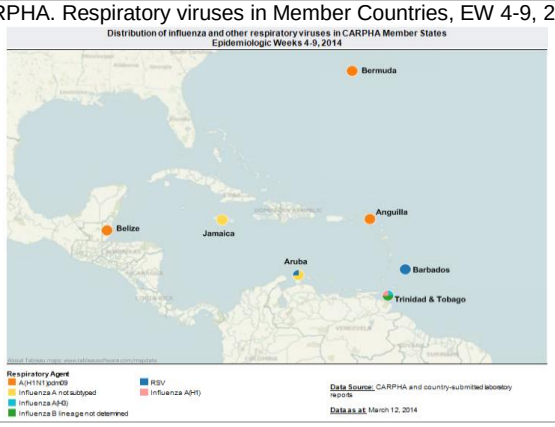


[4] Caribbean Public Health Agency (CARPHA) EW 8-9

CARPHA. SARI-related deaths, by EW, 2013-14



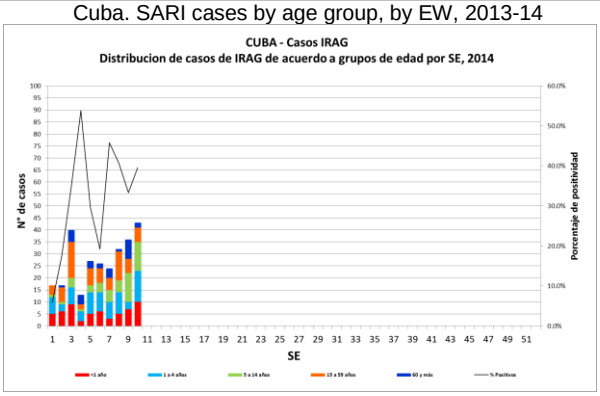
CARPHA. Respiratory viruses in Member Countries, EW 4-9, 2014



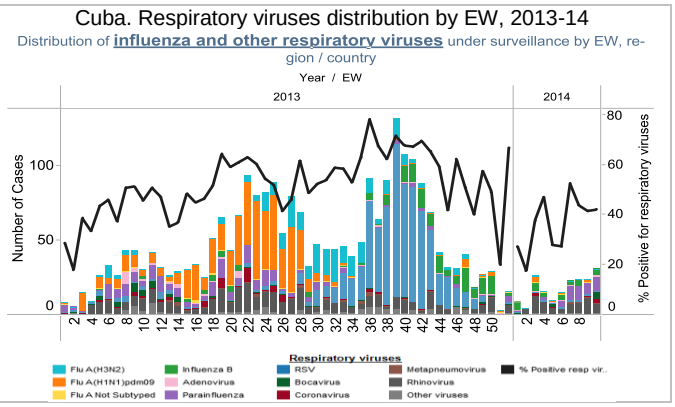
In Cuba during EW 10, the number of SARI-associated hospitalizations increased compared to the previous week. Children aged 1-4 years of age comprised the largest proportion of these cases. No SARI-associated deaths were reported during this period. According to national laboratory data for EW 7-10, 231 samples were analyzed, of which 44.2% were positive for a respiratory virus and 5.6% were positive for influenza. Among the positive samples, parainfluenza (34.3%), rhinovirus (29.4%) and influenza B (10.8%) predominated.

Cuba

Cuba. SARI cases by age group, by EW, 2013-14



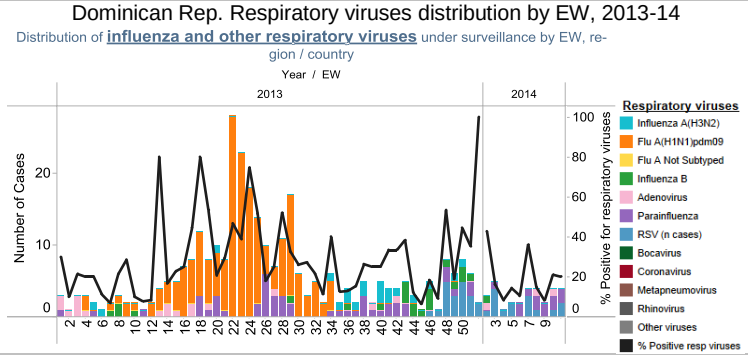
Cuba. Respiratory viruses distribution by EW, 2013-14



In the Dominican Republic[5], during EW 1-8, 123 ILI cases were detected through sentinel surveillance. Based on laboratory data for EW 8-11, 91 samples were analyzed, of which 15.4% were positive for a respiratory virus. Among the positive samples, parainfluenza (57.1%), RSV (28.6%) and adenovirus (14.3%) were detected.

Dominican Republic

Dominican Rep. Respiratory viruses distribution by EW, 2013-14

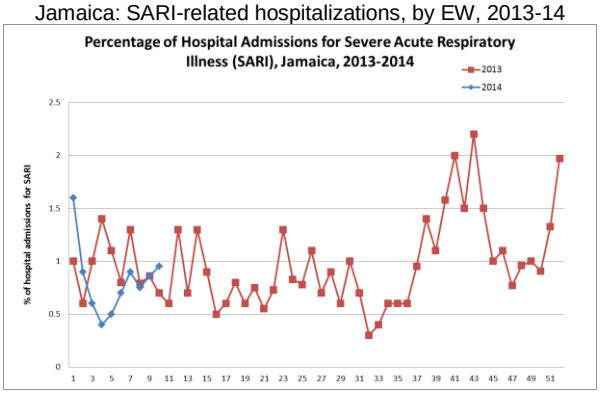


In Jamaica, based on sentinel surveillance data for EW 10, the proportions of ARI-associated consultations (4.7%) and SARI-associated hospitalizations (1.0%) increased compared to the previous week. No SARI-associated deaths were reported during EW 10. Based on laboratory data for EW 7-10, 16 samples were analyzed and two were positive for influenza (influenza A(H1N1)pdm09 and influenza B).

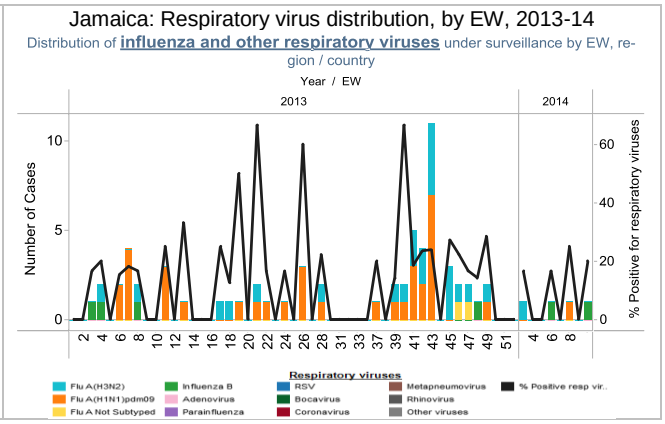
[5] República Dominicana. Dirección Nacional de Vigilancia Epidemiológica. Boletín Semanal SE 8.

Jamaica

Jamaica: SARI-related hospitalizations, by EW, 2013-14



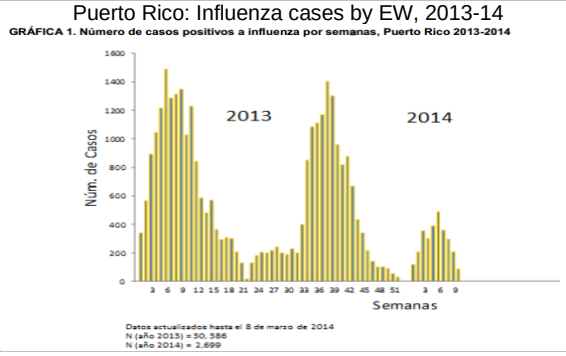
Jamaica: Respiratory virus distribution, by EW, 2013-14



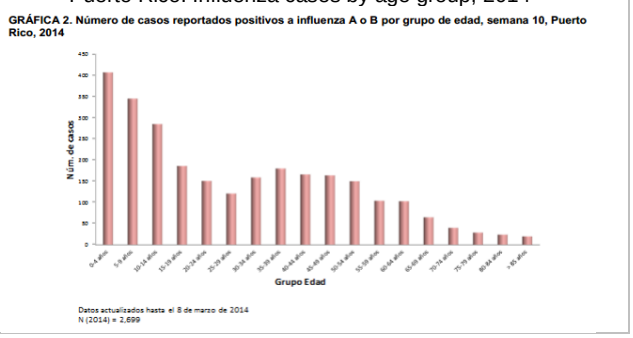
In Puerto Rico[6] during EW 10, the number of influenza cases (n=86) remained low. Of these, 57 cases were associated with influenza A, 27 with influenza B, and 2 with influenza A and B. Since the beginning of 2014, 2,699 influenza cases have been reported and persons aged 0-19 years accounted for 45% of those cases. During this same period, 164 influenza-associated hospitalizations and two influenza-associated deaths were reported.

Puerto Rico

Puerto Rico: Influenza cases by EW, 2013-14



Puerto Rico: Influenza cases by age group, 2014

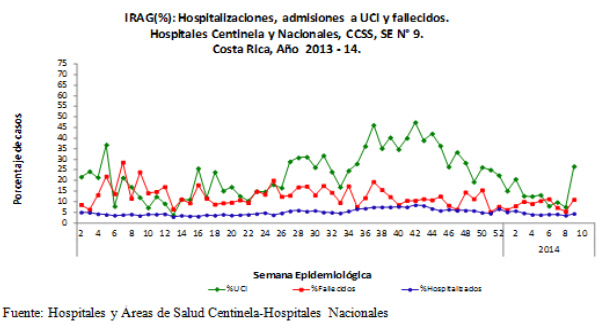


Central America

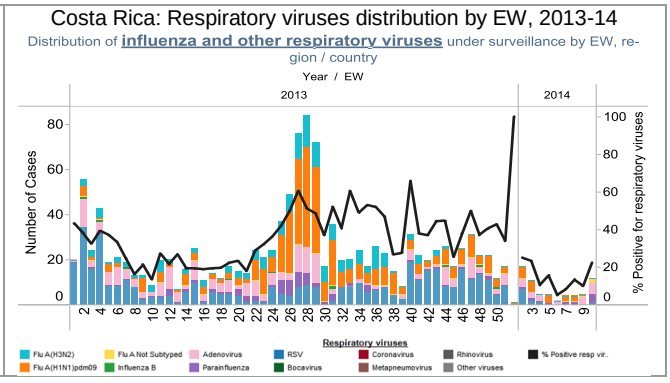
In Costa Rica, during EW 9, the proportions of SARI-associated hospitalizations (4.5%), SARI-associated ICU admissions (27.0%) and SARI-associated deaths (11.0%) increased compared to the previous EW. Based on laboratory data from EW 7-10, 182 samples were analyzed, of which 13.7% were positive for a respiratory virus and 3.8% were positive for influenza. Among the positive influenza samples, 100% were influenza A (71.4% A(H1N1)pdm09 and 28.6% not subtyped). Among other respiratory viruses, adenovirus (44.0% of positive samples) and parainfluenza (24.0%) predominated.

Costa Rica

Costa Rica. % SARI Hosps, ICU Admns & Deaths by EW 2013-14



Costa Rica: Respiratory viruses distribution by EW, 2013-14

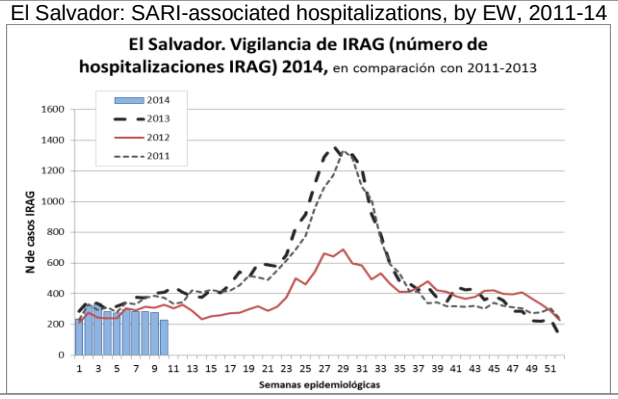


[6] Puerto Rico. Departamento de Salud. Vigilancia de influenza de Puerto Rico SE 10

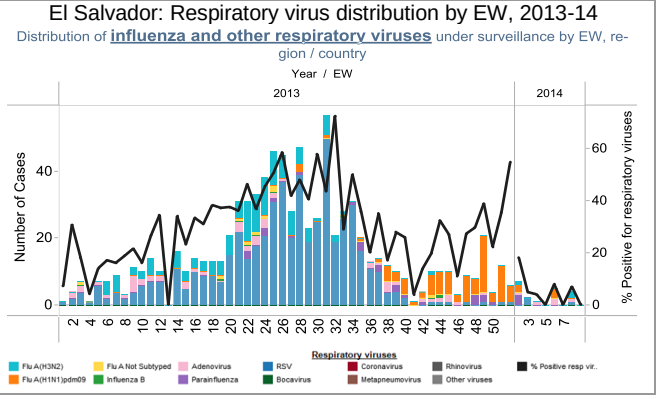
In El Salvador, during EW 10, the proportions of SARI-associated hospitalizations (4.7%), ICU admissions (9.1%) and deaths (7.2%) remained low and within the expected levels for this time of year. According to national laboratory data from EW 6-9, 166 samples were analyzed, of which 5.4% were positive for a respiratory virus and 3.0% were positive for influenza. Among the positive influenza samples, 100% were influenza A (60.0% A(H1N1)pdm09 and 40.0% A(H3N2)). Among other respiratory viruses, adenovirus (33.3% of positive samples) and RSV (11.1%) were detected.

El Salvador

El Salvador: SARI-associated hospitalizations, by EW, 2011-14



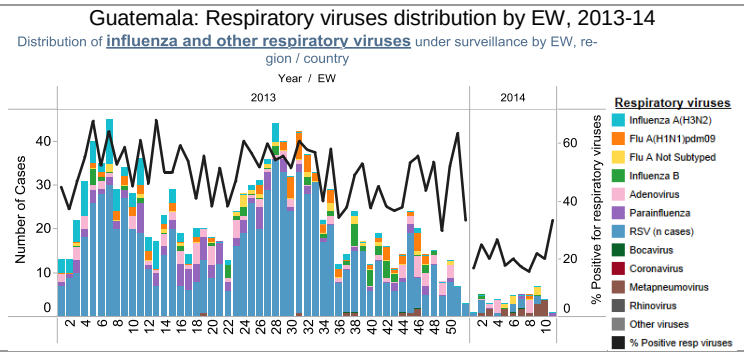
El Salvador: Respiratory virus distribution by EW, 2013-14



In Guatemala, based on laboratory data from EW 8-11, 87 samples were analyzed, of which 19.5% were positive for a respiratory virus and 3.4% were positive for influenza. Among the positive influenza samples, 100% were influenza A (33.3% were A(H1N1)pdm09 and 66.7% were not subtyped). Among other respiratory viruses, human metapneumovirus (47.1% of positive samples) and adenovirus (17.6%) predominated.

Guatemala

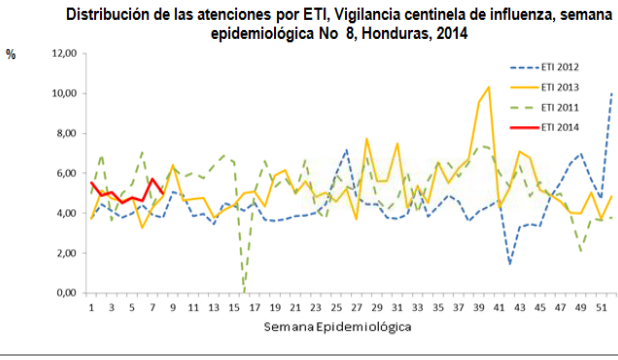
Guatemala: Respiratory viruses distribution by EW, 2013-14



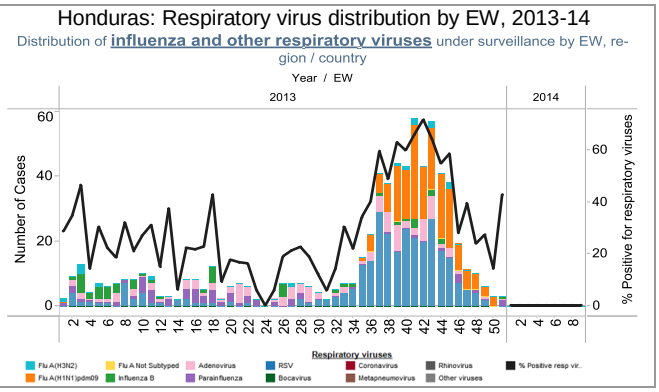
In Honduras[7], during EW 9, the proportions of ILI-associated visits (6.0%), SARI-associated hospitalizations (5.3%) and SARI-associated deaths (12.5%) remained low. Based on national laboratory data for EW 6-9, 111 samples were analyzed of which all were negative for influenza.

Honduras

Honduras: ILI-related visits by EW, 2011-14

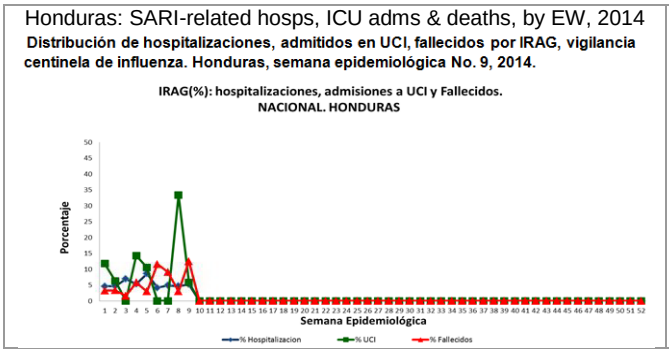


Honduras: Respiratory virus distribution by EW, 2013-14



[7] Honduras. Influenza Bulletin, EW 9

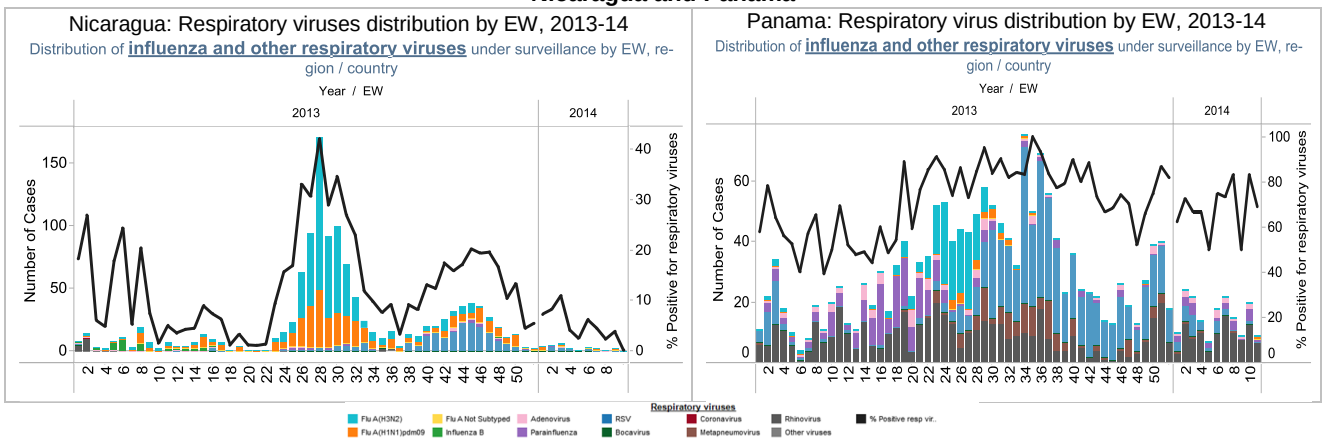
Honduras: SARI-related hosps, ICU adms & deaths, by EW, 2014



In Nicaragua, according to national laboratory data from EW 7-10, 204 samples were analyzed of which 2.5% were positive for a respiratory virus and 1.5% were positive for influenza. Among the positive samples, influenza A(H1N1)pdm09, influenza B and RSV were detected.

In Panama, based on national laboratory data from EW 8-11, 73 samples were analyzed of which 72.6% were positive for a respiratory virus. Among the positive samples, rhinovirus (71.7%) predominated.

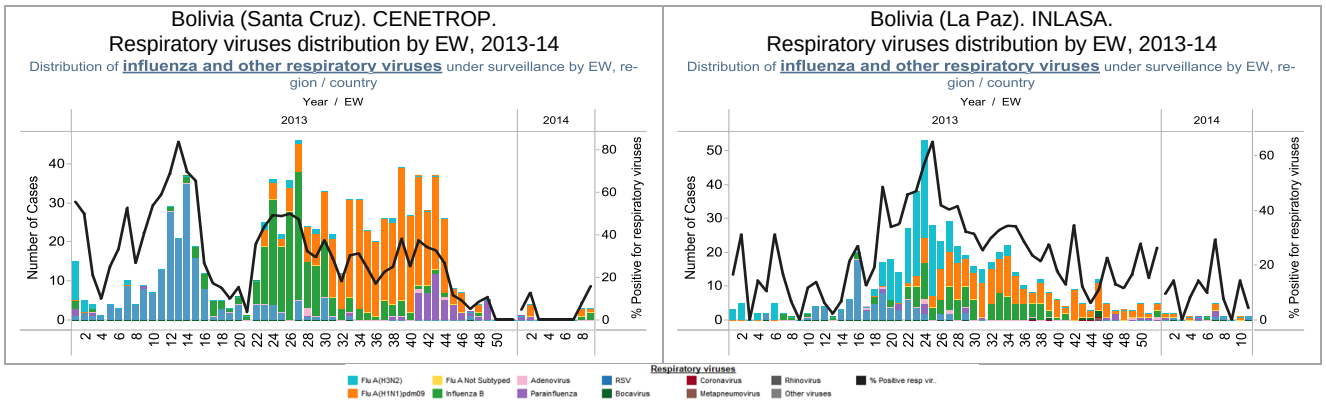
Nicaragua and Panama



South America – Andean countries

In Bolivia, according to laboratory data from CENETROP (Santa Cruz), from EW 6-9, 96 samples were analyzed and of these, four (6.3%) were positive for influenza (influenza A(H1N1)pdm09 and influenza B). According to laboratory data from INLASA (La Paz) from EW 8-11, 47 samples were analyzed of which 6.4% were positive for a respiratory virus and 2.1% were positive for influenza. Among the positive samples, RSV (66.7%) and influenza A(H1N1)pdm09 (33.3%) were detected.

Bolivia

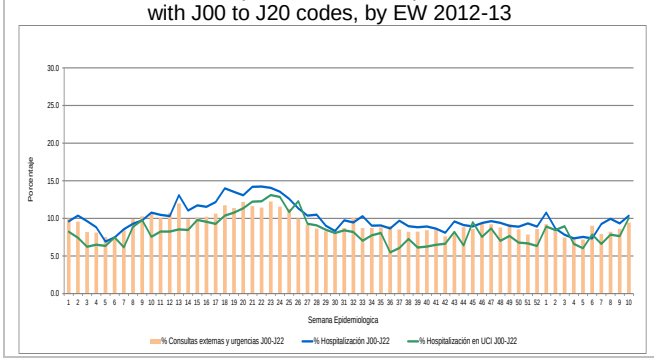


In Colombia, nationally during EW 10, the proportions of hospitalizations (10.4%), ICU admissions (10.1%), and outpatient and urgent visits (9.4%) with ARI-associated ICD-10 codes (J00 to J22) increased slightly compared to the previous week. Based on INS national laboratory data from EW 7-10, 921 samples were analyzed, of which 22.8% were positive for a respiratory virus and 3.4% were positive for influenza. Among

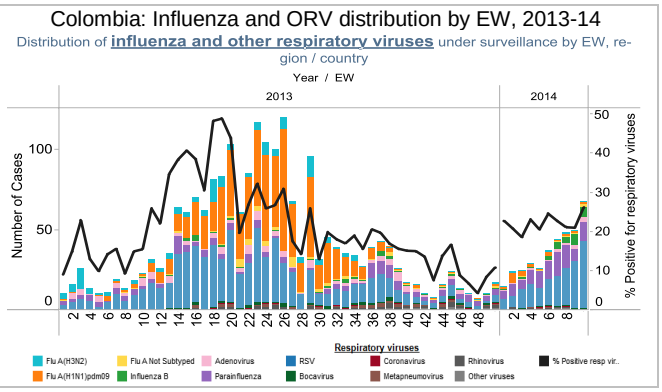
the positive influenza samples, 32.3% were influenza A (40.0% A(H1N1)pdm09, 30.0% A(H3N2) and 30.0% not subtyped) and 67.7% were influenza B. Among other respiratory viruses, RSV (53.8% of positive samples) and parainfluenza (23.8%) predominated.

Colombia

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



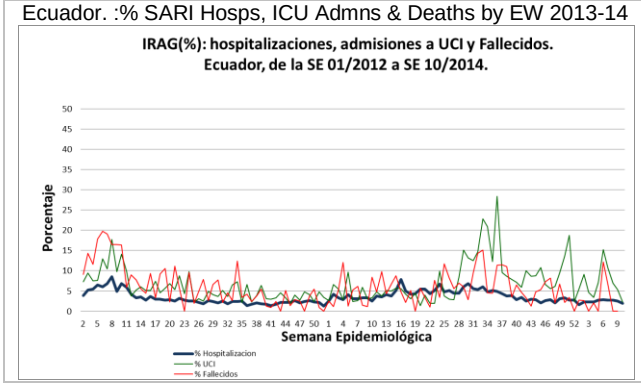
Colombia: Influenza and ORV distribution by EW, 2013-14



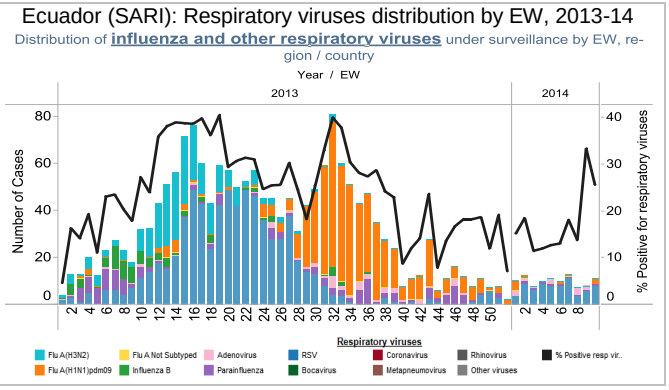
In Ecuador respiratory virus activity remained low. During EW 10, the proportions of SARI-associated hospitalizations (1.9%), ICU admissions (2.3%) and SARI-associated deaths (0.0%) were similar to the previous EW. Based on national reference laboratory data from EW 7-10, 190 SARI samples were analyzed, of which 20.5% were positive for a respiratory virus and 1.6% were positive for influenza. Among the positive samples, RSV predominated (74.4%).

Ecuador

Ecuador. :% SARI Hosps, ICU Admns & Deaths by EW 2013-14



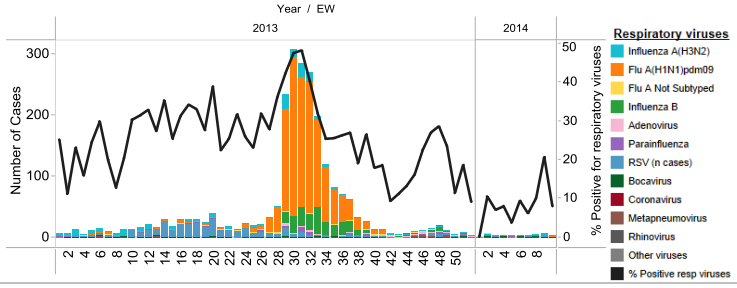
Ecuador (SARI): Respiratory viruses distribution by EW, 2013-14



In Peru, based on national laboratory data from EW 7-10, 127 samples were analyzed, of which 11.0% were positive for a respiratory virus and 0.8% were positive for influenza. Among the positive samples, RSV (78.6%) predominated.

Peru

Perú. Respiratory viruses distribution by EW, 2013-14



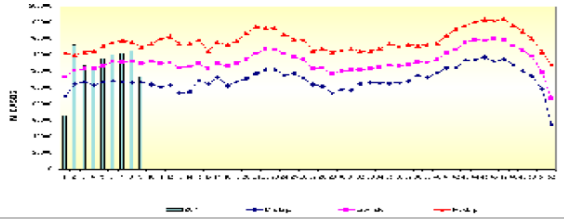
In Venezuela[8] during EW 9, the number of ARI and pneumonia cases decreased by 21.6% and 21.2%, respectively, compared to the previous EW. Both were within the expected levels for this time of year. During EW 9, 111 SARI-associated hospitalizations were reported, with children ≤1-4 years of age

[8] Venezuela. Boletín epidemiológico, EW 9.

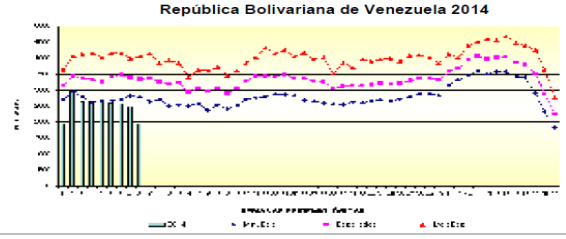
comprising the largest proportion of cases. Based on virologic data from January 1, 2014, 100 samples were analyzed from suspected influenza cases, of which 15.0% were positive for influenza. Among the positive samples, influenza A(H3N2) predominated (73.3%).

Venezuela

Venezuela: ARI endemic channel



Venezuela: Pneumonia endemic channel



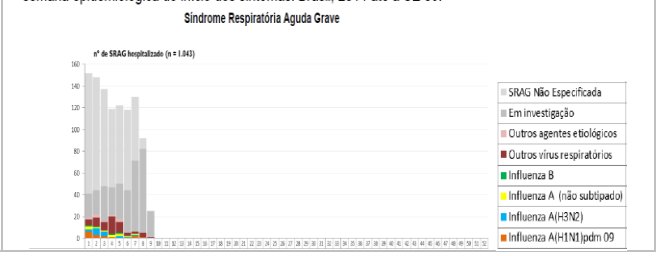
South America – South Cone and Brazil

In Brazil[9], according to ILI sentinel surveillance data through EW 9, 1,798 samples were analyzed, of which 7.3% were positive for influenza or another respiratory virus. During EW 9, 0.6% of samples were positive for a respiratory virus, and among these RSV was detected. Based on universal SARI surveillance data during this same period, 1,043 SARI cases were reported and 4.4% of these were positive for influenza. Among the positive samples, influenza A(H1N1)pdm09 and A(H3N2) predominated. Through EW 9, 117 SARI-associated deaths were reported, of which 3.4% were positive for influenza.

Brazil

Brazil: Resp virus distribution in ILI cases, by EW, 2014

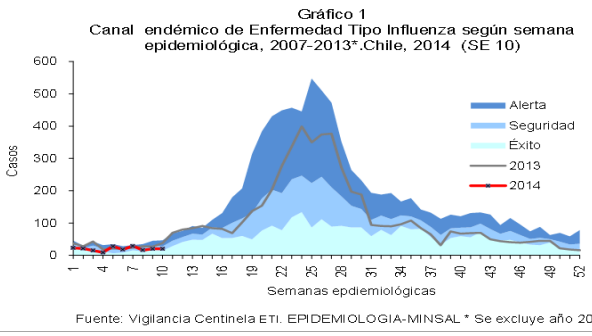
Brazil:Resp virus distribon, SARI cases, by EW, 2014



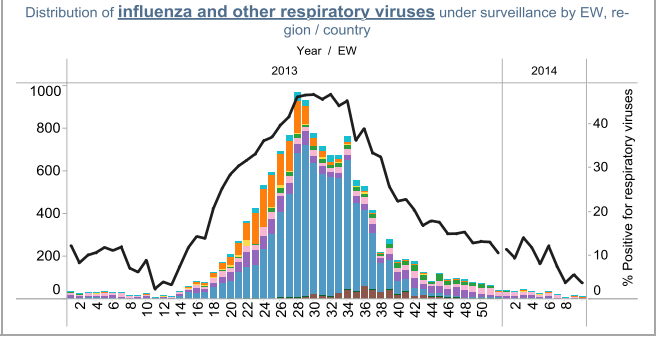
In Chile[10], ILI activity during EW 10 remained low (rate: 1.3 per 100,000 inhabitants) and was in the security zone of the endemic channel. Based on laboratory data from EW 9-10, 579 samples were analyzed, of which 4.5% were positive for a respiratory virus and 0.7% were positive for influenza. Among the positive samples, adenovirus predominated (57.7%).

Chile

Chile. ILI Endemic Channel, 2014

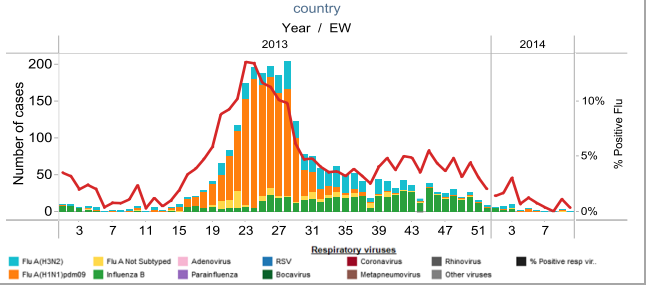


Chile. Respiratory viruses distribution by EW, 2013-14



[9] Brasil. Boletim informativo. Secretaria de Vigilância em Saúde. SE 9, 2014.
[10] Chile. Informe de situación. EW 10. Available at: http://epi.minsal.cl/

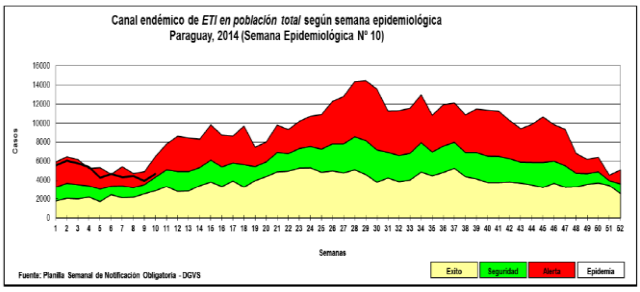
Chile. Influenza viruses distribution by EW, 2013-14



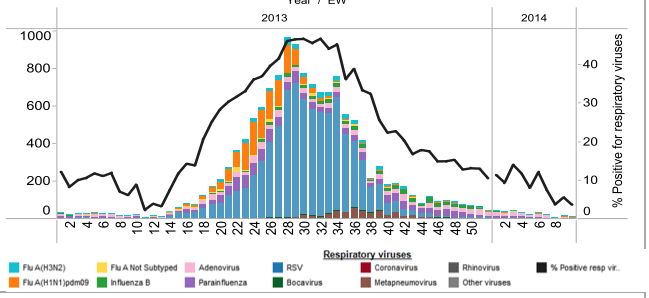
In Paraguay[11] during EW 10, the ILI consultation rate (69.8 per 100,000 inhabitants) increased from the previous EW and was within the alert zone of the endemic channel. The proportion of SARI-associated hospitalizations (1.4%) was within the expected range for this time of year. The most affected age groups were children <2 years of age and adults ≥60 years. Based on laboratory data from EW 8-11, 107 samples were analyzed, of which 4.7% were positive for a respiratory virus. Among the positive samples, adenovirus, parainfluenza, RSV and human metapneumovirus were detected.

Paraguay

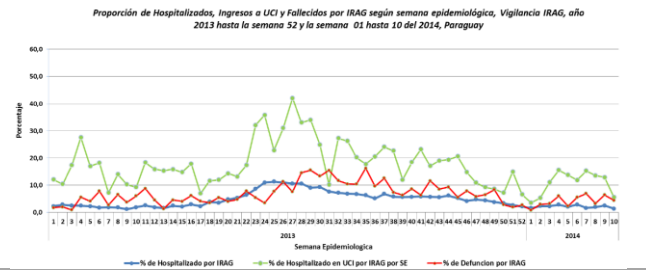
Paraguay. ILI endemic channel, by EW, 2014



Paraguay. Respiratory viruses distribution by EW, 2013-14



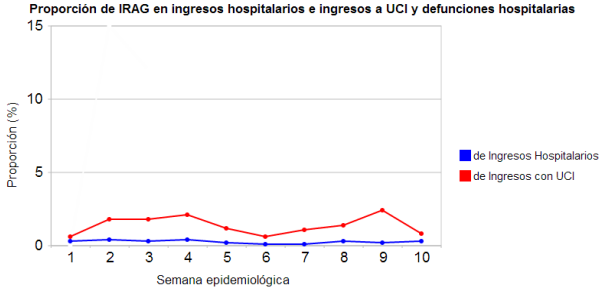
Paraguay:% SARI Hosps, ICU Admns & Deaths by EW 2013-14



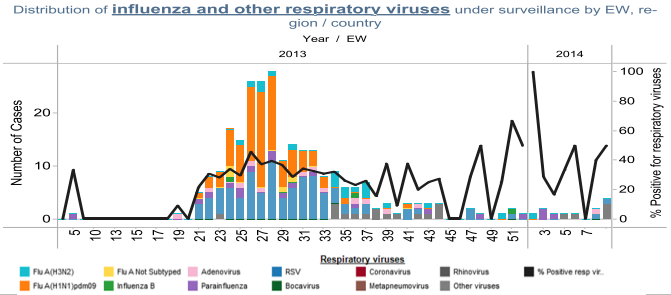
In Uruguay[12] during EW 10, the proportions of SARI-associated hospitalizations, ICU admissions and deaths remained at low levels. Based on laboratory data from EW 7-10, 15 samples were analyzed and of these, 6 (40.0%) were positive for a respiratory virus. Among the positive samples, RSV and adenovirus were detected.

Uruguay

Uruguay.SARI-related hosps & ICU admissions by EW, 2014



Uruguay. Respiratory viruses distribution by EW, 2013-14



[11] Paraguay. Informe de situación. Vigilancia de ETI e IRAG. SE 10.
[12] Uruguay. Generador de gráficos de la división de epidemiología, Dirección General de Salud – Ministerio de Salud Pública