Regional Update EW 13, 2014

Influenza and other respiratory viruses
(April 8, 2014)

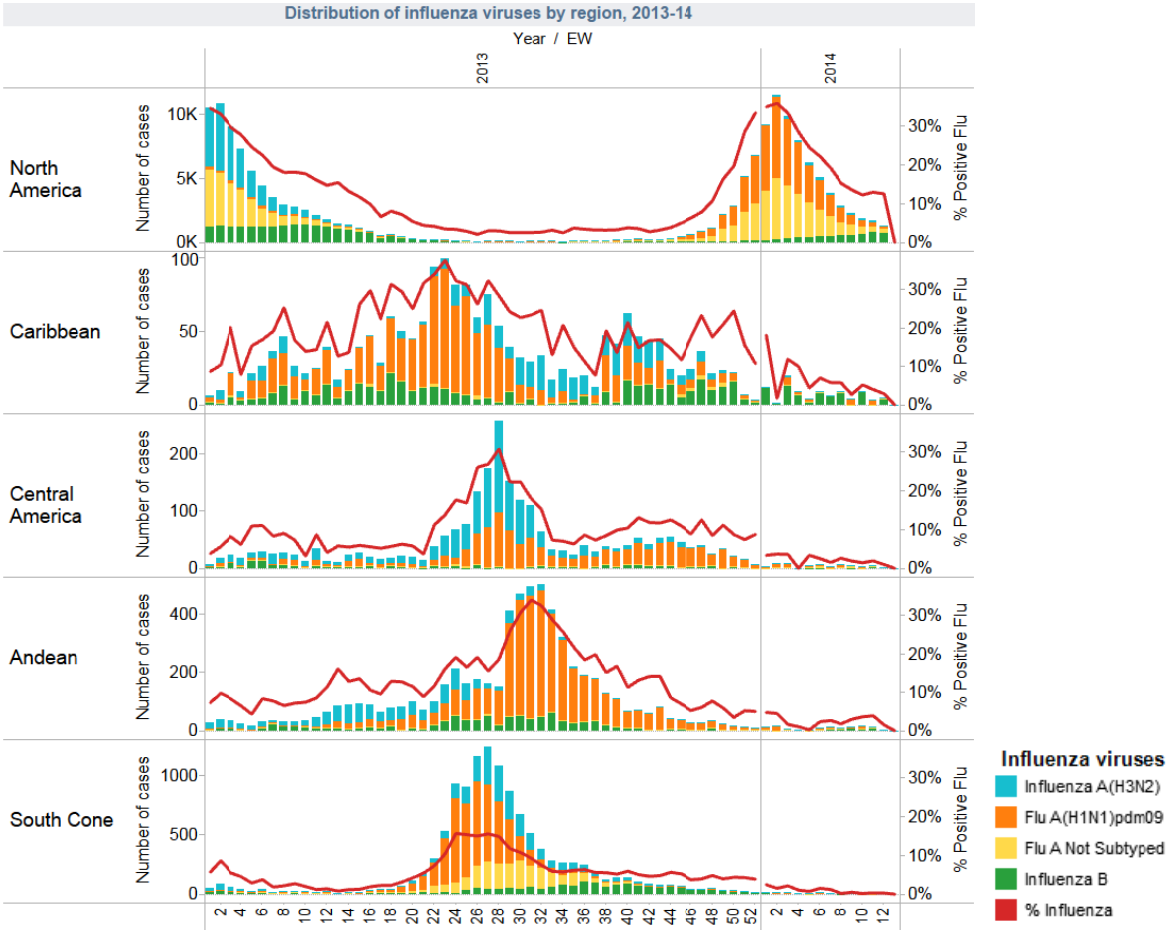
PAHO interactive influenza data: http://ais.paho.org/phip/viz/ed_flu.asp
Influenza Regional Reports: www.paho.org/influenzareports

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.

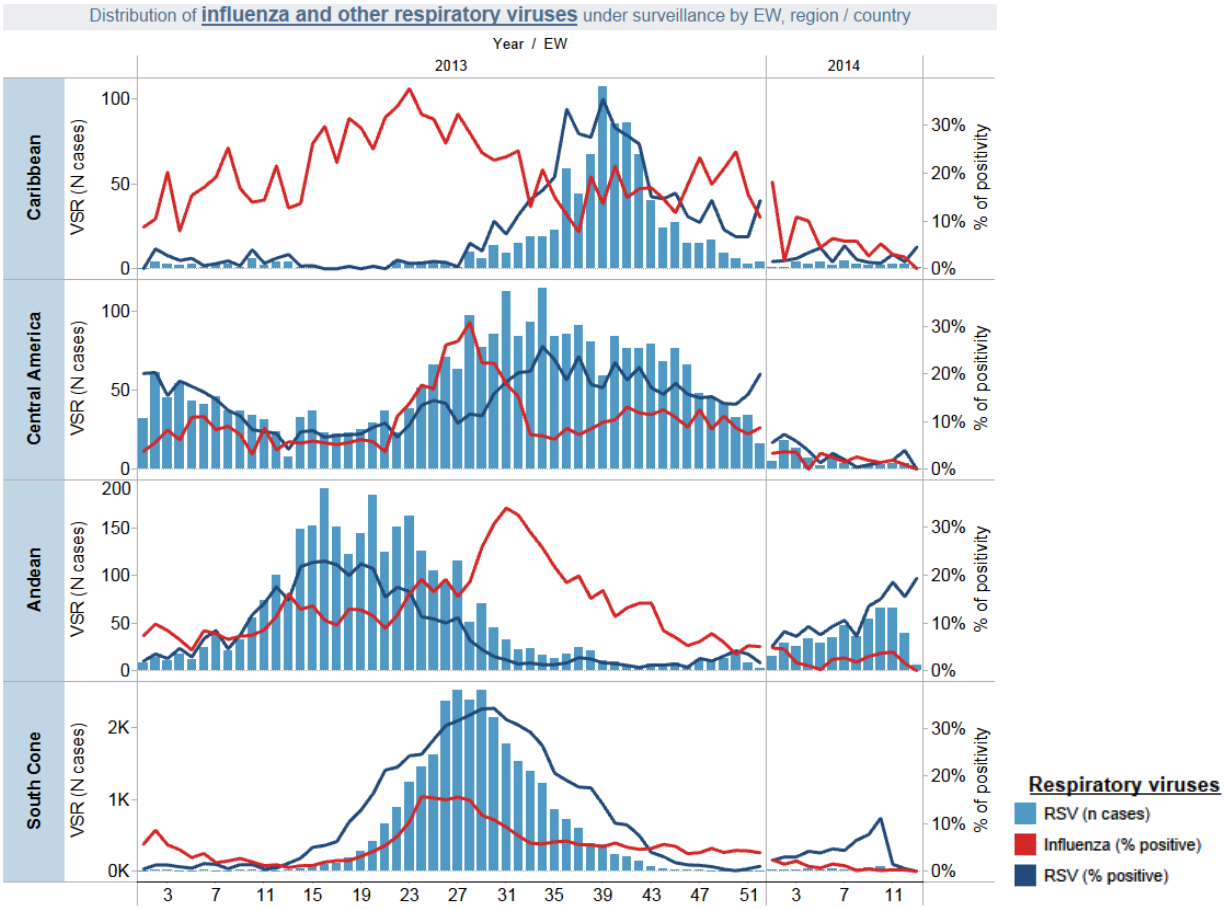
WEEKLY SUMMARY

- North America: Influenza activity continued to decrease in this sub-region. In the United States and Canada, the principal strain in circulation was influenza B, which increased progressively in recent weeks. In Mexico, low activity was observed, with co-circulation of A(H1N1)pdm09, A(H3N2) and influenza B. 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 remained low in the sub-region except in Guyana and Guadeloupe where influenza activity was above expected levels.
- South America – Andean Countries: Acute respiratory illness activity, and influenza and other respiratory virus activity remained low in the sub-region. Nonetheless, active RSV circulation was observed in Colombia, Ecuador and Peru.
- 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. A slight increase in RSV was observed in Argentina.

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:

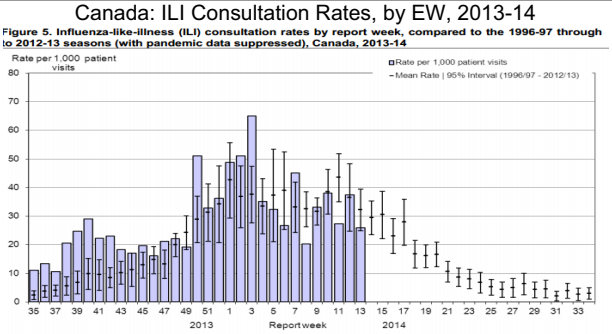
In Canada[1] during EW 13, the decrease in influenza activity was slowed by an increase in circulation of influenza B. The national influenza-like illness (ILI) consultation rate was 25.9 per 1,000 patient visits, a decrease compared to the previous week, and within expected levels. Since the beginning of the 2013-14 influenza season, 3,856 influenza-associated hospitalizations have been reported in participating regions, of which 89% were associated with influenza A. Although during this season A(N1H1)pdm09 predominated, which most affected adults from 20-64; influenza B is having a greater impact in adults ≥64 and Young people from 5 to 19 years of age. To date this season, 215 deaths have been reported most of which were associated with influenza A. The highest proportion of these deaths (46.9%) occurred among adults 20-64

[1] Canada: FluWatch Report. EW 13. Available at http://www.phac-aspc.gc.ca/fluwatch/

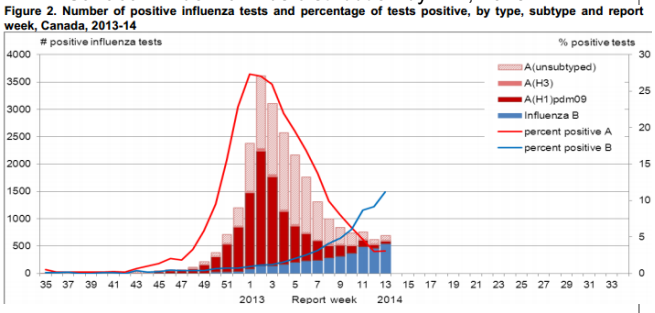
years of age, followed by adults ≥65 years (44.2%). Based on laboratory data for EW 13, the overall percentage of positive influenza tests was 14.2%(N=692), a slight increase compared to the previous week. Among the positive tests, 79% were influenza B and 21% were influenza A, of which 26.2% were identified as influenza A(H1N1)pdm09, 9.8% as A(H3N2) and 63.9% as A not subtyped). Among other circulating respiratory viruses, RSV continued to predominate.

Canada

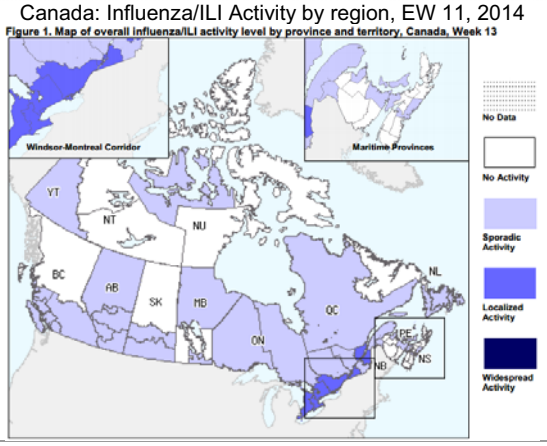
Canada: ILI Consultation Rates, by EW, 2013-14



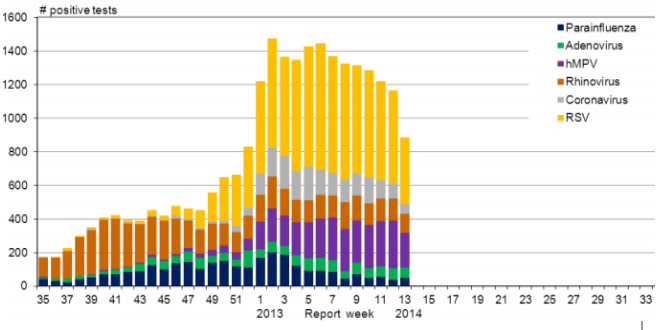
Canada: Influenza virus distribution by EW, 2013-14



Canada: Influenza/ILI Activity by region, EW 11, 2014



Canada: Respiratory virus distribution by EW, 2013-14

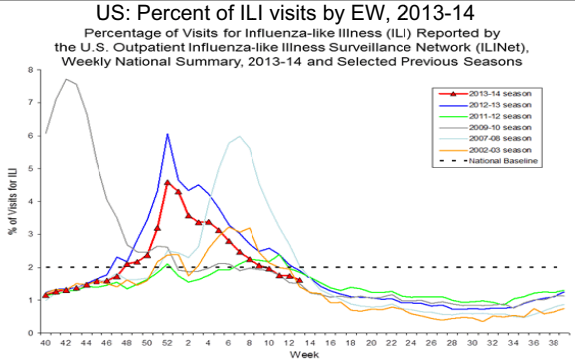


In the United States[2] during EW 13, influenza activity continued to decrease. The national proportion of outpatient visits for influenza-like illness (ILI) was 1.6%, a decrease compared to the previous week and below the national baseline. Just two of the 10 regions reported ILI activity above their region-specific baseline levels. The proportion of deaths attributed to pneumonia and influenza for EW 13 (6.5%) was similar to the previous EW but was below the epidemic threshold (7.3%). A total of 82 influenza-associated pediatric deaths have been reported this season, of which three were reported during EW 13. Since October 1, 2013, 8,587 laboratory confirmed influenza-associated hospitalizations have been reported (rate: 31.7 per 100,000 population) and the majority (92.6%) 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 13, 5,206 samples were analyzed, of which 12.5% were positive for influenza. Among the positive samples, 48.3% were influenza A (21.6% A(H1N1)pdm09, 28.6% A(H3) and 49.8% not subtyped) and 51.7% were influenza B. Based on antiviral resistance testing, 1.2% (55/4,714) of the influenza A(H1N1)pdm09 samples tested were oseltamivir resistant.

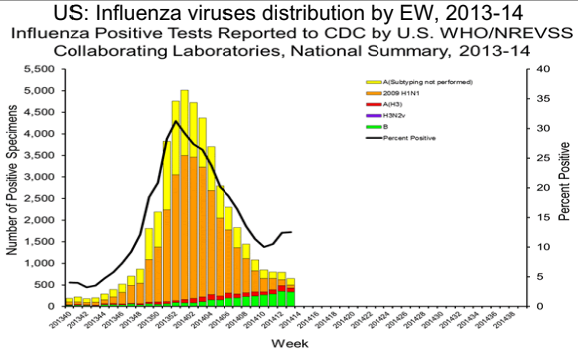
[2] USA: CDC FluView report. EW 13. Available at: http://www.cdc.gov/flu/weekly/

United States

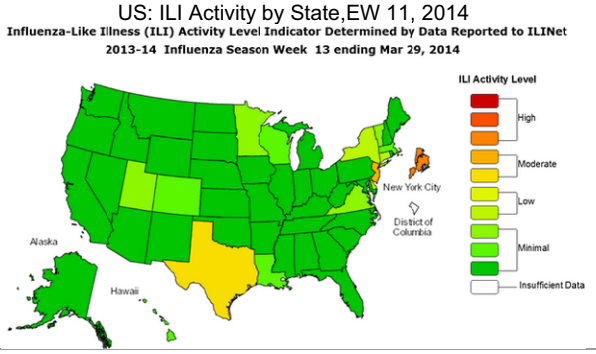
US: Percent of ILI visits by EW, 2013-14



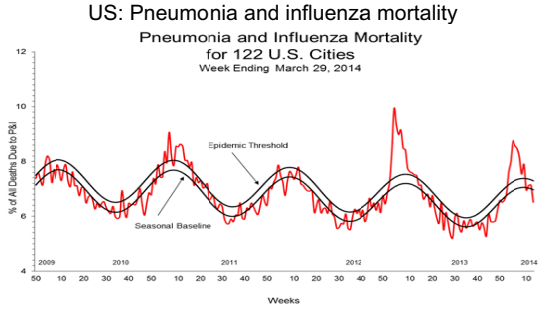
US: Influenza viruses distribution by EW, 2013-14



US: ILI Activity by State,EW 11, 2014



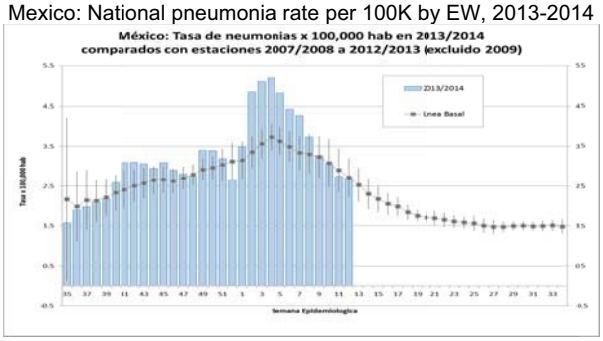
US: Pneumonia and influenza mortality



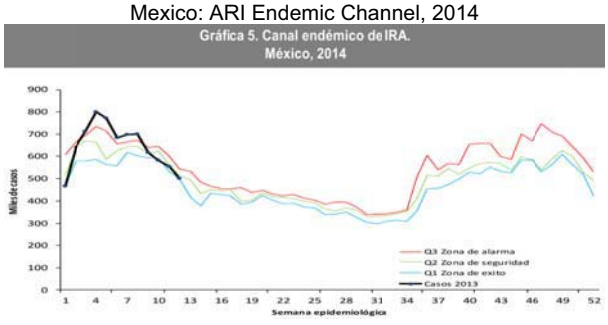
In Mexico[3] during EW 13, influenza activity continued to decrease. The pneumonia rate (2.7 per 100,000 inhabitants in EW 12) has been decreasing since EW 6 and was within the expected level for this time of year. ARI activity decreased from the previous week and was within the success zone of the endemic channel. Regionally, the highest levels of ARI activity were reported in Aguascalientes, Sinaloa and Zacatecas, while the highest levels of pneumonia activity were reported in Chihuahua, Nuevo Leon and Sonora. Nationally, through March 27, 2014, the proportion of ILI/SARI-associated medical visits was 1.0%, a decrease compared to the previous EW. The entities with the greatest proportion of influenza sentinel site ILI/SARI consultancies were in Oaxaca (3.4%), Tlaxcala (3.1%), Veracruz (2.6%), Guerrero (2.3%) and Morelos (2.3%). During this same period, 704 influenza-associated deaths were reported, of which 91.1% were associated with influenza A(H1N1)pdm09. Based on laboratory data, 429 samples were processed during EW 12-13, of which 13.9% were positive for influenza. Among the positive samples, 70% corresponded with influenza A (55% A(H1H1)pdm09, 33.3% A(H3N2) and 0.5% A not subtyped) and 30% with influenza B.

Mexico

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

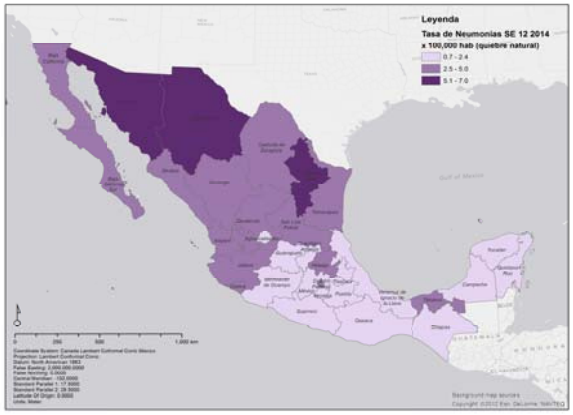


Mexico: ARI Endemic Channel, 2014



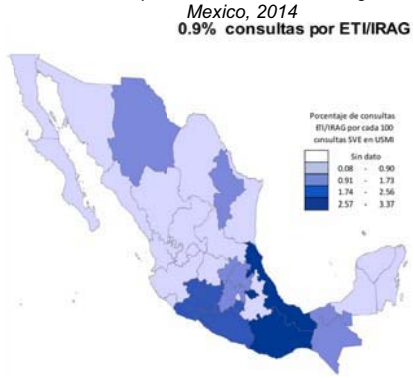
[3] México. Dirección General de Epidemiología. Información epidemiológica. Informes Epidemiológicos Semanales 2014.

Mexico: Pneumonia Rates by State, EW 12

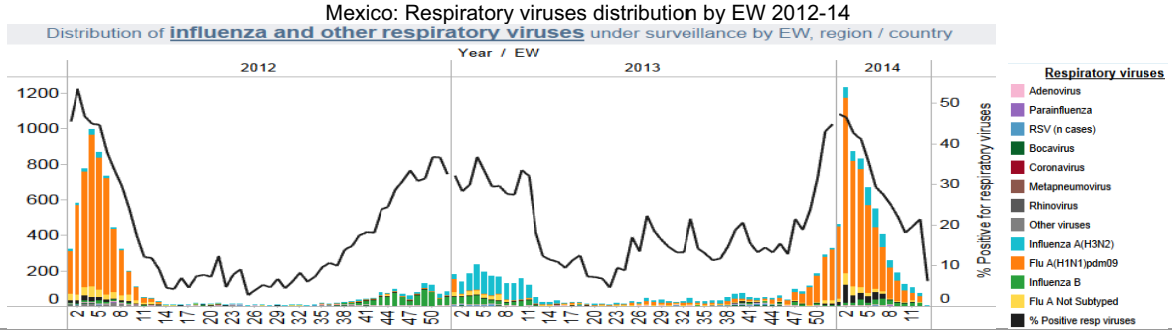


Proportion of ILI/SARI in centinel sites by state. 2014. EW 13

Proporción de consultas por ETI/IRAG en USMI según entidad deferativa, Mexico, 2014



Mexico: Respiratory viruses distribution by EW 2012-14

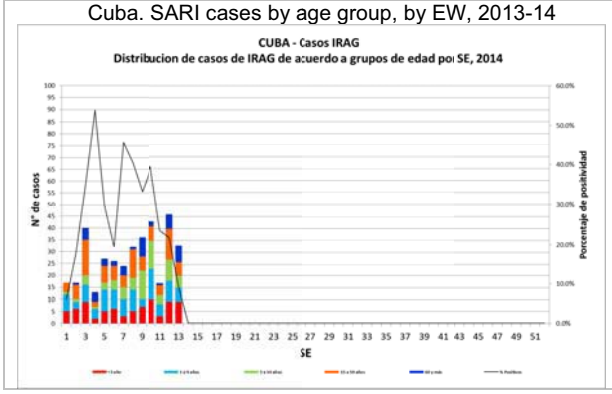


Caribbean

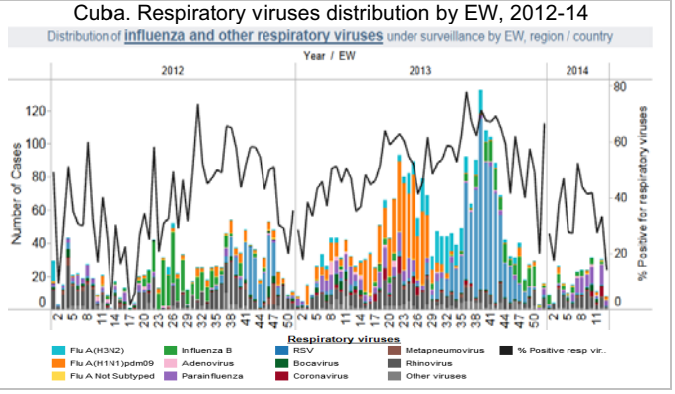
In Cuba during EW 13, the number of SARI-associated hospitalizations (n=33) decreased compared to the previous week. Children less than one year of age comprised the largest proportion of these cases. Three SARI-associated deaths were reported during this period, but all were negative for analyzed respiratory viruses. According to national laboratory data for EW 10-13, 261 samples were analyzed, of which 29.2% were positive for a respiratory virus and 4.3% were positive for influenza. Among the positive samples, parainfluenza (32.5%) and rhinovirus (20.0%) predominated.

Cuba

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



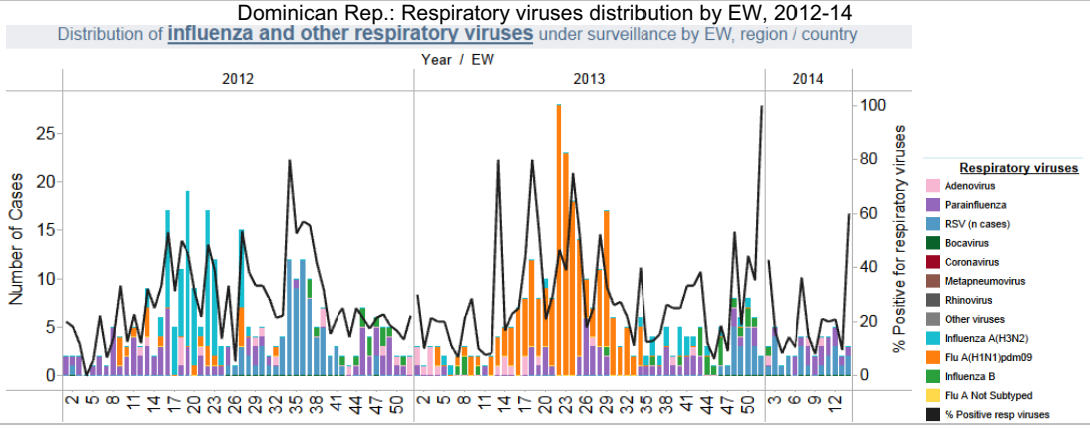
Cuba. Respiratory viruses distribution by EW, 2012-14



In the Dominican Republic, during EW 11-14, 70 samples were analyzed, of which 27.6% were positive for a respiratory virus and none was positive for influenza. Among the positive samples, RSV (57.1%) and parainfluenza (42.8%) predominated.

Dominican Republic

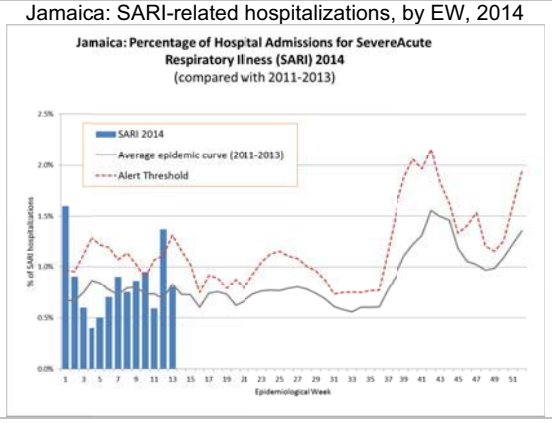
Dominican Rep.: Respiratory viruses distribution by EW, 2012-14



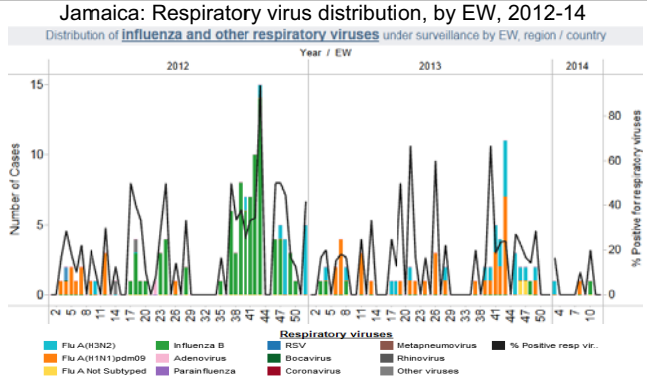
In Jamaica, based on sentinel surveillance data for EW 13, the proportions of ARI-associated consultations (3.6%) decreased slightly (0.5%) compared to the previous week. Meanwhile, the proportion of SARI-associated hospitalizations (0.8%) decreased 0.57% compared to the previous week, and falls within the expected levels for this time of year. No SARI-associated deaths were reported during EW 13. Based on laboratory data for EW 11-14, 5 samples were analyzed and all were negative for respiratory viruses.

Jamaica

Jamaica: SARI-related hospitalizations, by EW, 2014



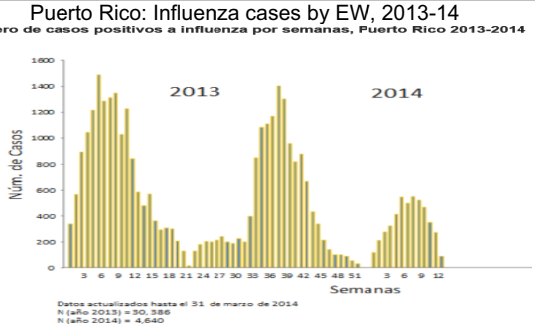
Jamaica: Respiratory virus distribution, by EW, 2012-14



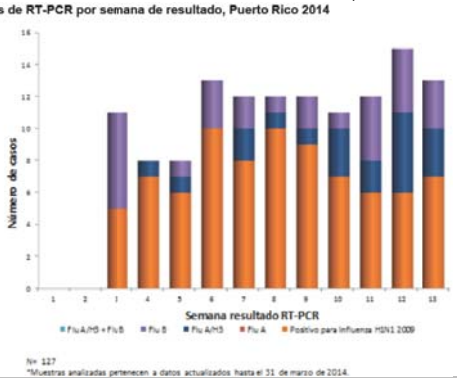
In Puerto Rico[4] during EW 13, the number of influenza cases (n=91) remained low. Of these, 61 cases were associated with influenza A and 30 with influenza B. Since the beginning of 2014, 4,640 influenza cases have been reported (61.9% influenza A and 37.4% influenza B) and persons aged 0-19 years accounted for 47% of those cases. During this same period, 249 influenza-associated hospitalizations and 3 influenza-associated deaths were reported.

Puerto Rico

Puerto Rico: Influenza cases by EW, 2013-14



Puerto Rico: Influenza virus distribution, 2014



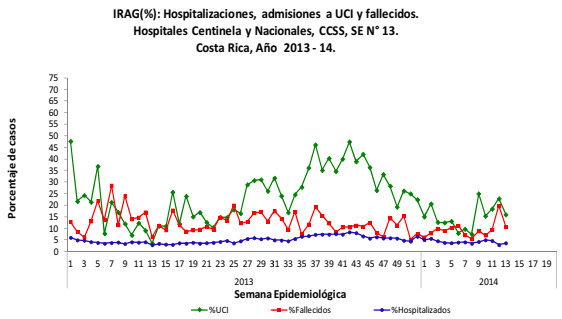
Central America

[4] Puerto Rico. Departamento de Salud. Vigilancia de influenza de Puerto Rico SE 13

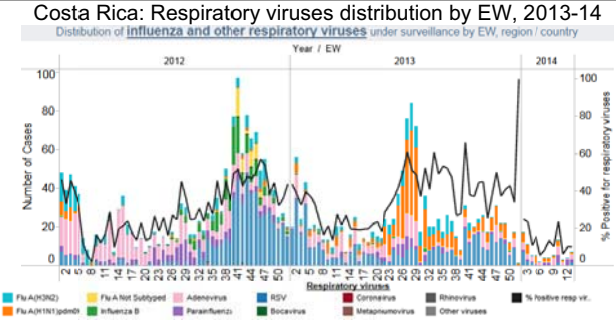
In Costa Rica, during EW 13, the percentage of SARI hospitalizations (4%), SARI ICU admissions (165%) and SARI deaths (11%) remained low. Based on national laboratory data from EW 10-13, 217 samples were analyzed, of which 12.3% were positive for a respiratory virus and 2.2% were positive for influenza. Among the positive influenza samples, 100% were influenza A(H1N1)pdm09. Among other respiratory viruses, adenovirus (40.7% of positive samples) and parainfluenza (33%) predominated.

Costa Rica

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

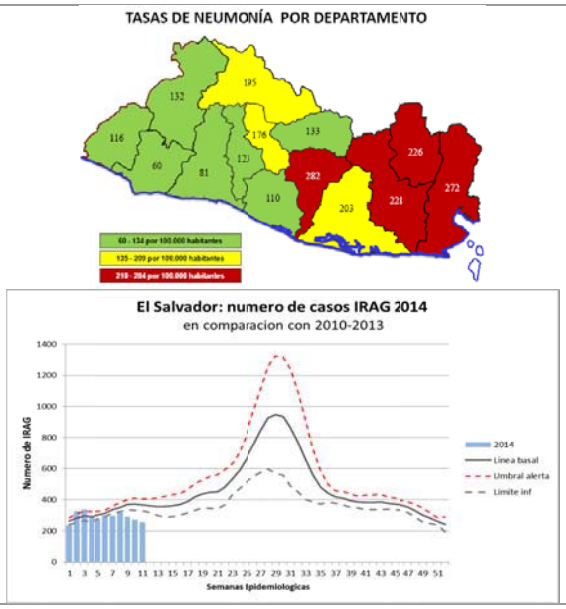


Costa Rica: Respiratory viruses distribution by EW, 2013-14

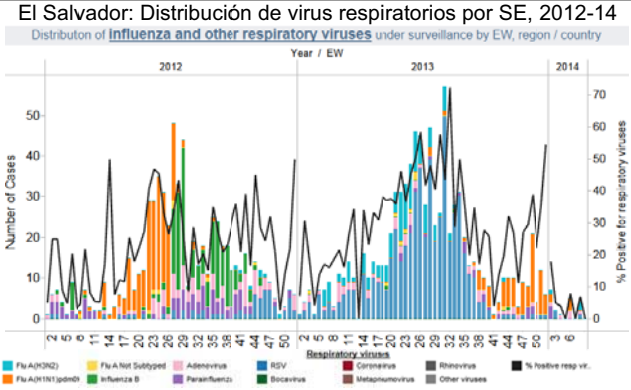


In El Salvador, the number of ARI and pneumonia cases observed in 2014 through EW 12 was lower (3.4% and 2.2%, respectively) than that of 2013. The proportions of SARI-associated hospitalizations (5.3%), ICU admissions (7.1%) and deaths (4.5%) remained low and within the expected levels for this time of year.

El Salvador



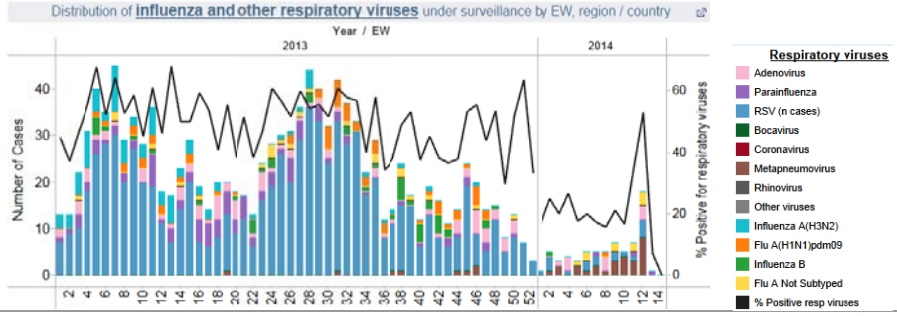
El Salvador: Distribución de virus respiratorios por SE, 2012-14



In Guatemala, based on laboratory data from EW 11-14, 70 samples were analyzed, of which 23.8% were positive for a respiratory virus and 4.7% were positive for influenza. Among the positive influenza samples, 100% were influenza A (not subtyped). Among other respiratory viruses, human metapneumovirus (42.3% of positive samples) and RSV (19.2%) predominated.

Guatemala

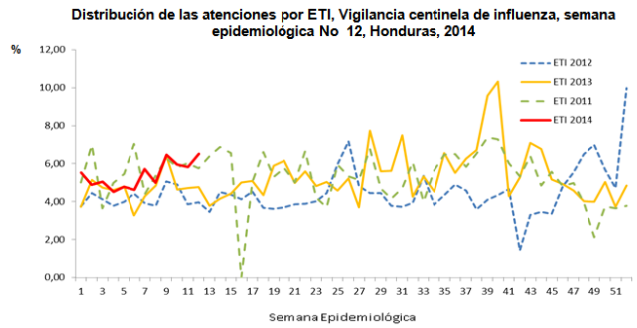
Guatemala: Respiratory viruses distribution by EW, 2013-14



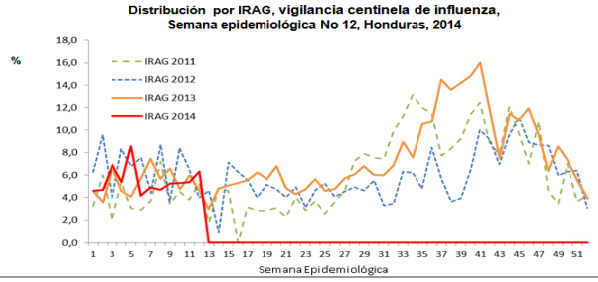
In Honduras[5], during EW 12 and according to sentinel surveillance data, the percentages of ILI consultations (6.5%), SARI-associated hospitalizations (6.31%) and SARI-associated deaths (6.67%) remained low. Based on national laboratory data from EW 09-12, 99 samples were analyzed, of which only 4% were positive for respiratory virus (adenovirus and RSV) and 1% for influenza (influenza B).

Honduras

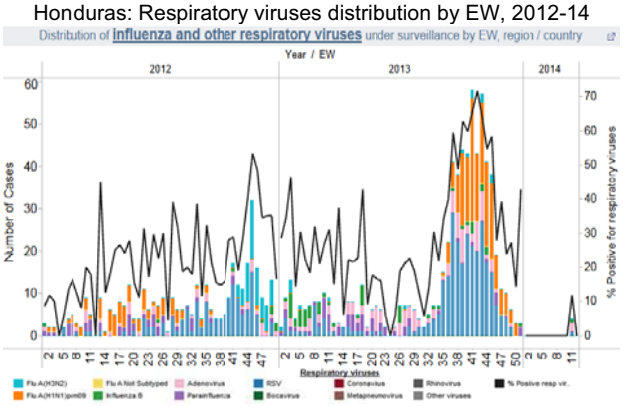
Honduras: consultas de ETI por SE, 2011-14



Honduras: casos IRAG (hosp, UCI y fallecidos) por SE, ,2014



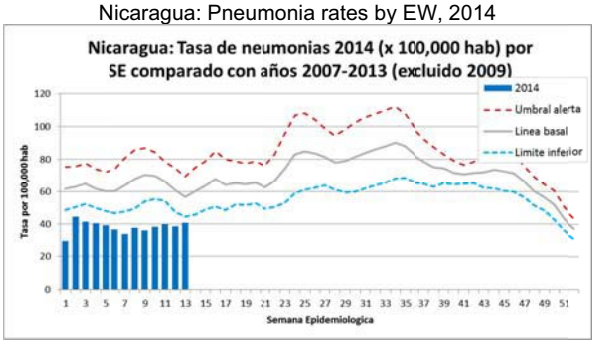
Honduras: Respiratory viruses distribution by EW, 2012-14



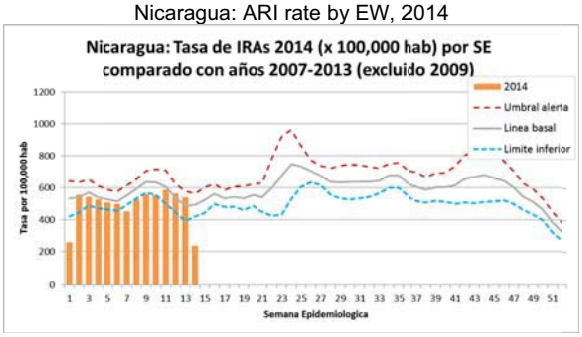
In Nicaragua, during EW 13, the national rates of pneumonia and ARI were low and within expected levels. According to national laboratory data from EW 9-12, 241 samples were analyzed of which 1.2% were positive for a respiratory virus and 0.8% were positive for influenza. Among the positive samples, influenza A(H1N1)pdm09, influenza B and parainfluenza were detected.

Nicaragua

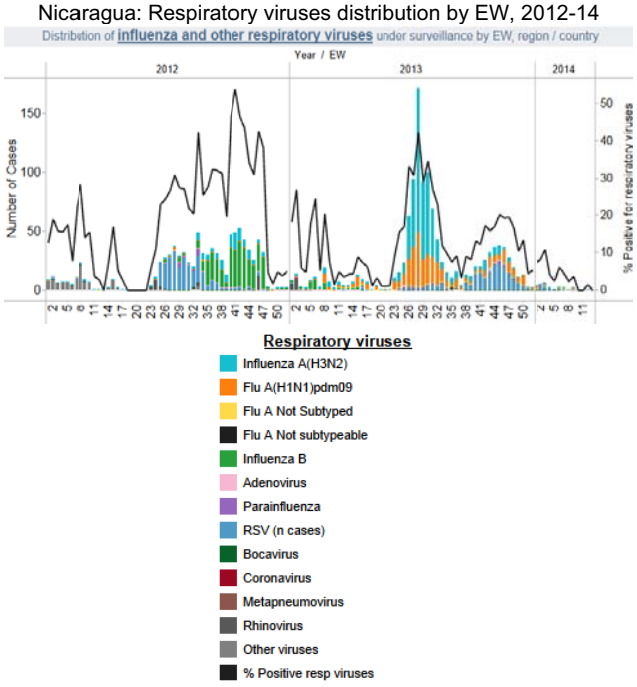
Nicaragua: Pneumonia rates by EW, 2014



Nicaragua: ARI rate by EW, 2014



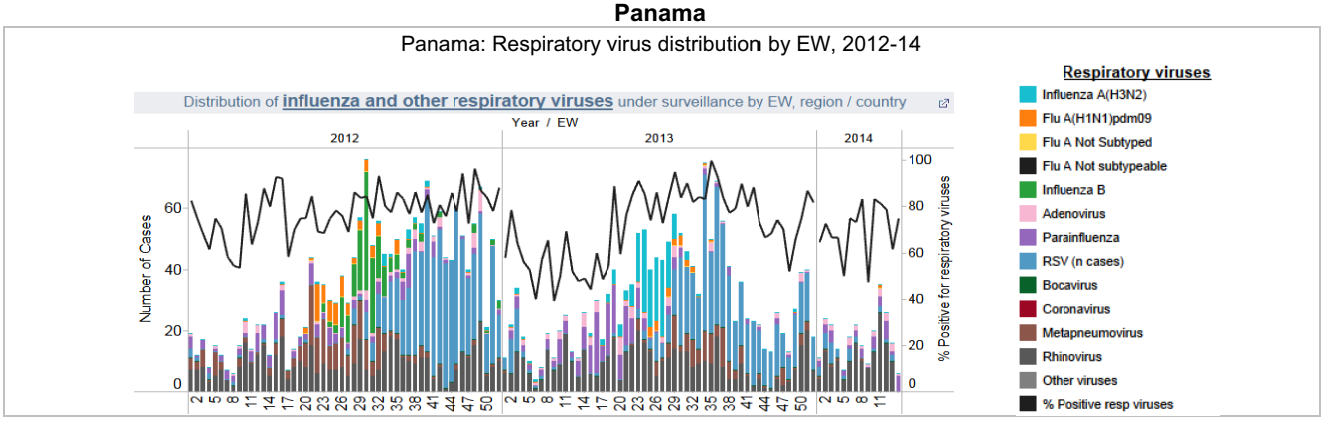
Nicaragua: Respiratory viruses distribution by EW, 2012-14



[5] Honduras. Boletín de la vigilancia de influenza y otros virus respiratorios en Honduras. Secretaría de Salud. Dirección General de Vigilancia de la Salud. SE 12

In Panama, based on national laboratory data from EW 10-13, 108 samples were analyzed, of which 80.6% were positive for a respiratory virus and only 1% were positive for influenza. Among the positive samples, rhinovirus (67.8%) predominated.

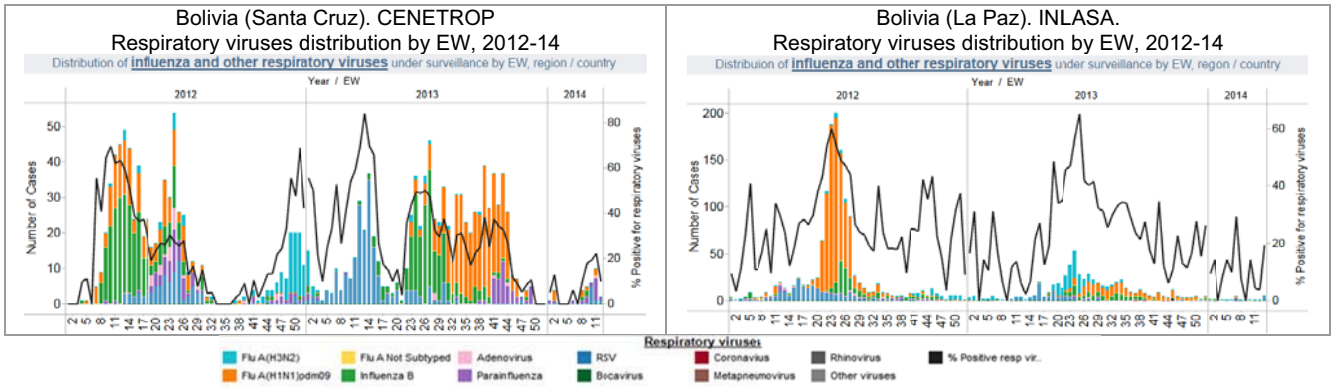
Panama



South America – Andean countries

In Bolivia, according to laboratory data from CENETROP (Santa Cruz), 124 samples were analyzed between EW 9-12, of which 18.5% were positive to some respiratory virus and 4% were positive for influenza. Among the positive samples, parainfluenza (43.5%) and RSV (30.4%) predominated; and among those positive for influenza, a co-circulation of influenza A(H1N1)pdm09 and influenza B. According to the National Laboratory in La Paz (INLASA), 86 samples were analyzed between EW 10-13, of which 10.5% were positive for respiratory viruses and 1.2% were positive for influenza. Among the positive samples, VSR and influenza A(H1N1)pdm09 were detected.

Bolivia

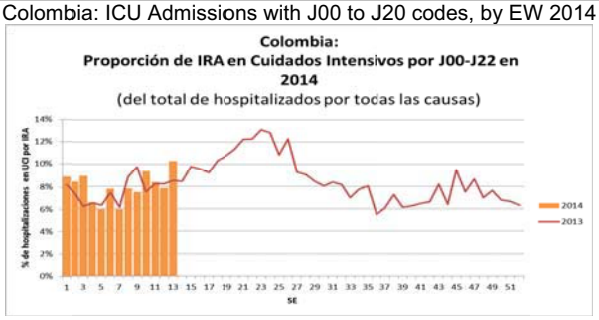


In Colombia, an increase in RSV circulation was observed. Nationally during EW 13, the proportions of SARI hospitalizations (12.3%), ICU admissions (10.3%), and outpatient and urgent visits associated with SARI according to ICD-10 codes (J00 to J22) (9.8%) increased in recent weeks. Based on INS laboratory data from EW 10-13, 724 samples were analyzed, of which 32.1% were positive for a respiratory virus and 4.1% were positive for influenza. Among the positive influenza samples (n=30), 30% were influenza A (89% A(H1N1)pdm09) and 70% were influenza B. Among other respiratory viruses, there has been increasing positivity with a predominance of RSV (60% of positive samples) and parainfluenza (20%).

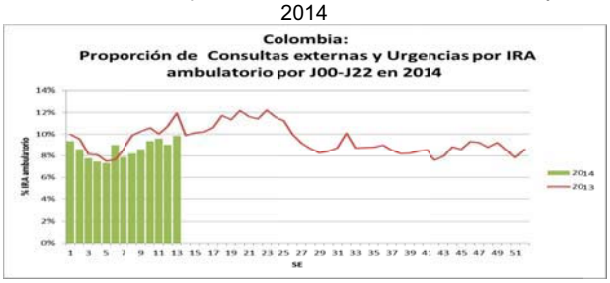
Colombia

Colombia: Percent Hospitalizations with J00 to J20 codes, by EW 2014

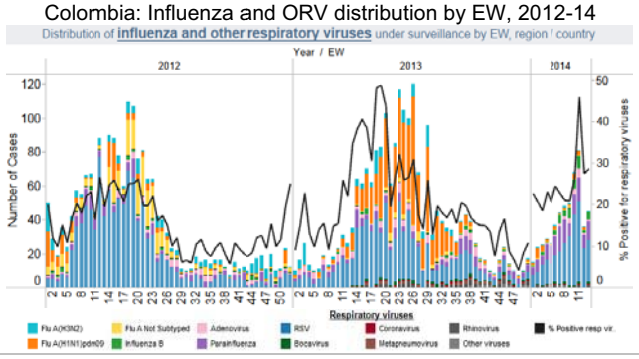
Colombia: ICU Admissions with J00 to J20 codes, by EW 2014



Colombia: IRA Outpatient Visits with J00 to J20 codes, by EW 2014



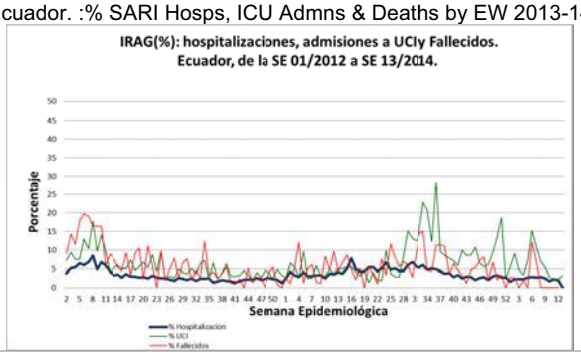
Colombia: Influenza and ORV distribution by EW, 2012-14



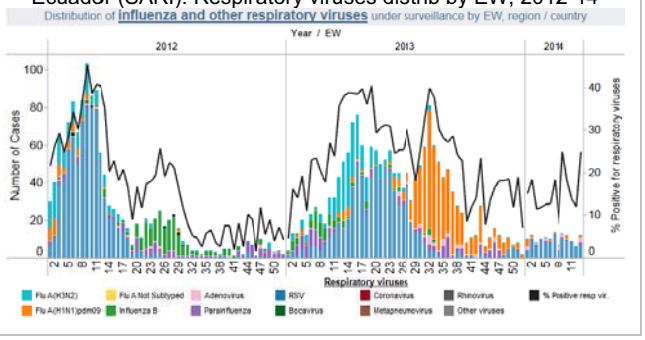
In Ecuador, respiratory virus activity remained low; nonetheless, a stable RSV circulation has been observed in 2014. During EW 13, the proportions of SARI-associated ICU admissions (3.2%) increased slightly compared to the previous week; no SARI-associated deaths were reported. Based on national reference laboratory data from EW 10-13, 228 SARI samples were analyzed, of which 17.3% were positive for a respiratory virus and 1.3% were positive for influenza. Among the positive samples, RSV predominated (79.5%).

Ecuador

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



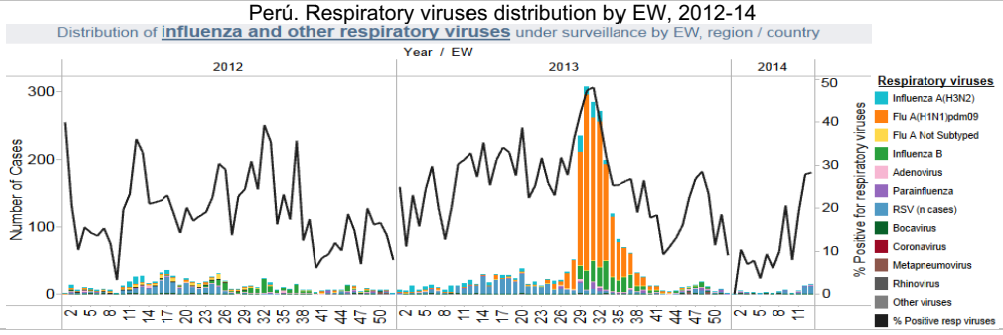
Ecuador (SARI): Respiratory viruses distrib by EW, 2012-14



In Peru, based on national laboratory data from EW 10-13, 147 samples were analyzed, of which 20.9% were positive for a respiratory virus and 2.4% were positive for influenza. Among the positive samples, RSV (70.5%) predominated.

Peru

Perú. Respiratory viruses distribution by EW, 2012-14

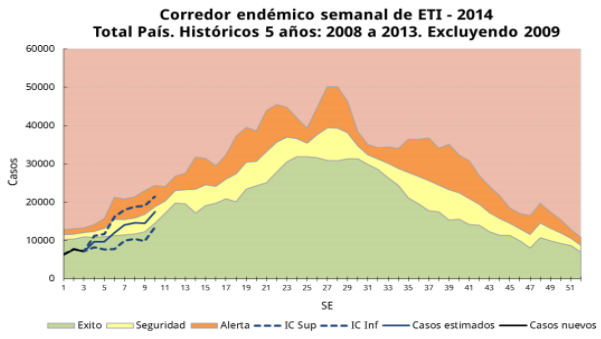


South America – South Cone and Brazil

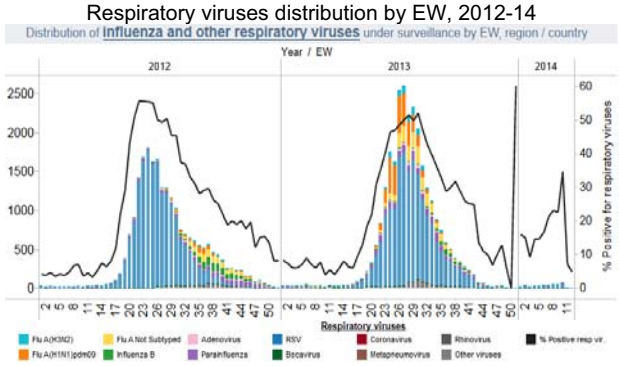
In Argentina[6], according to reports and calculated estimations, the national activity of ILI, pneumonia and bronchiolitis in children <2 years old, during EW 10 was within the security zone of the endemic channel. The proportion of SARI-associated hospitalizations was within the security zone of the endemic channel, but was 13% lower than the levels seen last year. According to laboratory data, 510 samples were processed during EW 12-13, of which 17.5% were positive for respiratory viruses and 0.2% were positive for influenza. Among the positive samples, RSV (79.8%) predominated, followed by parainfluenza (11%) and adenovirus (6.7%).

Argentina

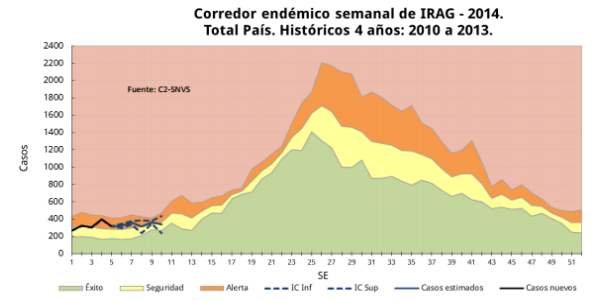
Argentina. ILI cases. Endemic Channel, 2014



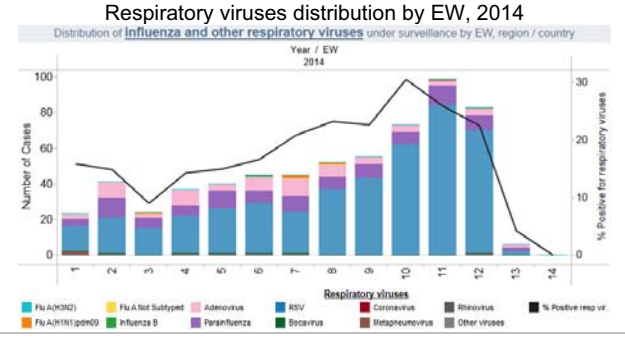
Respiratory viruses distribution by EW, 2012-14



Argentina. SARI cases. Endemic Channel, 2014



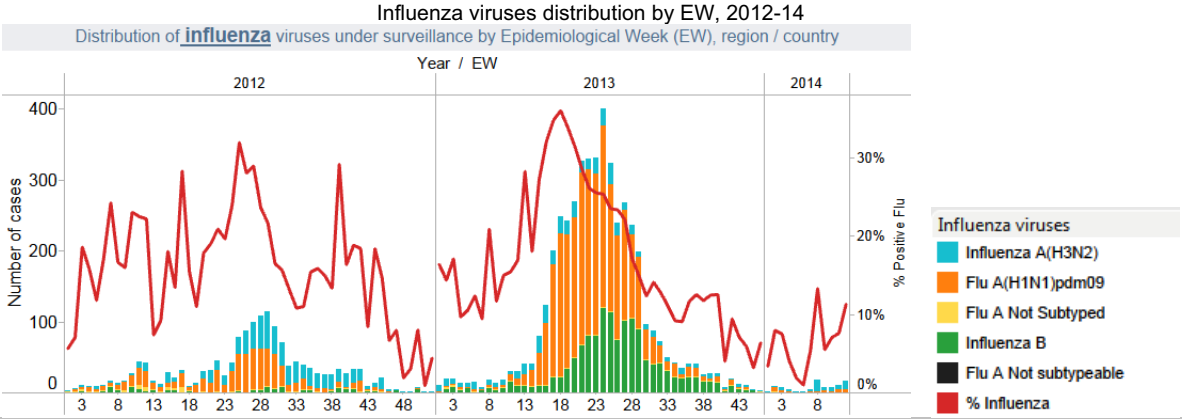
Respiratory viruses distribution by EW, 2014



In Brazil, based on laboratory data from EW 12-13, 159 samples were processed, of which 16.3% were positive for influenza, which shows a slight increase in recent weeks. Among the influenza-positive samples, a co-circulation of A(H3N2) (73%) and A(H1N1)pdm09 (27%) was observed.

Brazil

Influenza viruses distribution by EW, 2012-14



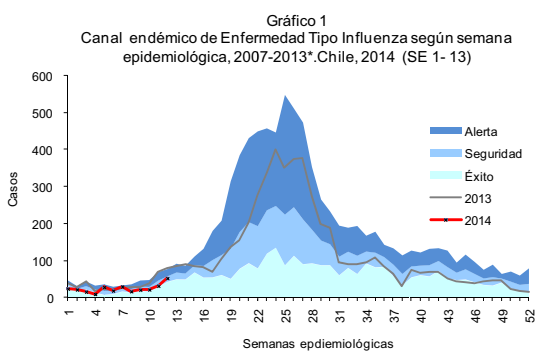
In Chile[7], ILI activity has increased in recent weeks, but remained within expected levels during EW 13 (rate: 3.5 per 100,000 inhabitants). ILI consultations in relation to total urgent hospital consultations remained lower than 0.5% and below those of the 2013 period. In 2014, up to EW 13, based on sentinel SARI surveillance 286 SARI cases were analyzed with 9.4% positive for respiratory viruses (27 cases) and low rates of

[6] Argentina. Boletin integrado de vigilancia. SE 12.
[7] Chile. Informe de situación. EW 13. Available at: http://epi.minsal.cl/

influenza (3 influenza B and 3 influenza A). Based on laboratory data from EW 12-13, 973 samples were analyzed, of which 3.1% were positive for a respiratory virus and 0.1% were positive for influenza. Among the positive samples, adenovirus (70%) and RSV (13%) predominated.

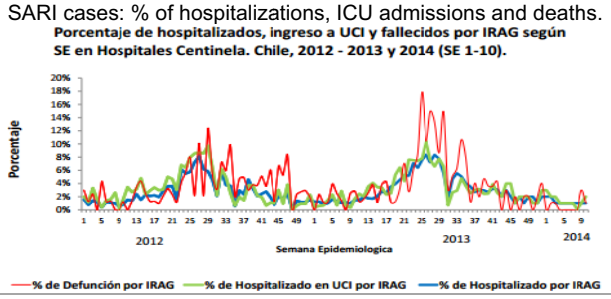
Chile

Chile. ILI Endemic Channel, 2014

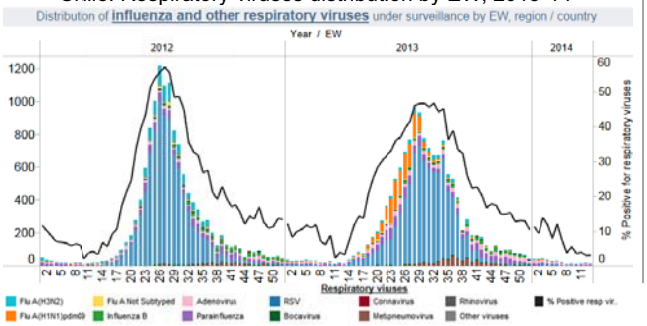


Fuente: Vigilancia Centinela ETI. EPIDEMIOLOGIA-MINSAL * Se excluye año 2009-2010 por corresponder a años epidémicos

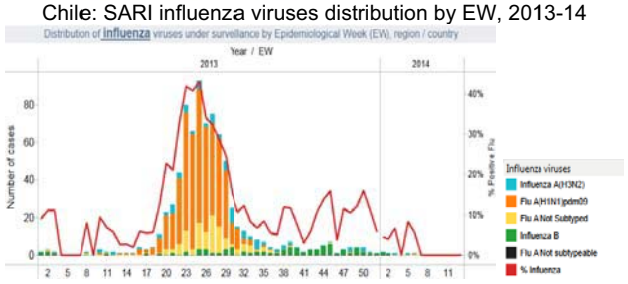
SARI cases: % of hospitalizations, ICU admissions and deaths.



Chile. Respiratory viruses distribution by EW, 2013-14



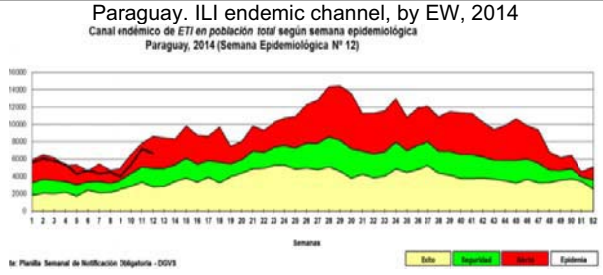
Chile: SARI influenza viruses distribution by EW, 2013-14



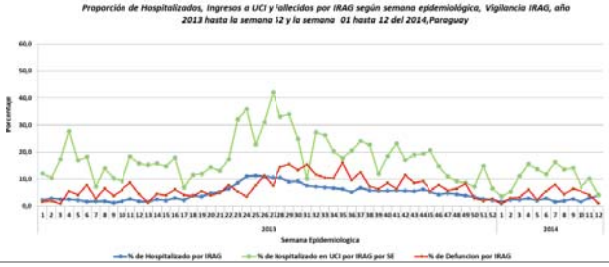
In Paraguay[8] during EW 12, the ILI consultation rate (99.9 per 100,000 inhabitants) increased from the previous EW and was within the alert zone of the endemic channel. The proportion of SARI-associated hospitalizations (3.8%) increased slightly, but remained within the expected range for this time of year. The most affected age groups were children <2 years of age and adults ≥60 years. Based on reference laboratory data, from EW 11-14, 197 samples were processed, of which 3.8% were positive for a respiratory virus. Among the positive samples, adenovirus, RSV, parainfluenza and influenza B were detected.

Paraguay

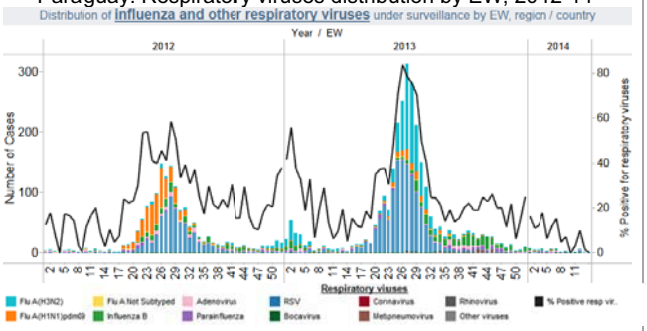
Paraguay. ILI endemic channel, by EW, 2014



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



Paraguay. Respiratory viruses distribution by EW, 2012-14

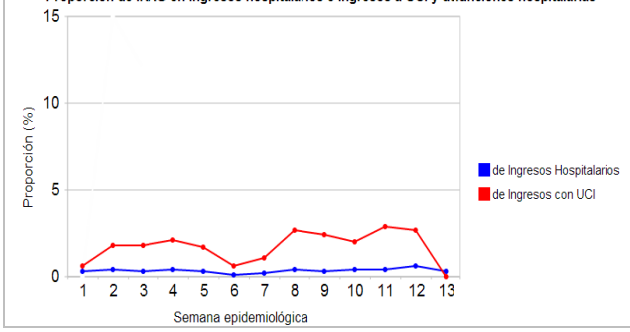


[8] Paraguay. Informe de situación. Vigilancia de ETI e IRAG. SE 13.

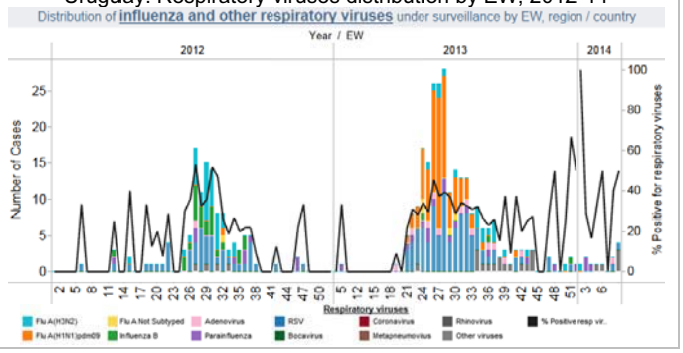
In Uruguay[9] during EW 13, the proportions of SARI-associated hospitalizations, ICU admissions and deaths remained at low levels. Based on laboratory data from EW 8-11, 13 samples were analyzed and of these, 6 (46.2%) were positive for a respiratory virus. Among the positive samples, RSV and adenovirus were detected.

Uruguay

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



Uruguay. Respiratory viruses distribution by EW, 2012-14



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