Regional Update EW 41, 2013

Influenza and other respiratory viruses
(October 22, 2013)

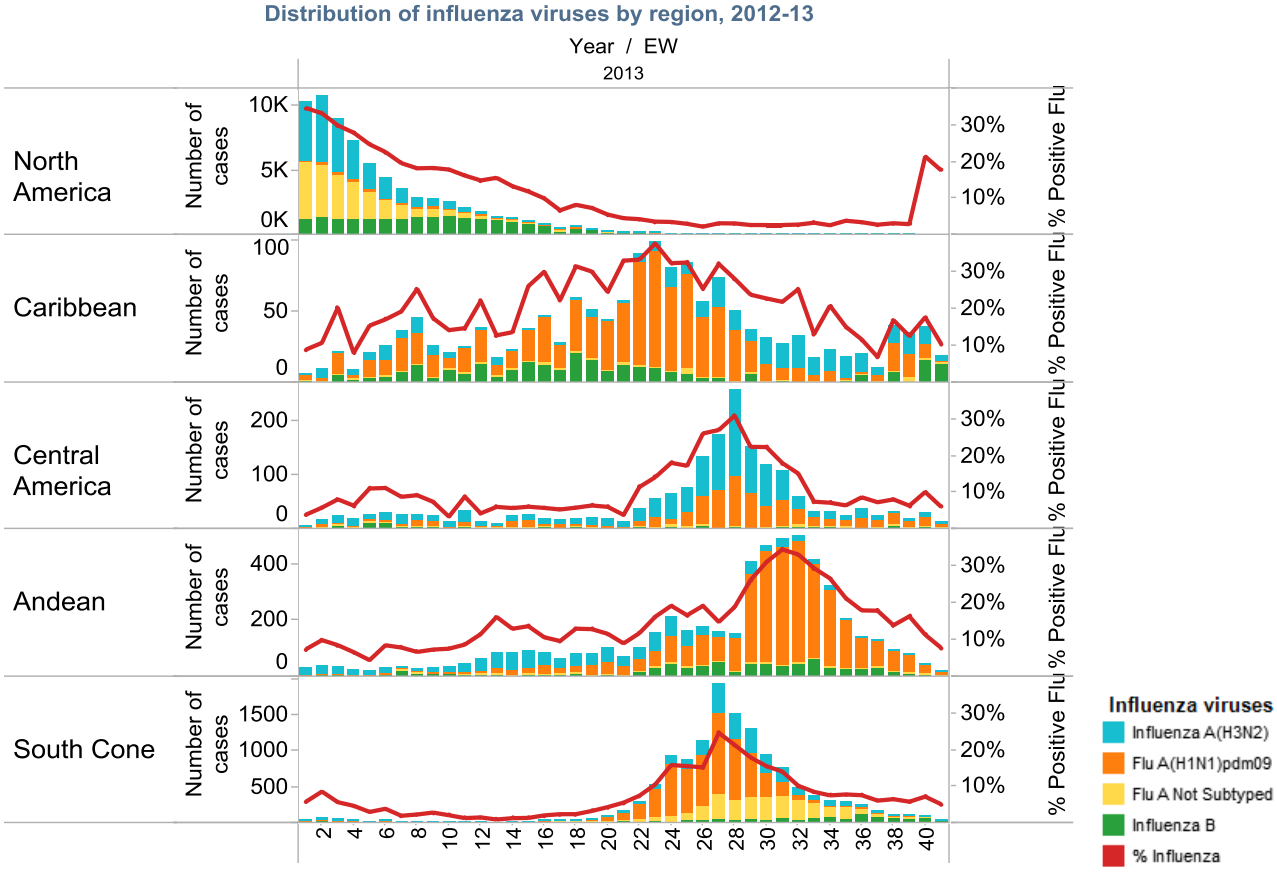
PAHO interactive influenza data: http://ais.paho.org/phip/viz/ed_flu.asp
Influenza Regional Reports: www.paho.org/reportesinfluenza

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.

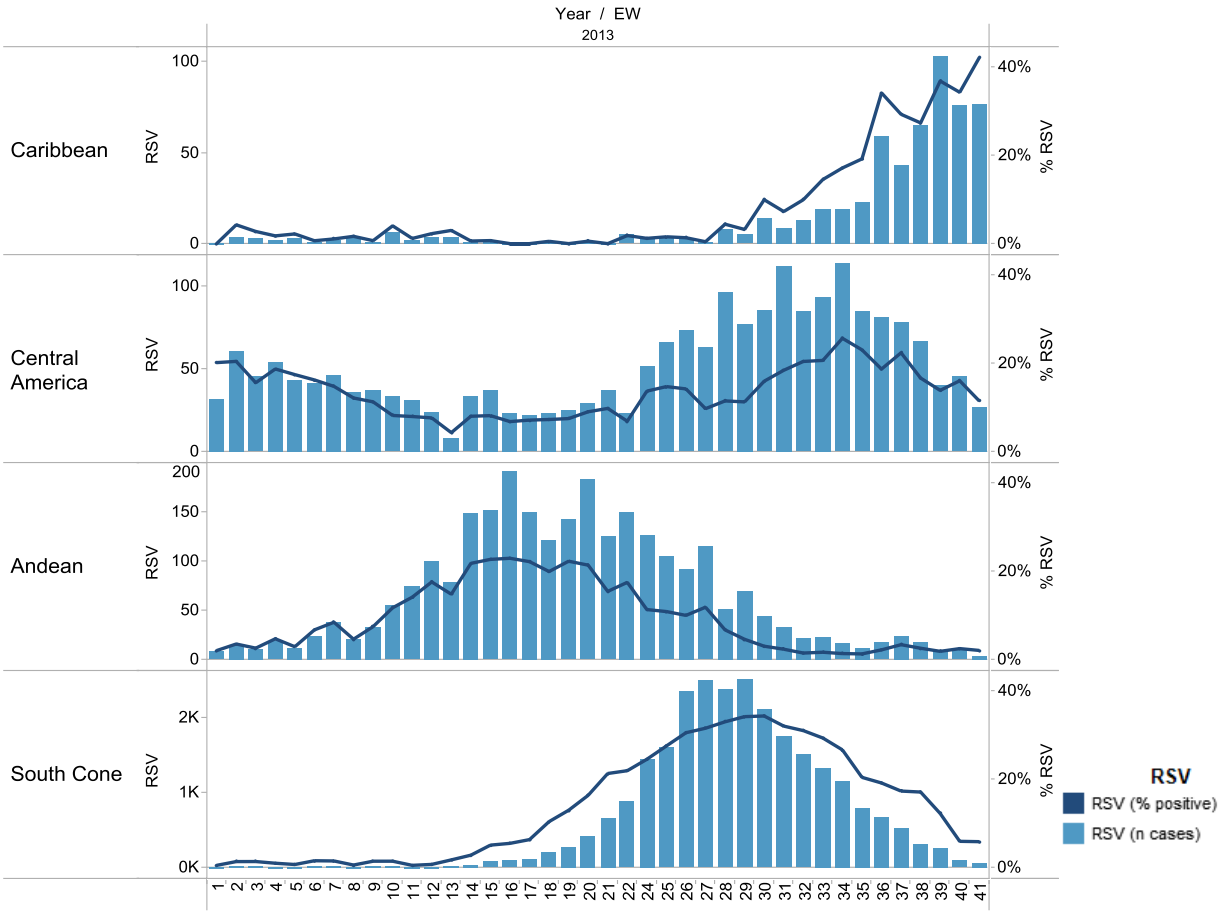
WEEKLY SUMMARY

- North America: Influenza activity in the United States and Canada remained low while some respiratory virus and influenza activity indicators in Mexico showed slight increasing trends. In the United States, the first variant influenza infection with A(H3N2v) for the 2013-14 was reported. The case had swine exposure in the week before illness onset, and has fully recovered. No human-to-human transmission has been reported.
- The Caribbean and Central America: An increased detection of influenza A (co-circulation of A(H1N1)pdm09 and A(H3N2)) was reported by some Caribbean islands and countries within Central America. RSV continued to predominate in Cuba, Costa Rica, Guatemala, El Salvador, Honduras, and Panama.
- South America – Andean Countries: After high influenza activity in July and August, acute respiratory virus activity continued a decreasing trend in most countries in the region except Bolivia (Santa Cruz) where influenza A(H1N1)pmd09 activity has been increasing.
- South America - South Cone and Brazil: Acute respiratory virus activity was within the expected level for this time of year in all countries except Paraguay where ILI activity continued to increase. Currently, co-circulation of influenza B and A(H3N2) continues in most of the countries of this region. RSV continued to predominate in some countries (Argentina and Chile), although it showed a decreasing trend.

Influenza circulation by region. 2013



Respiratory syncytial virus (RSV) circulation by region. 2013



ACRONYMS

ARI	Acute respiratory infection
CARPHA	Caribbean Public Health Agency
CENETROP	Centro de Enfermedades Tropicales (Santa Cruz, Bolivia)
EW	Epidemiological Week
ILI	Influenza-like illness
INLASA	Instituto Nacional de Laboratorios de Salud (La Paz, Bolivia)
INS	Instituto Nacional de Salud
ORV	Other respiratory viruses
SARI	Severe acute respiratory infection
SEDES	Servicio Departamental de Salud (Bolivia)
ICU	Intensive Care Unit
RSV	Respiratory Syncytial Virus

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

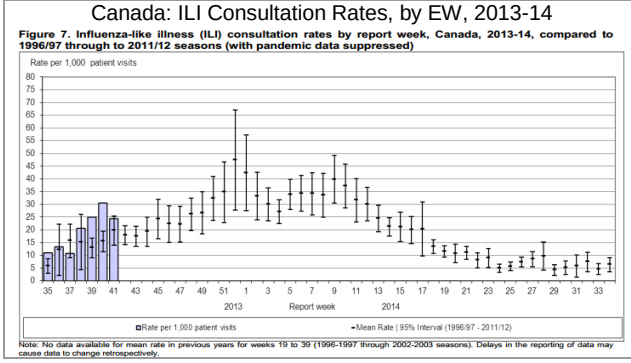
North America:

In Canada[1], during EW 41, influenza activity remained low. The national influenza-like-illness (ILI) consultation rate was 24.3 per 1,000 patient visits, a decrease from the previous week. No influenza-associated pediatric deaths were reported during this period. Based on laboratory data for EW 41, the overall percentage of positive influenza tests was 0.4%. Among the positive samples (N=7), 71.4% were influenza A (40.0% were A(H3N2) and 40.0% were not subtyped) and 28.6% were influenza B. Among other respiratory viruses, rhinovirus predominated (31.9% of positive tests), followed by parainfluenza (4.1%), adenovirus (1.7%), RSV (0.8%), coronavirus (0.3%) and human metapneumovirus (0.3%).

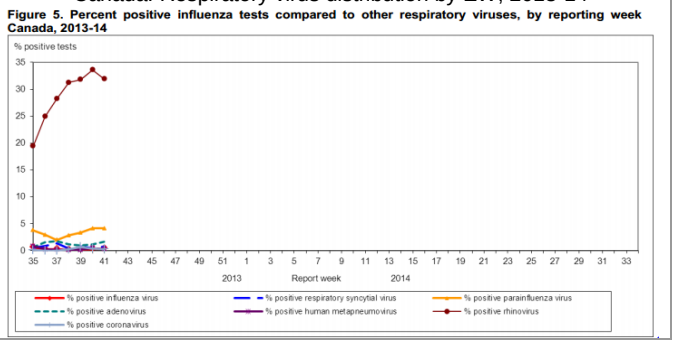
[1] Canada: FluWatch Report. EW 41. Available at http://www.phac-aspc.gc.ca/fluwatch/

Canada

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



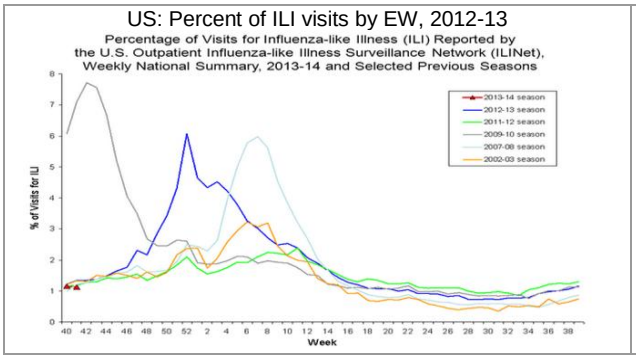
Canada: Respiratory virus distribution by EW, 2013-14



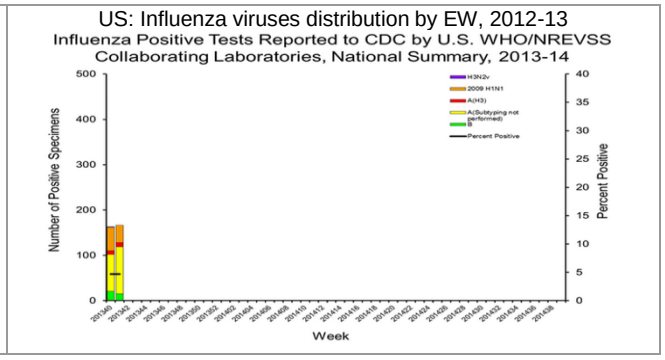
In the United States[2] during EW 41, influenza activity remained low with 1.1% of outpatient visits associated with ILI and 5.6% of deaths associated with pneumonia and influenza. No influenza-associated pediatric deaths were reported during this time. Based on laboratory data for EW 41, 3,534 samples were analyzed, of which 4.7% were positive for influenza. Among the positive samples (n=166), 91.0% were influenza A (of which 68.9% were not subtyped and 25.2% were A(H1N1)pdm09) and 9.0% were influenza B. One infection with an influenza A (H3N2) variant virus (H3N2v) was reported by Iowa during EW 41. This is the first H3N2v infection reported during 2013-14 influenza season. The case reported contact with swine in the week prior to illness onset, and has fully recovered. There have been no other cases identified among the patient's contacts.

United States

US: Percent of ILI visits by EW, 2012-13



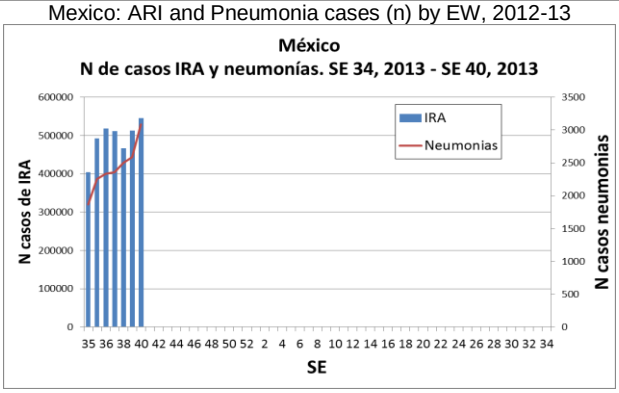
US: Influenza viruses distribution by EW, 2012-13



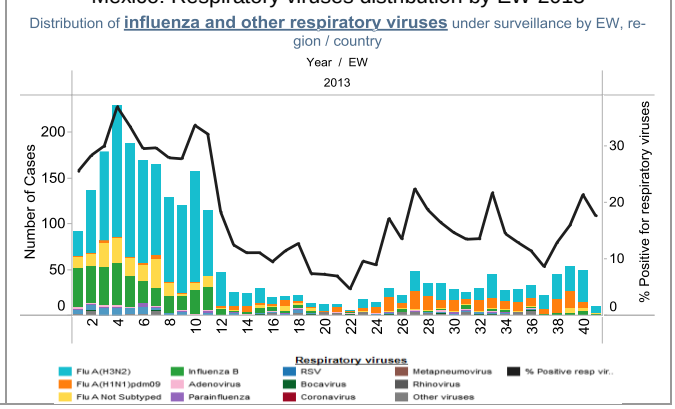
In Mexico[3], during EW 40 the number of ARI and pneumonia cases increased by 6.4% and 19.2%, respectively, compared to the previous week. The highest levels of ARI activity were reported in Hidalgo, Aguascalientes and Guerrero, and the highest levels of pneumonia activity were reported in Colima, Tabasco and Morelos. According to laboratory data from EW 40-41, 310 samples were tested, of which 20.6% were positive for influenza. Among the positives, 89.1% were influenza A (71.9% were A(H3N2) and 14.0% were A(H1N1)pdm09) and 10.9% were influenza B.

Mexico

Mexico: ARI and Pneumonia cases (n) by EW, 2012-13



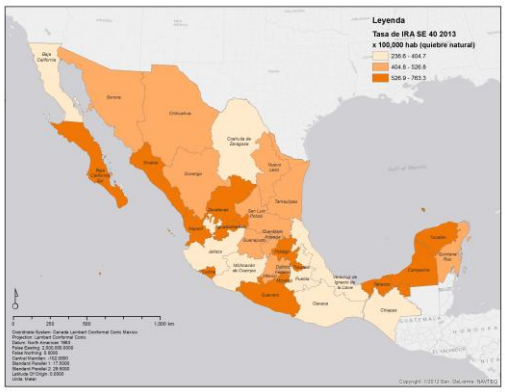
Mexico: Respiratory viruses distribution by EW 2013



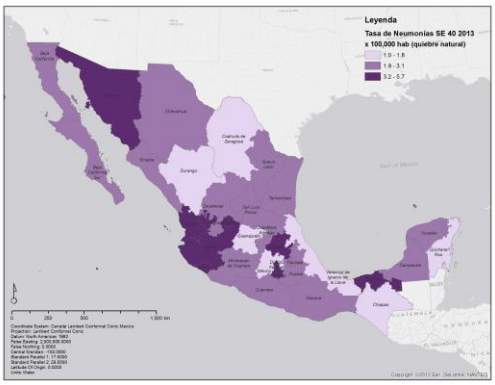
[2] USA: CDC FluView report. EW 41. Available at: http://www.cdc.gov/flu/weekly/

[3] México. Dirección General de Epidemiología. Información epidemiológica. SE 40.

Mexico: ARI Rates by State, EW 40



Mexico: Pneumonia Rates by State, EW 40

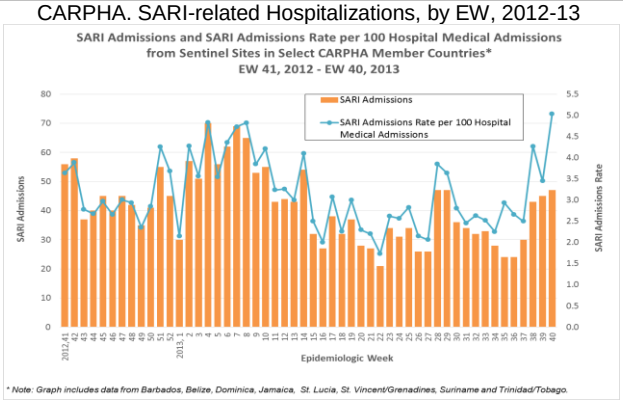


Caribbean

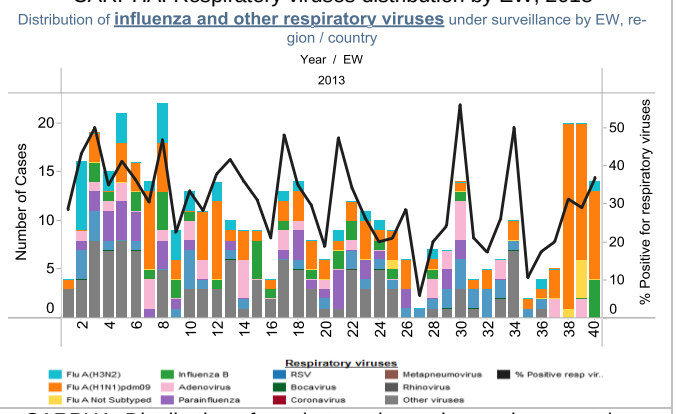
CARPHA[4] received weekly SARI/ARI data from five countries for EW 40: Barbados, Belize, Dominica, St. Vincent & the Grenadines and Trinidad & Tobago. During EW 40, the proportion of SARI-associated hospitalizations was 5.0%, with children 6 months to 4 years of age accounting for the largest proportion of these admissions (12.6%). During EW 40, Barbados reported three SARI-associated deaths. According to CARPHA laboratory data, the percent positivity of samples increased from ~10% (EW 35) to ~37% (EW 40), and was associated with increased detection of influenza A(H1N1)pdm09 (in Barbados, Virgin Islands, Jamaica, St. Vincent & the Grenadines, and Trinidad & Tobago). Additionally, for cases with dates of onset between EW 35-40, the following viruses were reported: influenza A(H3N2) (Belize, Jamaica), influenza B (Trinidad & Tobago), adenovirus (Barbados), RSV (Belize) and influenza A, not subtyped (Barbados).

CARPHA

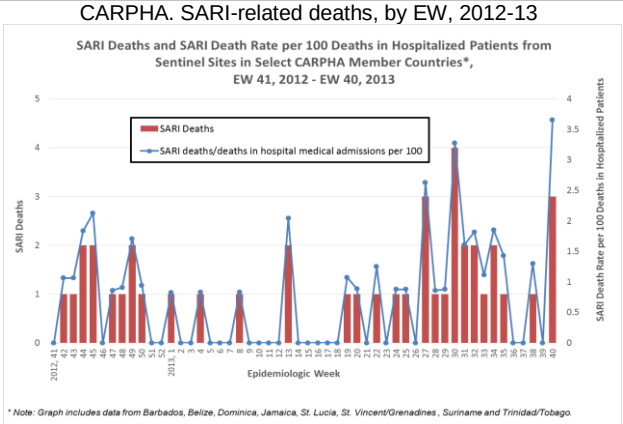
CARPHA. SARI-related Hospitalizations, by EW, 2012-13



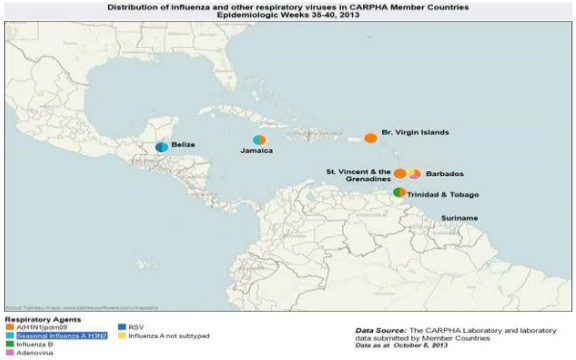
CARPHA. Respiratory viruses distribution by EW, 2013



CARPHA. SARI-related deaths, by EW, 2012-13



CARPHA. Distribution of respiratory viruses in member countries, EW 35-40, 2013



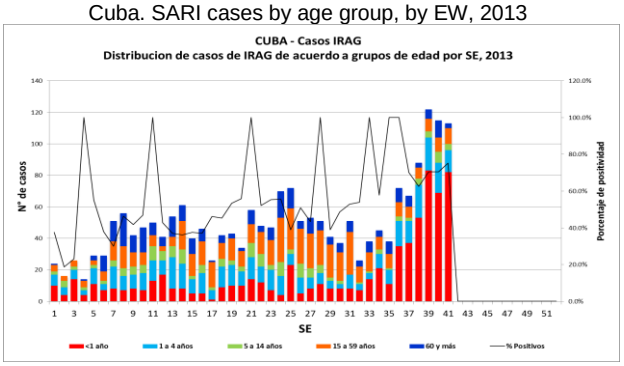
In Cuba during EW 41, the number of SARI-associated hospitalizations decreased compared to the previous EW, but still remains elevated. Children less than one year of age comprised the largest proportion of these cases. No SARI-associated deaths were reported during this period. According to national laboratory data for EW 38-41, 645 samples were analyzed, of which 67.3% were positive for a respiratory virus and 9.9%

[4] Caribbean Public Health Agency (CARPHA) EW 40

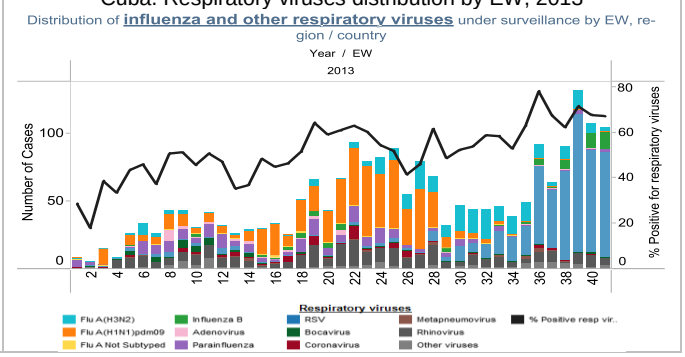
were positive for influenza. RSV remained the predominant circulating virus (74.0% of the positives), and among influenza viruses, 100% were A(H3N2).

Cuba

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



Cuba. Respiratory viruses distribution by EW, 2013

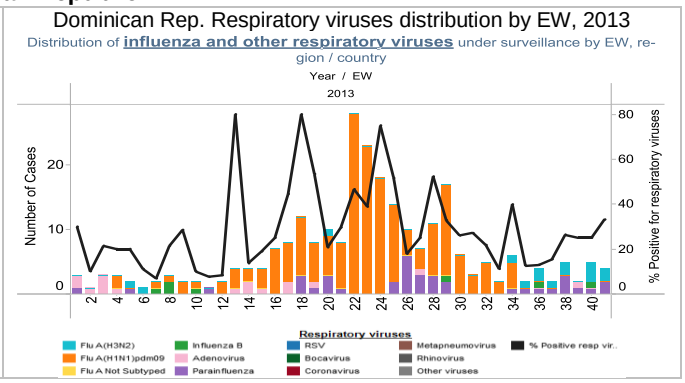


In the Dominican Republic[5], the cumulative ILI rate for EW 1-40 was 1,395 per 10,000 inhabitants, and is 15% less than what was reported this period last year. During EW 1-40, 1,325 SARI cases were reported through sentinel surveillance, of which 23 were reported during EW 40. There were two SARI-associated deaths reported during EW 40, bringing the total number reported this year to 30 (compared to 5 in 2012). According to laboratory data for EW 38-41, 59 samples were analyzed, of which 27.1% were positive for a respiratory virus and 13.6% were positive for influenza. Among positive influenza samples, 87.5% were influenza A (100% were influenza A(H3N2), increasing slightly since EW 34) and 12.5% were influenza B. Among other respiratory viruses, parainfluenza (43.8% of positive samples) predominated.

Dominican Republic

Dominican Rep. Provinces with respiratory virus circulation, EW 37-40

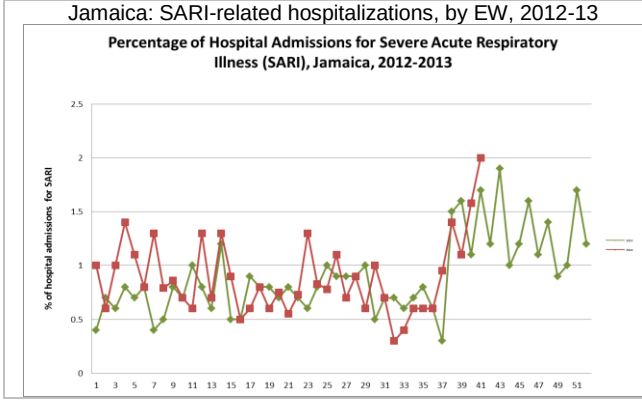
Dominican Rep. Respiratory viruses distribution by EW, 2013



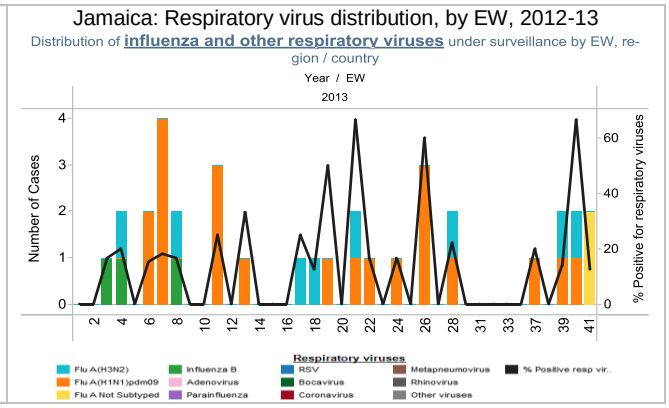
In Jamaica, based on sentinel surveillance data for EW 41, the proportion of ARI-associated consultations was 6.6%, a 0.4% increase from the previous EW. The proportion of SARI-associated hospitalizations was 2.0%, a 0.4% increase compared to the previous week. No SARI-associated deaths were reported during this period. Based on laboratory data from EW 41, 16 samples were tested, of which 12.5% were positive for a respiratory virus (influenza A, not subtyped).

Jamaica

Jamaica: SARI-related hospitalizations, by EW, 2012-13



Jamaica: Respiratory virus distribution, by EW, 2012-13

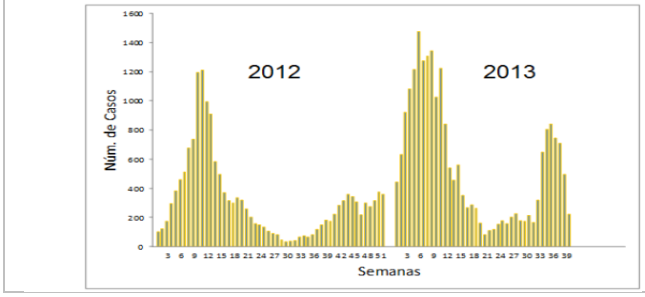


[5] República Dominicana. Dirección Nacional de Vigilancia Epidemiológica. Boletin Semanal SE 40.

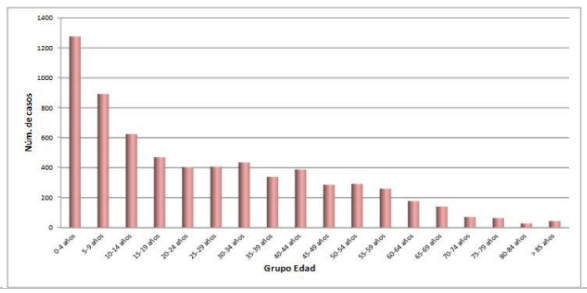
In Puerto Rico[6], during EW 40, the number of influenza cases (n=222) continued a decreasing trend since peaking in EW 34. Of these, 96.8% were associated with influenza A. Since the beginning of June, 6,655 influenza cases have been reported and children 0-14 years of age accounted for 42% of those cases. Since June, 309 influenza-associated hospitalizations and 9 influenza-associated deaths were reported.

Puerto Rico

Puerto Rico: Influenza cases by EW, 2012-13



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

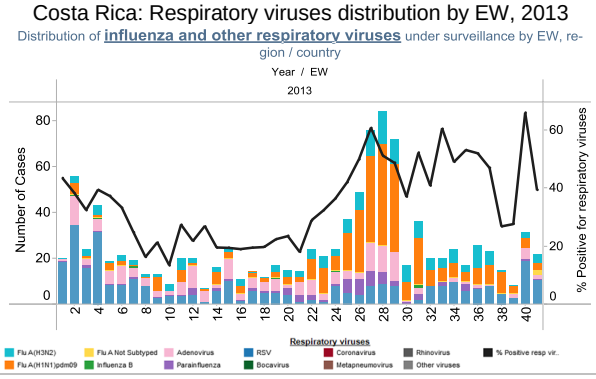


Central America

In Costa Rica, based on national laboratory data from EW 38-41, 188 samples were analyzed, of which 40.4% were positive for a respiratory virus and 14.9% were positive for influenza. Among influenza positive samples, 100% were influenza A (67.9% were A(H1N1)pdm09 and 25.0% were A(H3N2)). Among other respiratory viruses, RSV (50.0% of positive samples) predominated.

Costa Rica

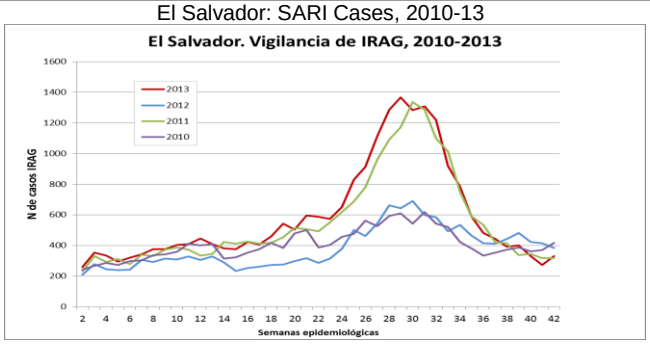
Costa Rica: Respiratory viruses distribution by EW, 2013



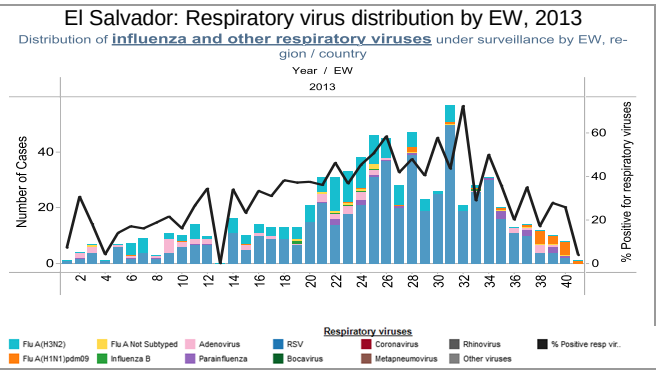
In El Salvador, during EW 41 respiratory activity remained low and the number of SARI cases continued a decreasing trend since peaking in EW 28. Based on national laboratory data from EW 38-41, 162 samples were analyzed, of which 19.1% were positive for a respiratory virus and 8.6% were positive for influenza. Among influenza positive samples for the last five weeks, 100% were A(H1N1)pdm09. Among other respiratory viruses, RSV predominated (32.3% of positive samples) followed by adenovirus and parainfluenza.

El Salvador

El Salvador: SARI Cases, 2010-13



El Salvador: Respiratory virus distribution by EW, 2013

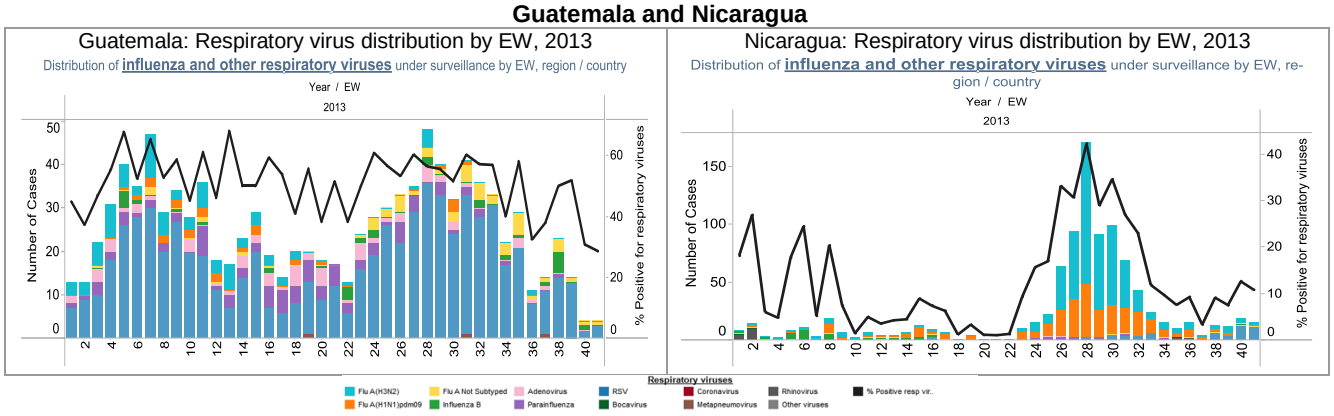


[6] Puerto Rico. Departamento de Salud. Vigilancia de influenza de Puerto Rico SE 40. http://www.salud.gov.pr/influenza/Informes%20Influenza/Informe%20Influenza%20Semana%2040.pdf.

In Guatemala, based on laboratory data from EW 38-41, 100 samples were analyzed, of which 45.0% were positive for a respiratory virus and 12.0% were positive for influenza. Among influenza positive samples, 50.0% were influenza A (none of which were subtyped) and 50.0% were influenza B. Among the other respiratory viruses, RSV predominated (71.1% of positive samples).

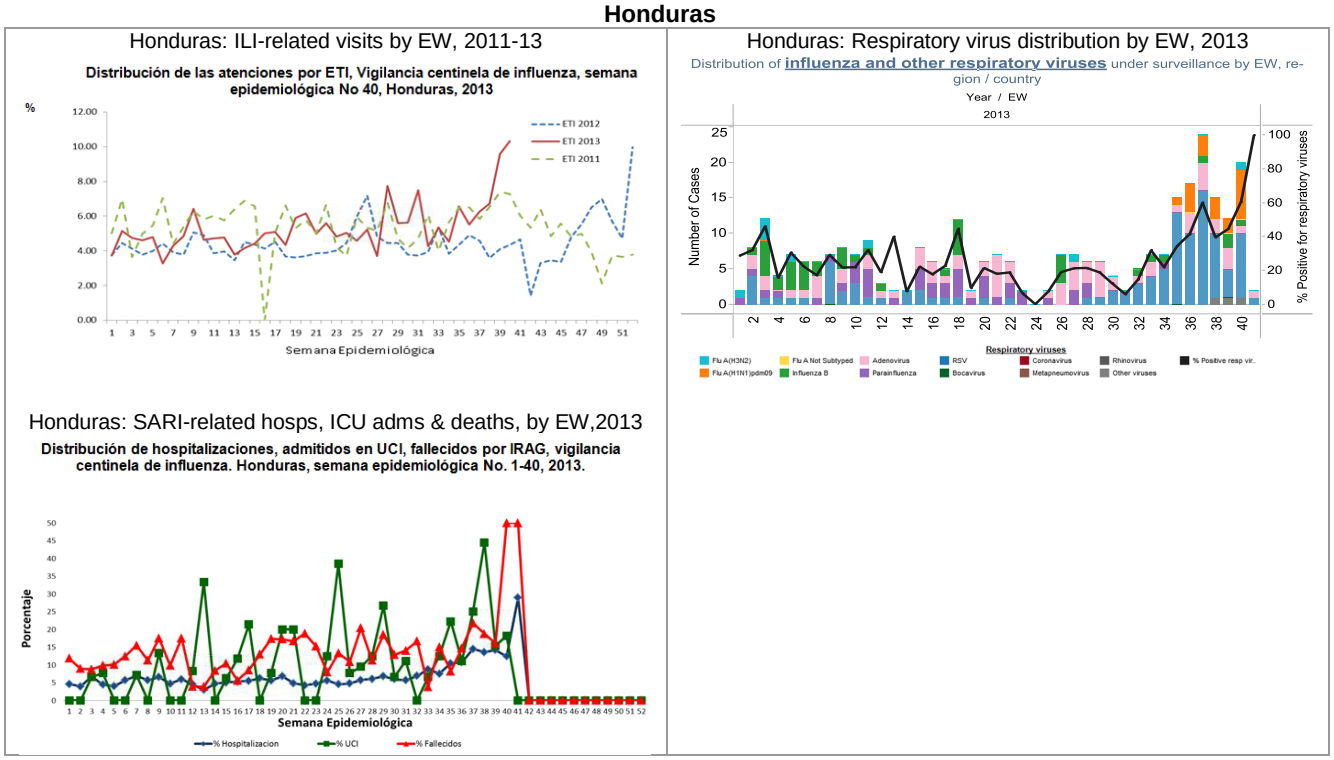
In Nicaragua, based on national laboratory data from EW 38-41, 580 samples were analyzed, of which 10.0% were positive for a respiratory virus and 3.8% were positive for influenza. RSV was the predominate respiratory virus (58.6% of positive samples). Among influenza positive samples, 95.5% were influenza A (66.7% were A(H3N2) and 33.3% were A(H1N1)pdm09).

Guatemala and Nicaragua



In Honduras[7], based on sentinel surveillance during EW 40, the proportion of ILI-associated visits (10.3%) increased for the fifth consecutive week. The proportion of SARI-associated hospitalizations continued an increasing trend for the last ten weeks. Based on national laboratory data for EW 38-41, 100 samples were analyzed, of which 49.0% were positive for a respiratory virus and 16.0% were positive for influenza. Among the positive samples, RSV (46.9%) predominated, followed by influenza A(H1N1)pdm09 (24.5%), which has been increasing for the last six weeks.

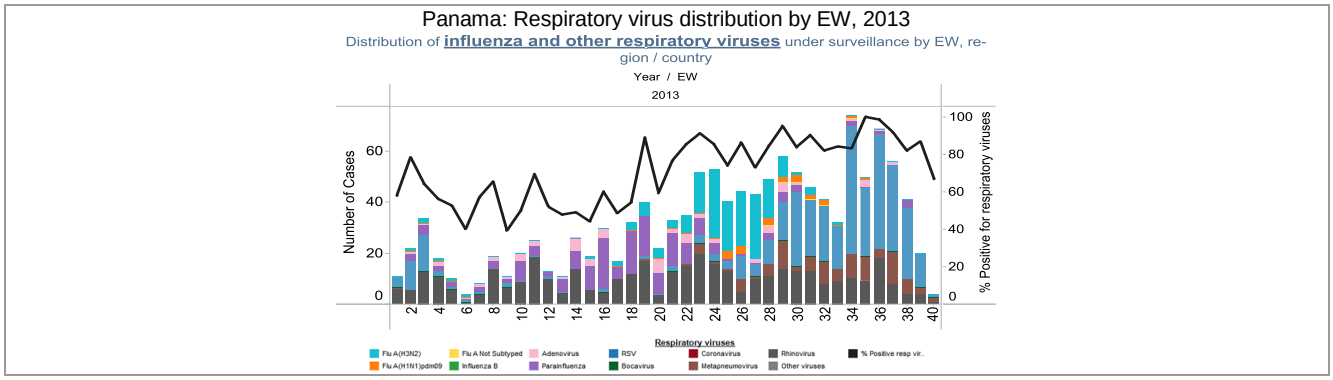
Honduras



[7] Honduras. Influenza Bulletin, EW 40

In Panama, based on national laboratory data from EW 37-40, 140 samples were analyzed, of which 86.4% were positive for a respiratory virus. Among positive samples, RSV (62.8%) predominated, followed by metapneumovirus (19.8%) and rhinovirus (14.0%).

Panama

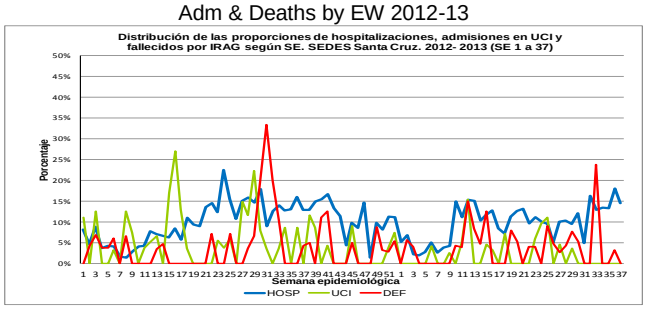


South America – Andean countries

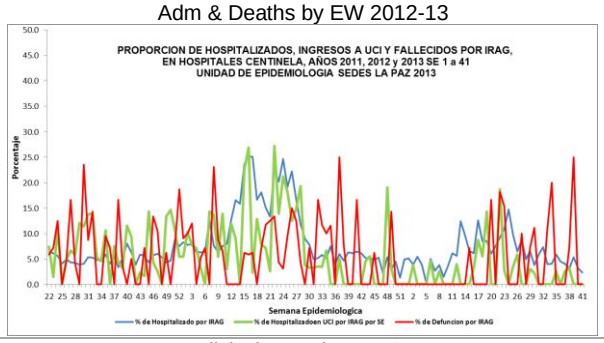
In Bolivia, according to data from Santa Cruz during EW 37, the proportion of SARI hospitalizations (14%) remained elevated compared to this period last year. Based on laboratory data from CENETROP (Santa Cruz) during EW 37-40, 395 SARI samples were analyzed, of which 27.3% were positive for a respiratory virus. Among the positive samples, influenza A(H1N1)pdm09 (84.3%) predominated. According to data from La Paz, the proportion of SARI-associated hospitalizations in EW 41 (2.3%) continued a decreasing trend. Based on laboratory data from INLASA (La Paz) from EW 38-41, 140 samples were analyzed of which 20.7% were positive for a respiratory virus. Among positive samples, influenza A(H1N1)pdm09 (62.1%) and influenza B (31.0%) predominated.

Bolivia

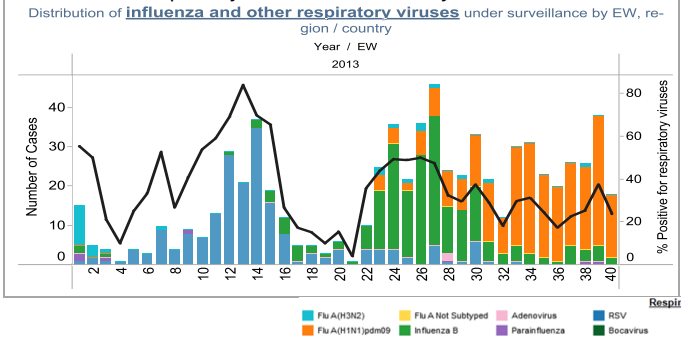
Bolivia (Santa Cruz): Percent SARI related-Hospitalizations, ICU Adm & Deaths by EW 2012-13



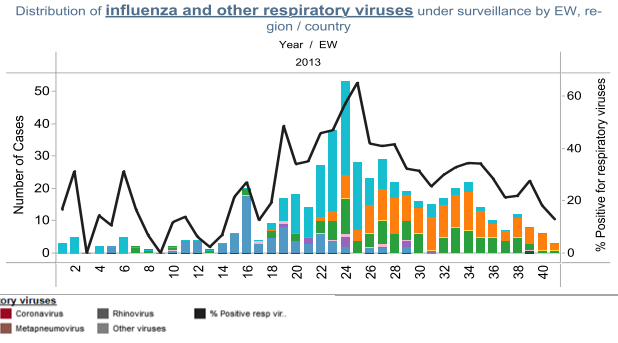
Bolivia (La Paz): Percent SARI related-Hospitalizations, ICU Adm & Deaths by EW 2012-13



Bolivia (Santa Cruz). CENETROP
Respiratory viruses distribution by EW, 2013



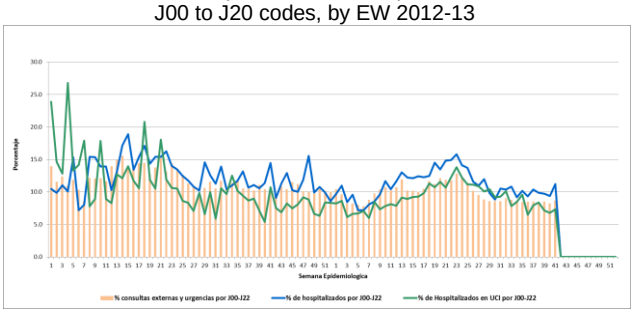
Bolivia (La paz). INLASA.
Respiratory viruses distribution by EW, 2013



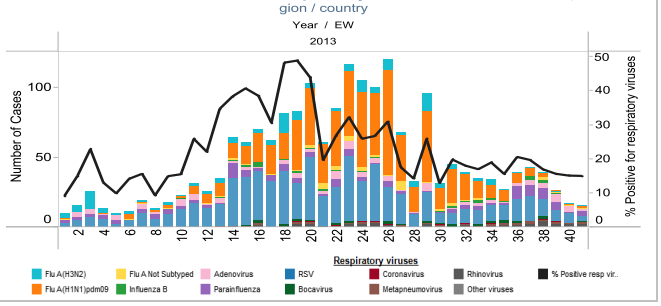
In Colombia, nationally during EW 41, the proportions of outpatient visits (11.2%), ICU admissions (7.3%) and deaths (8.7%) with ARI-associated ICD-10 codes (J00 to J22) have shown a decreasing trend since EW 23. Based on INS national laboratory data from EW 38-41, 618 samples were analyzed, of which 15.9% were positive for a respiratory virus and 2.3% were positive for influenza. Among the positive samples, RSV (30.6%), parainfluenza (18.4%) and adenovirus (16.3%) predominated.

Colombia

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



Colombia: Influenza and ORV distribution by EW, 2013



In Ecuador[8], based on SARI surveillance data from EW 40, 3% of hospitalizations, 9% of ICU admissions and 5% of deaths were SARI-associated. Based on national reference laboratory data from EW 37-40, 392 SARI samples were analyzed, of which 21.4% were positive for a respiratory virus and 18.1% were positive for influenza – both showing a decrease since peaking in EW 32. Among the positive samples, influenza A(H1N1)pdm09 predominated (83.3% of positive samples)

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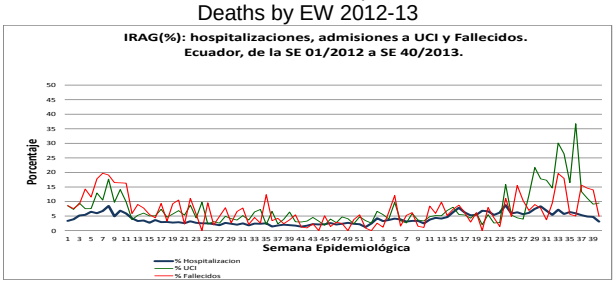
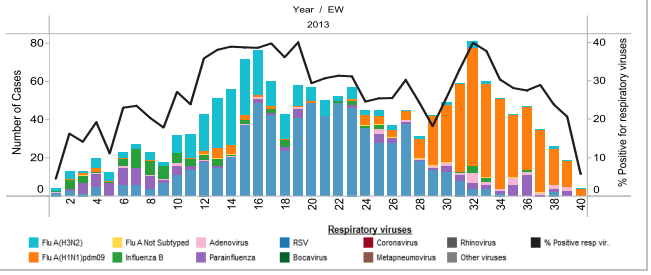
Ecuador

Ecuador: Percent SARI related-Hospitalizations, ICU Adm & Deaths by EW 2012-13



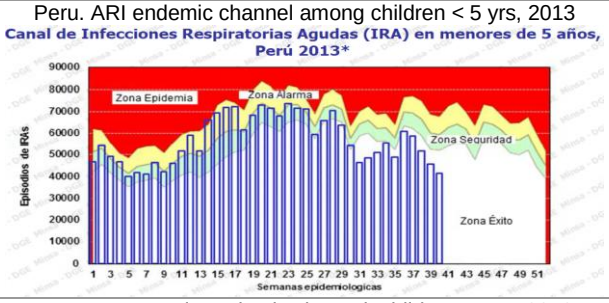
Ecuador. Respiratory virus distribution by EW, 2013



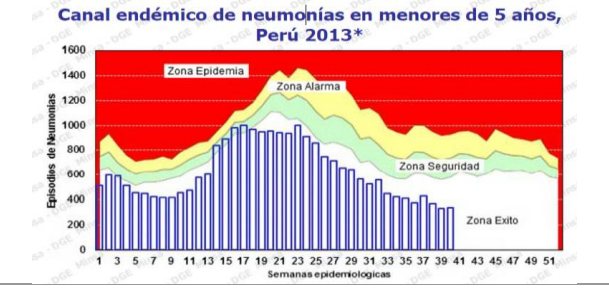
In Peru[9] during EW 40, ARI reports in children less than 5 years of age continued a decreasing trend since EW 36 and were within the success zone of the endemic channel. Pneumonia reports in the same age group were also within the success zone and continued a decreasing trend. Based on national laboratory data from EW 38-41, 404 samples were analyzed, of which 20.5% were positive for a respiratory virus and 16.6% were positive for influenza. Among the positive samples, influenza A(H1N1)pdm09 (54.2%) and influenza B (25.3%) predominated.

Peru

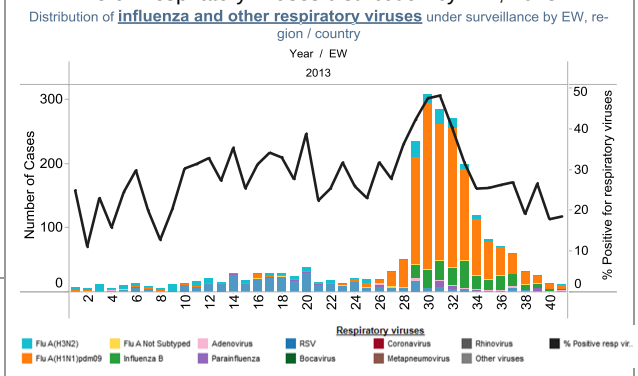
Peru. ARI endemic channel among children < 5 yrs, 2013



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



Perú. Respiratory viruses distribution by EW, 2013



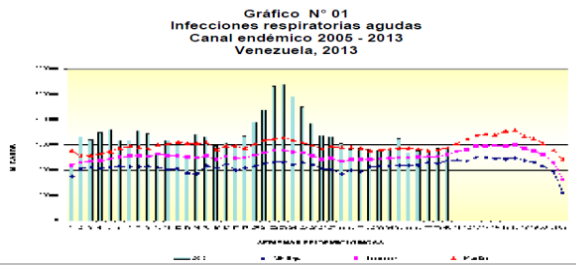
[8] Ecuador: Ministerio de Salud Pública. Actualización Nacional Vigilancia de IRAG, SE 40.

[9] Perú. Sala de Situación de Salud. EW 40, 2013. Ministerio de Salud. Dirección General de Epidemiología

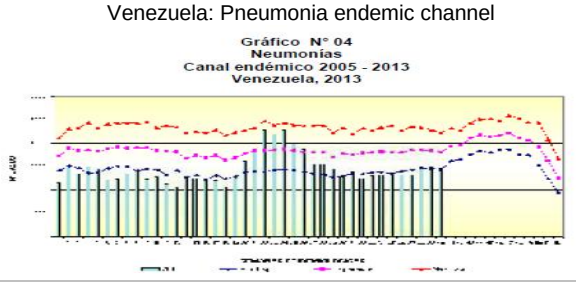
In Venezuela[10], ARI and pneumonia activity during EW 40 were within the expected values for this time of year. During this time, 93 SARI-associated hospitalizations were reported, with children less than 1 year of age comprising the largest proportion of cases. Based on virologic data from EW 1-40, 5,190 samples were analyzed from suspected influenza cases, of which 53.3% were positive for influenza. Among the positive samples, 92.3% were influenza A(H1N1)pdm09. The federal entities with the largest number of suspected influenza cases were Mérida (n=948), Distrito Capital (n=379) and Zulia (n=360).

Venezuela

Venezuela: ARI endemic channel



Venezuela: Pneumonia endemic channel

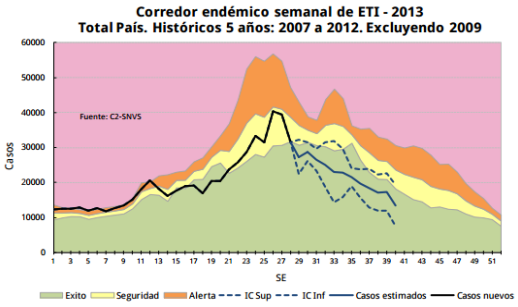


South America – Southern Cone and Brazil

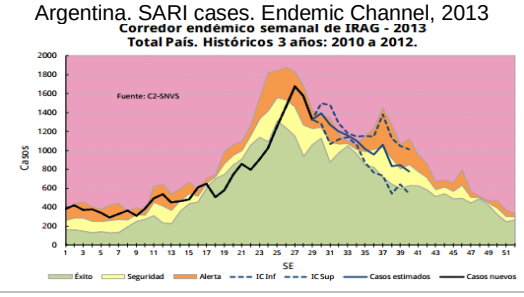
In Argentina[11], according to reports and calculated estimations, national ILI activity during EW 39 is within the success zone of the endemic channel and has shown a decreasing trend since its peak in EW 25-27. The proportion of SARI-associated hospitalizations was within the security zone of the endemic channel and also showed a decreasing trend. Based on laboratory data from EW 39-40, 1,121 samples were analyzed, of which 25.3% were positive for a respiratory virus and 7.1% for influenza. Among positive samples, RSV predominated (47.9%) but has been decreasing since peaking in EW 27.

Argentina

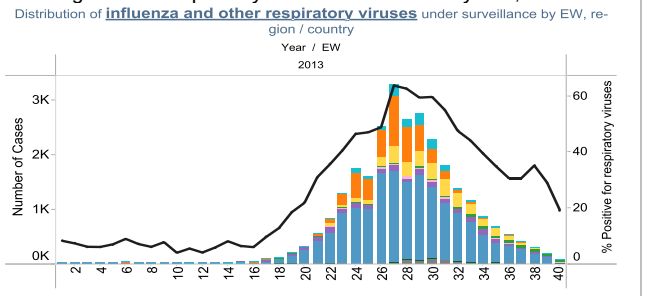
Argentina. ILI cases. Endemic Channel, 2013



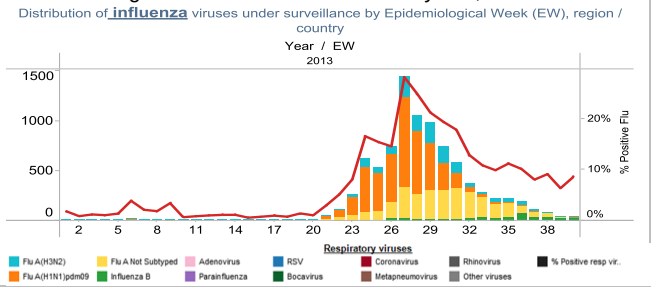
Argentina. SARI cases. Endemic Channel, 2013



Argentina. Respiratory viruses distribution by EW, 2013



Argentina. Influenza distribution by EW, 2013

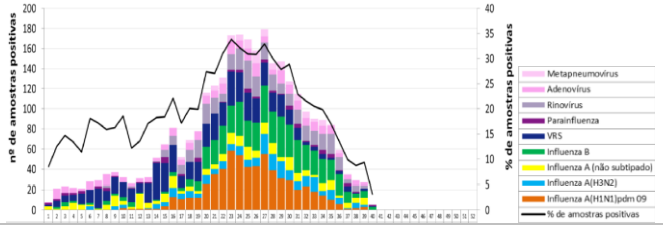


In Brazil[12], according to ILI sentinel surveillance data through EW 40, 13,390 samples have been analyzed, of which 22.0% were positive for influenza or other respiratory viruses. Positivity has decreased since EW 27 and among positive samples during EW 40, influenza B predominated. Based on universal SARI surveillance data during this same period, 32,111 SARI cases were reported and 17.5% were positive for influenza. Of these positive samples, influenza A(H1N1)pdm09 predominated (64.5%), followed by influenza B (21.5%) and A(H3N2) (10.7%). Through EW 40, 3,651 SARI-associated deaths were reported of which 24.9% were positive for influenza, and of these, 81.4% were associated with influenza A(H1N1)pmd09.

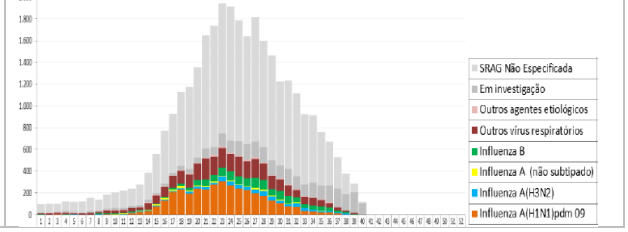
[10] Venezuela. Boletín epidemiológico, EW 40, 2013.
[11] Argentina. Boletin integrado de vigilancia. SE 39.
[12] Brasil. Boletim informativo. Secretaria de Vigilância em Saúde. SE 40, 2013.

Brazil

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



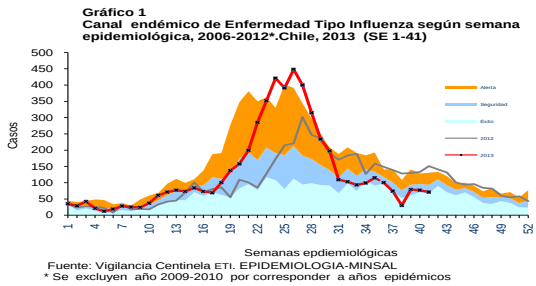
Brazil:Resp virus distribon, SARI cases, by EW, 2013



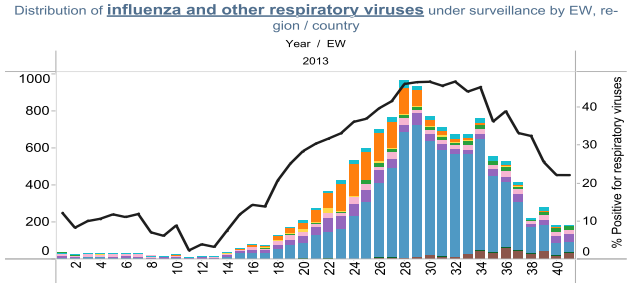
In Chile[13] ILI activity during EW 41 (rate: 4.6 per 100,000 inhabitants) remained low and was within the security zone of the endemic channel. The proportion of SARI-associated hospital emergency consultations was 0.6%, and has been showing a decreasing trend since peaking in EW 24. Based on laboratory data from EW 40-41, 1,652 samples were tested, of which 22.1% were positive for a respiratory virus and 3.8% were positive for influenza. Among the positive samples, RSV (31.8%), parainfluenza (23.6%) and metapneumovirus (16.7%) predominated.

Chile

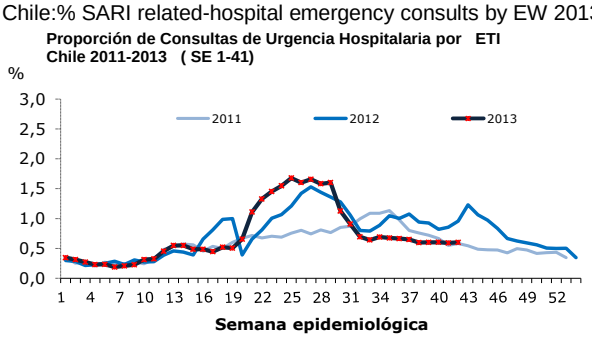
Chile. ILI Endemic Channel, 2013



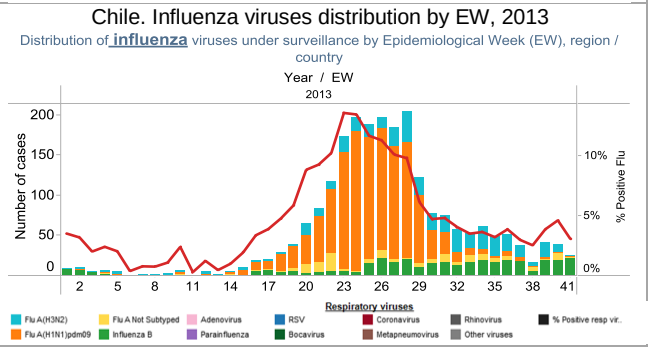
Chile. Respiratory viruses distribution by EW, 2013



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



Chile. Influenza viruses distribution by EW, 2013



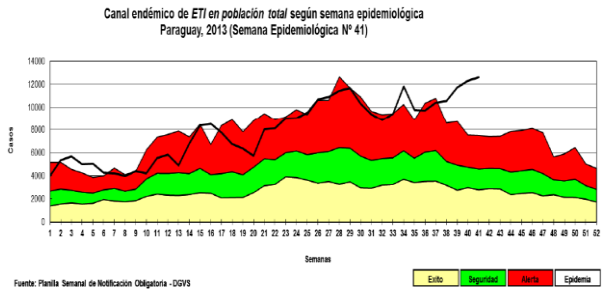
In Paraguay[14] during EW 41, the ILI consultation rate (189.3 per 100,000 inhabitants) increased compared to the previous EW and was higher than observed during this same time last year. The proportion of SARI-associated hospitalizations (5.6%) was similar to the previous week and children less than 5 years of age comprised the largest portion (54.0%) of these cases. Based on reference laboratory data from EW 38-41, 565 samples were analyzed, of which 21.1% were positive for a respiratory virus and 12.9% were positive for influenza. Among influenza samples, 82.2% were influenza B and 17.8% were influenza A (mostly A(H3N2)). Among other respiratory viruses, adenovirus (16.8% of positive samples) and parainfluenza (13.4%) were detected.

[13] Chile. Informe de situación. EW 41. Disponible en: http://epi.minsal.cl/

[14] Paraguay. Informe de situación. Vigilancia de ETI e IRAG. SE 41, 2013

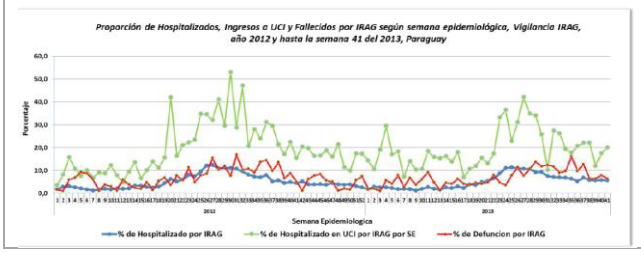
Paraguay

Paraguay. ILI endemic channel, by EW, 2013

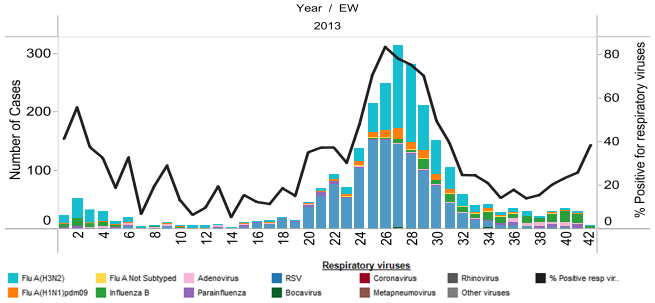


Paraguay:% SARI Hosps, ICU Admns & Deaths by EW 2012-13

Gráfico 6: Proporción de Hospitalizados, ingresos a UCI y fallecidos por IRAG según semana epidemiológica, SE 1 a 41, Vigilancia Centinela, Paraguay, 2.013.



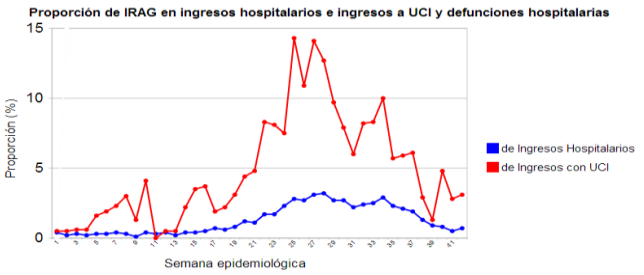
Paraguay. Respiratory viruses distribution by EW, 2013



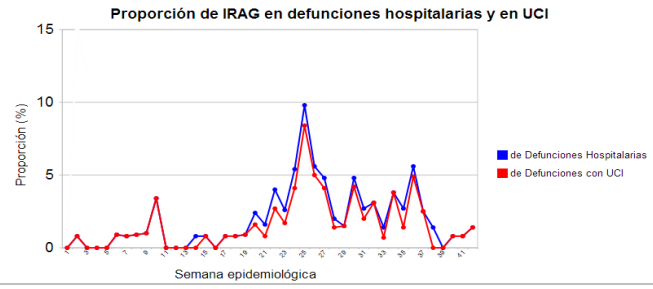
In Uruguay[15] during EW 41, the proportions of SARI-associated hospitalizations, ICU admissions and deaths increased slightly compared to the previous EW, but remain at a low levels. Based on laboratory data from EW 38-41, 17 SARI samples were analyzed, of which one was positive, and it was for influenza A(H3N2).

Uruguay

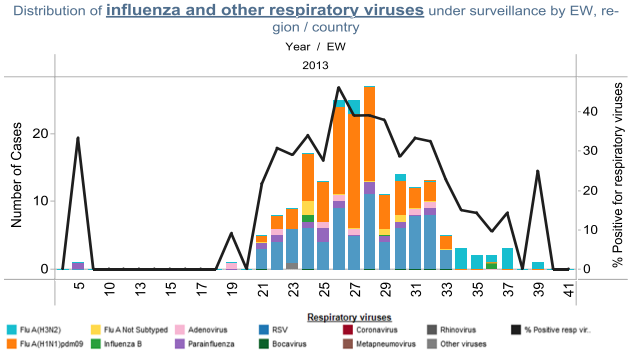
Uruguay.SARI-related hosps & ICU admissions by EW, 2013



Uruguay. SARI-associated deaths by EW. 2013



Uruguay. Respiratory viruses distribution by EW, 2013



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