

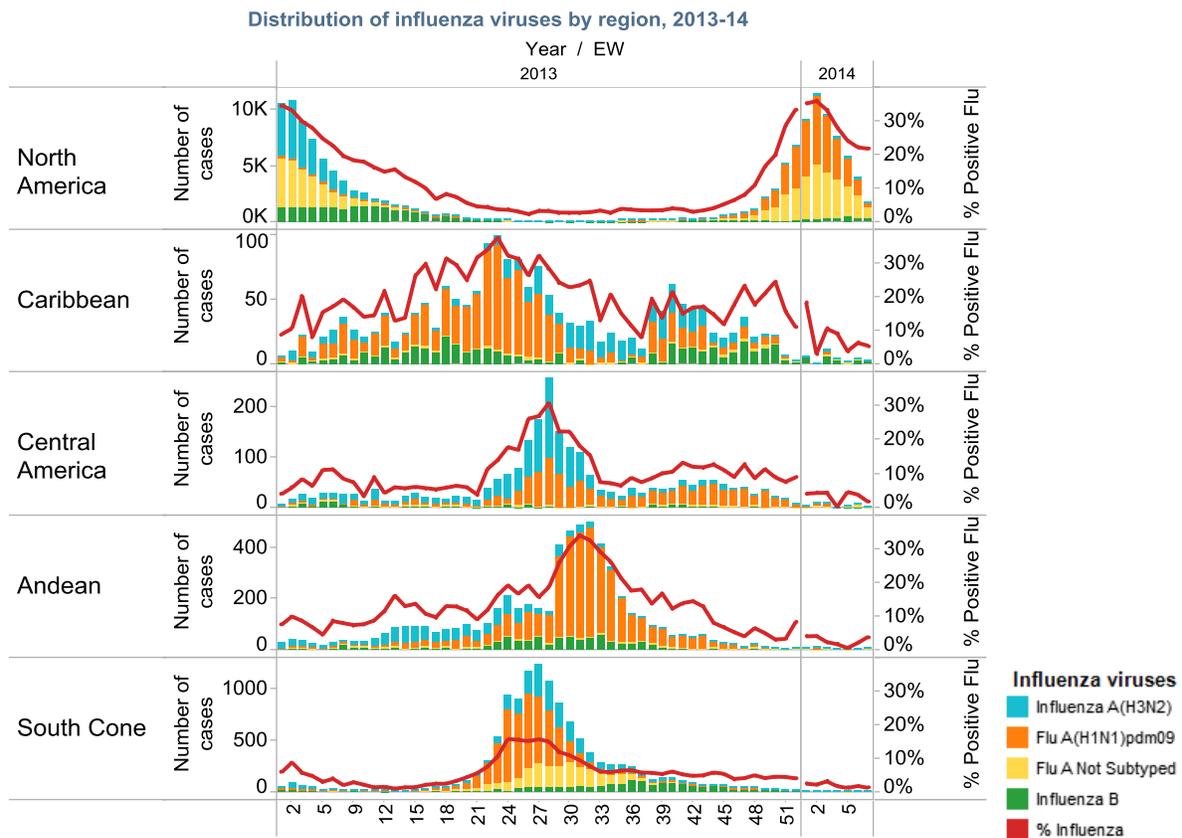
PAHO interactive influenza data: http://ais.paho.org/phis/viz/ed_flu.asp
Influenza Regional Reports: www.paho.org/reportesinfluenza

The information presented in this update is based on data provided by Ministries of Health and National Influenza Centers of Member States to the Pan American Health Organization (PAHO) or from updates on the Member States' Ministry of Health web pages.

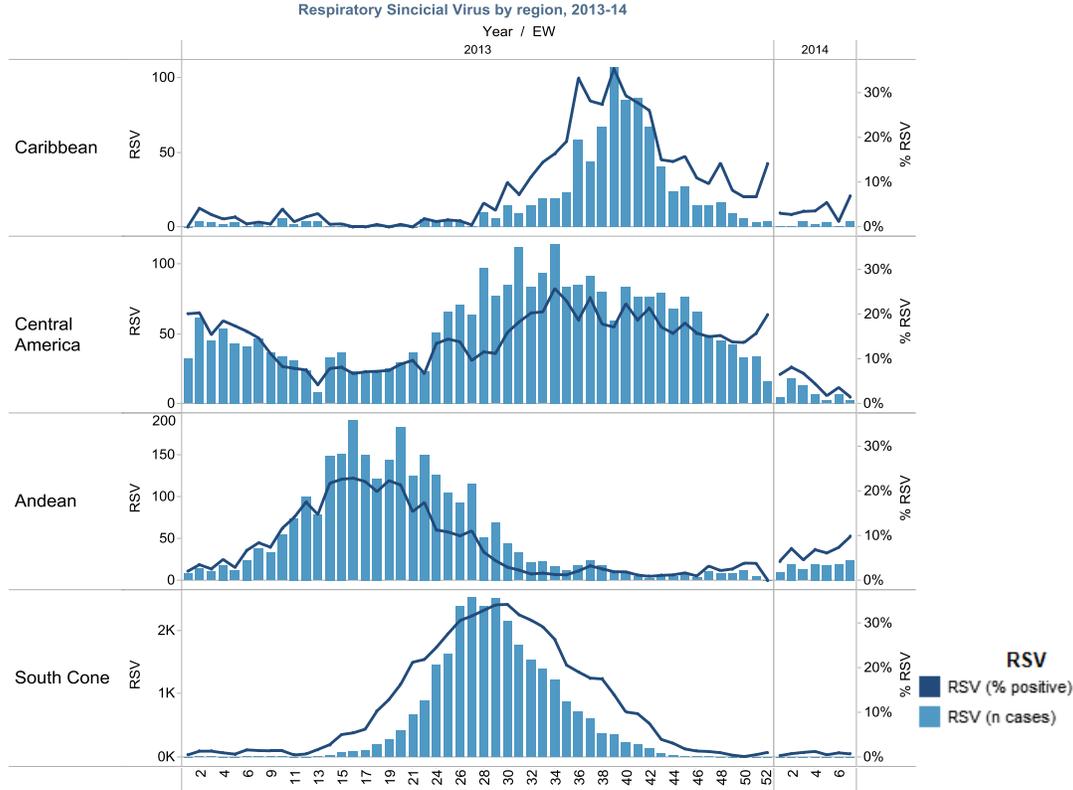
WEEKLY SUMMARY

- **North America:** Although influenza activity remained high in Canada and the United States, several indicators continued to decrease. In Mexico, influenza activity remained elevated, but several indicators decreased. Influenza A(H1N1)pdm09 continued to be the predominant circulating virus in the region but slight increases in influenza B in Canada and the United States and A(H3N2) in Mexico were observed. Among other respiratory viruses, RSV circulation remained high in Canada and the United States.
- **The Caribbean and Central America:** Influenza and other respiratory viruses activity in the region remained low.
- **South America – Andean Countries:** Acute respiratory illness activity as well as influenza and other respiratory viruses activity remained low in the region.
- **South America - South Cone and Brazil:** Acute respiratory illness activity as well as influenza and other respiratory viruses 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:

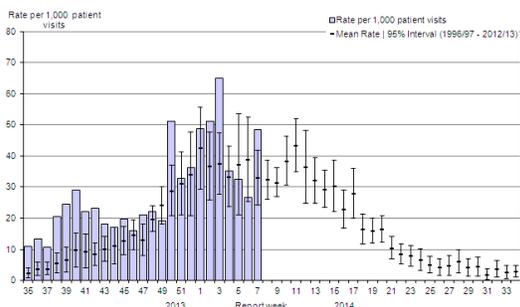
In Canada¹ during EW 7, influenza activity decreased compared to the previous week. However, the national influenza-like illness (ILI) consultation rate was 48.6 per 1,000 patient visits, an increase compared to the previous week, and above the expected range for this time of year. Since the beginning of the 2013-14 influenza season, 2,915 influenza-associated hospitalizations have been reported and most of them have been associated with influenza A (97.2%). The majority (57.3%) of these cases have been adults ≥45 years of age. There have been 291 ICU admissions reported and of these, 69.8% were among adults 20-64 years of age. To date this season, 155 deaths have been reported (compared to 217 during the same period of the 2012-13 season) and 98.1% were associated influenza A. The highest proportion of these deaths (55.5%) occurred among adults 20-64 years of age, followed by adults ≥65 years (36.7%). Based on laboratory data for EW 7, the overall percentage of positive influenza tests was 17.1% (N=1,281), a decrease compared to the previous week. Among the positive tests, 80.9% were influenza A (30.3% influenza A(H1N1)pdm09, 1.8% A(H3N2) and 67.9% not subtyped) and 19.1% were influenza B. Among other circulating respiratory viruses, RSV predominated.

¹ Canada: FluWatch Report. EW 7. Available at <http://www.phac-aspc.gc.ca/fluwatch/>

Canada

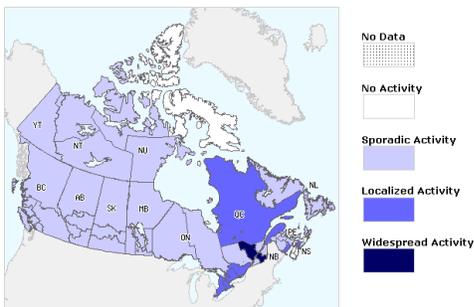
Canada: ILI Consultation Rates, by EW, 2013-14

Figure 5. Influenza-like-illness (ILI) consultation rates by report week, compared to the 1996-97 through to 2012-13 seasons (with pandemic data suppressed), Canada, 2013-2014



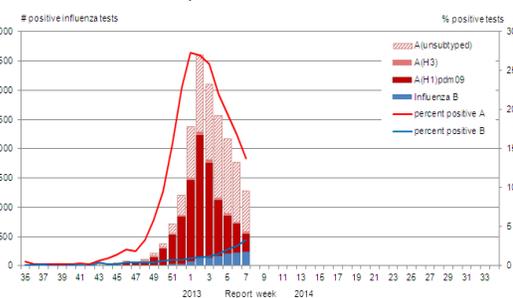
Canada: Influenza/ILI Activity by region, EW 7, 2014

Figure 1. Map of overall influenza/ILI activity level by province and territory, Canada, Week 07



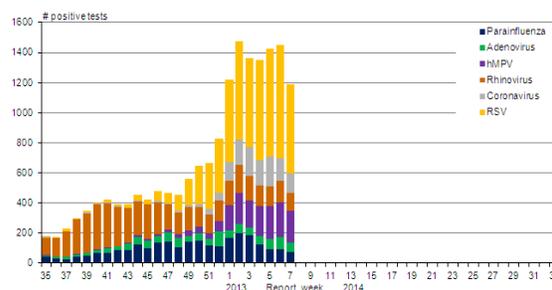
Canada: Influenza virus distribution by EW, 2013-14

Figure 2. Number of positive influenza tests and percentage of tests positive, by type, subtype and report week, Canada, 2013-14



Canada: Respiratory virus distribution by EW, 2013-14

Figure 3. Number of positive laboratory tests for other respiratory viruses by report week, Canada, 2013-14

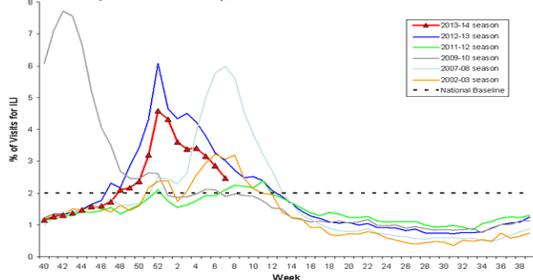


In the United States² during EW 7, influenza activity decreased, but still remained elevated. The proportion of outpatient visits for influenza-like illness (ILI) was 2.5%, above the national baseline of 2.0%, but a decrease compared to the previous EW. Nine of the 10 regions reported ILI activity above their region-specific baseline levels. The proportion of deaths attributed to pneumonia and influenza for EW 7 (8.2%) decreased slightly from the previous EW, but was above the epidemic threshold (7.4%). A total of 52 influenza-associated pediatric deaths have been reported this season, of which two were reported during EW 6. One death was associated with influenza A(H1N1)pdm09 and occurred during EW 6, and one death was associated with influenza A (not subtyped) and occurred during EW 5. Since October 1, 2013, 7,073 laboratory confirmed influenza-associated hospitalizations have been reported (rate: 26.1 per 100,000 population). The highest hospitalization rates were among adults ≥ 65 years followed by 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 7, 6,887 samples were analyzed, of which 13.9% were positive for influenza. Among the positive samples, 90.3% were influenza A (48.1% A(H1N1)pdm09, 2.7% A(H3) and 49.2% not subtyped) and 9.7% were influenza B. Based on antiviral resistance testing, 0.7% (26/3,471) of the influenza A(H1N1)pdm09 samples tested were oseltamivir resistant.

United States

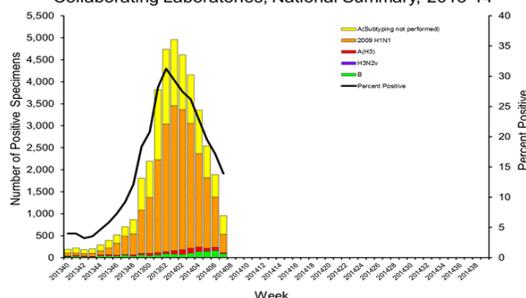
US: Percent of ILI visits by EW, 2013-14

Percentage of Visits for Influenza-like Illness (ILI) Reported by the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), Weekly National Summary, 2013-14 and Selected Previous Seasons

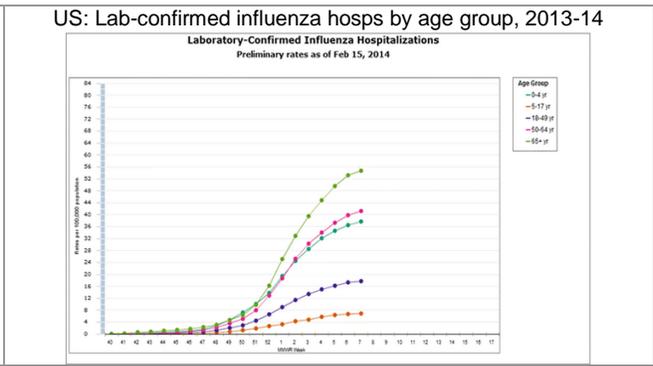
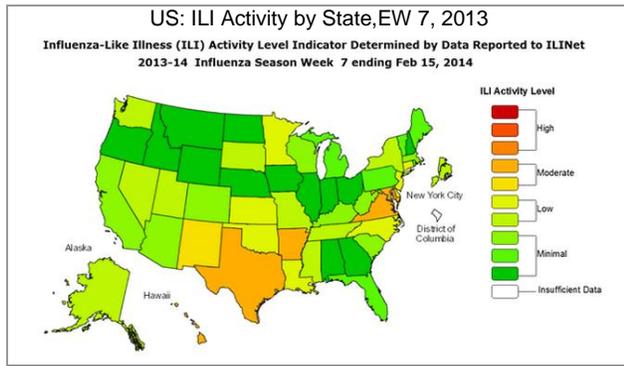


US: Influenza viruses distribution by EW, 2013-14

Influenza Positive Tests Reported to CDC by U.S. WHO/NREVSS Collaborating Laboratories, National Summary, 2013-14

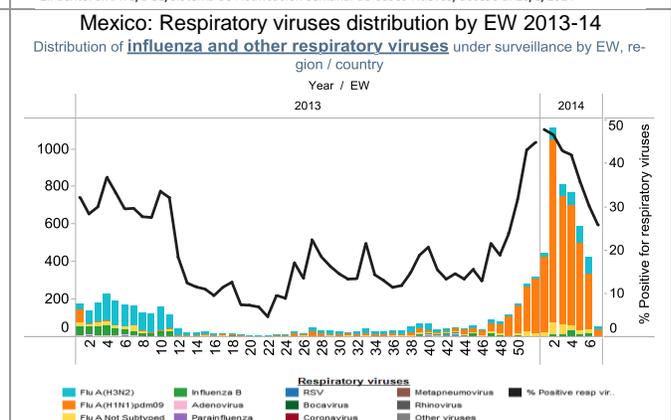
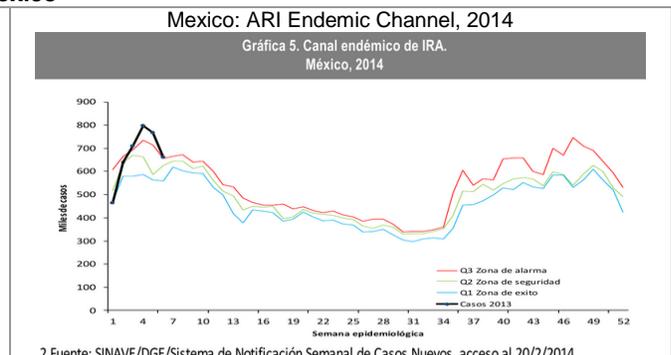
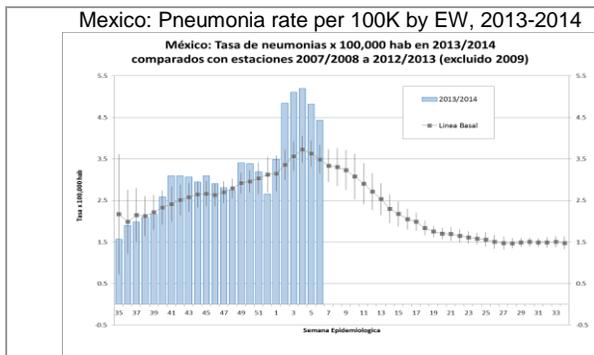


² USA: CDC FluView report. EW 7. Available at: <http://www.cdc.gov/flu/weekly/>



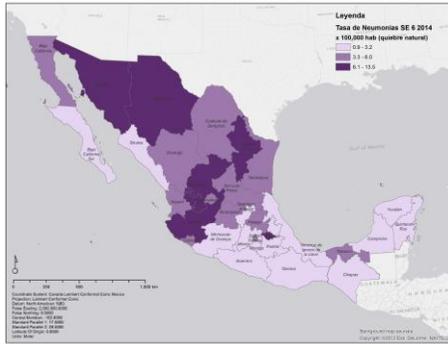
In Mexico³ during EW 6, although some indicators decreased, influenza activity remained elevated. Both ARI and pneumonia rates decreased compared to the previous EW but were above expected levels for this time of year. ARI activity remained in the epidemic zone of the endemic channel. The highest levels of ARI activity were reported in Zacatecas, Durango and Hidalgo, and the highest levels of pneumonia activity were reported in Chihuahua, Sonora and Zacatecas. Nationally, through February 20, 2014, the proportion of ILI/SARI-associated medical visits was 3.3% and did not change from the previous EW. During this same period, 588 influenza-associated deaths were reported, of which 91.3% were associated with influenza A(H1N1)pdm09. According to laboratory data during EW 6-7, 1,757 samples were analyzed, of which 29.4% were positive for influenza. Among the positive influenza samples, 95.9% were influenza A (67.1% A(H1N1)pdm09 and 20.6% A(H3N2)) and 4.1% were influenza B.

Mexico



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

Mexico: Pneumonia Rates by State, EW 6

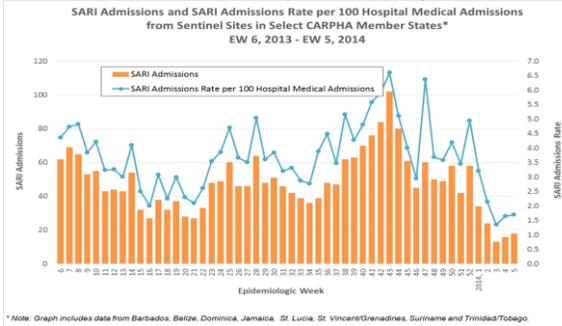


Caribbean

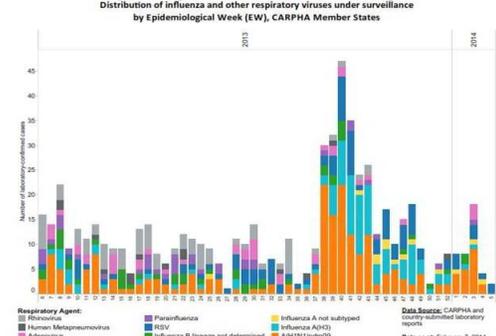
CARPHA⁴ received weekly SARI/ARI data from the following countries for EW 4-5: Barbados, Jamaica, and Trinidad & Tobago. The proportion of SARI-associated hospitalizations during EW 5 was 1.7%, a slight increase compared to the previous EW. Children 5-14 years of age had the highest rate of SARI admissions (6.1%). One SARI-associated death was reported during EW 4 by Barbados. According to laboratory data from EW 52-5, the following viruses were detected: influenza A(H1N1)pdm09 (Belize, Montserrat, Trinidad & Tobago), influenza A(H3) (Barbados, Jamaica, Trinidad & Tobago), influenza A, not subtyped (Aruba, Barbados), influenza B (Barbados, Belize, Trinidad & Tobago), human metapneumovirus (Dominica), parainfluenza (Aruba), RSV (Aruba, Barbados) and adenovirus (Barbados, Montserrat).

CARPHA

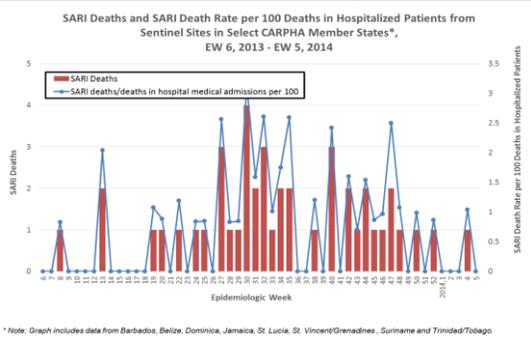
CARPHA. SARI-related Hospitalizations, by EW, 2013-14



CARPHA. Respiratory viruses distribution by EW, 2013-14



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



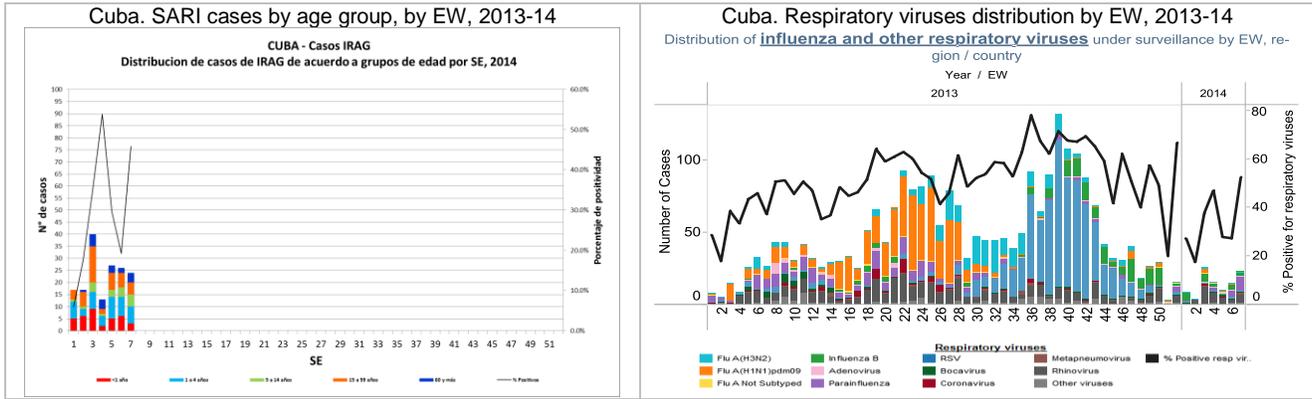
CARPHA. Distribution of respiratory viruses in member countries, EW 52, 2013 – EW 5, 2014



In Cuba during EW 7, the number of SARI-associated hospitalizations decreased slightly compared to the previous week. Children aged 1-4 years comprised the largest proportion of these cases. No SARI-associated deaths were reported during this period. According to national laboratory data for EW 4-7, 169 samples were analyzed, of which 37.9% were positive for a respiratory virus and 8.3% were positive for influenza. Among the positive samples, rhinovirus (34.4%), parainfluenza (25.0%), and influenza B (17.2%) were predominant.

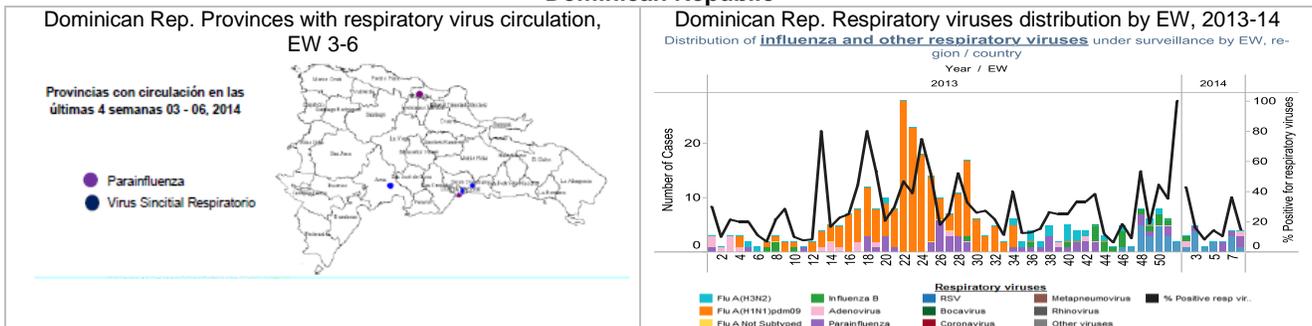
⁴ Caribbean Public Health Agency (CARPHA) EW 4-5

Cuba



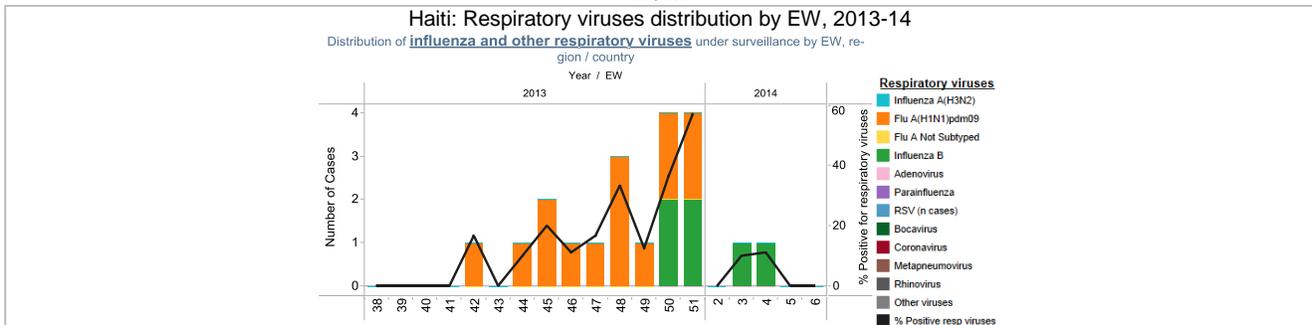
In the Dominican Republic⁵, the cumulative ILI rate for EW 1-6 was 24.5 per 10,000 inhabitants. During this same period, 224 SARI cases were reported through sentinel surveillance, of which 15 were reported during EW 6. Two SARI-associated deaths were reported during EW 6 (7 deaths have been reported since the beginning of 2014). Based on laboratory data for EW 5-8, 71 samples were analyzed, of which 16.9% were positive for a respiratory virus. Among the positive samples, RSV (50.0%) and parainfluenza (41.7%) predominated.

Dominican Republic



In Haiti, based on laboratory data for EW 3-6, 25 samples were analyzed, of which two (8.0%) were positive for influenza B.

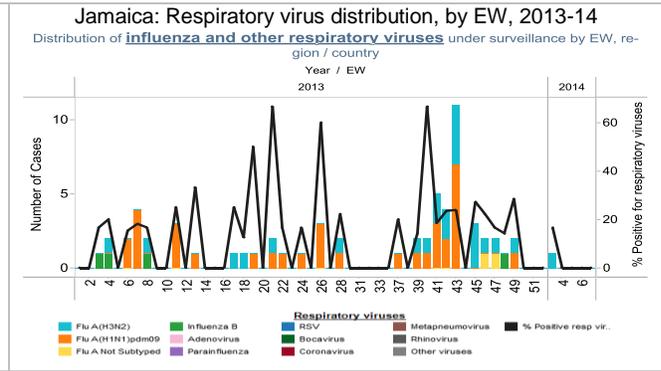
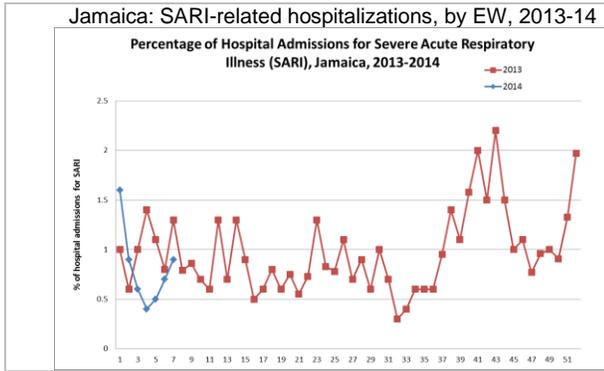
Haiti



In Jamaica, based on sentinel surveillance data for EW 7, the proportion of ARI-associated consultations (4.6%) decreased compared to the previous EW while the proportion of SARI-associated hospitalizations (0.9%) increased. No SARI-associated deaths were reported during EW 6. Based on laboratory data for EW 4-7, 10 samples were analyzed and all were negative for influenza.

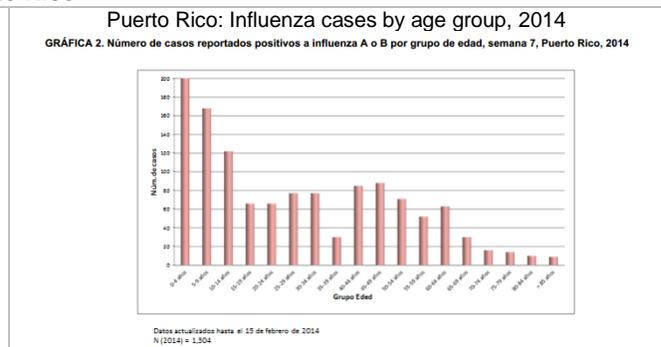
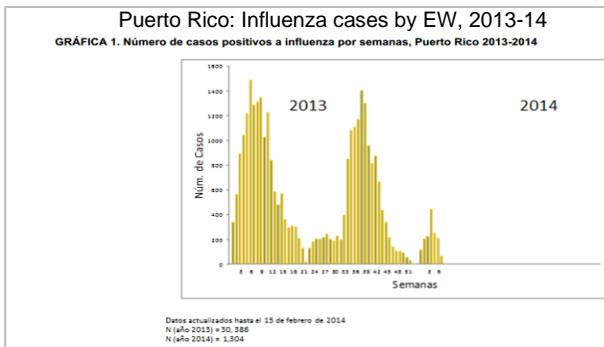
⁵ República Dominicana. Dirección Nacional de Vigilancia Epidemiológica. Boletín Semanal SE 6.

Jamaica



In Puerto Rico⁶ during EW 7, the number of influenza cases (n=66) remained low. Of these, 55 cases were associated with influenza A and 11 with influenza B. Since the beginning of 2014, 1,304 influenza cases have been reported and persons aged 0-19 years accounted for 50% of those cases. During this same period, 81 influenza-associated hospitalizations and one influenza-associated death were reported.

Puerto Rico

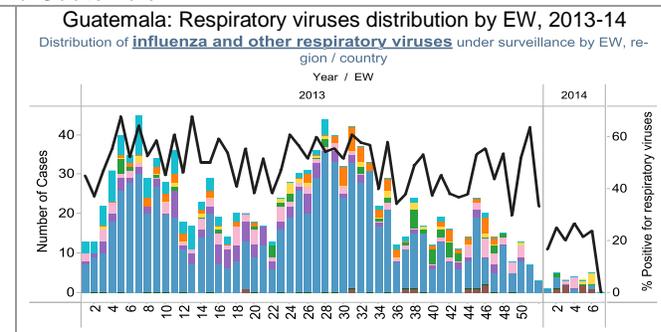
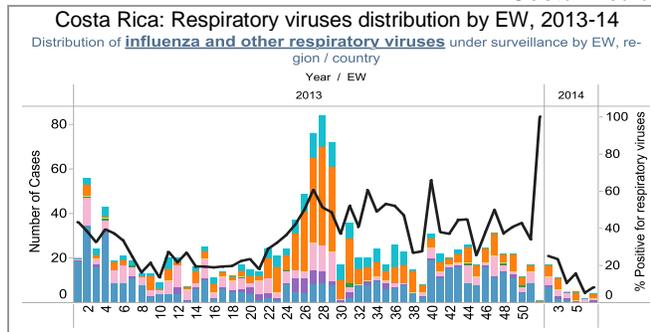


Central America

In Costa Rica, based on laboratory data from EW 4-7, 165 samples were analyzed, of which 9.7% were positive for a respiratory virus and 3.6% were positive for influenza. Among the positive influenza samples, 100% were influenza A(H1N1)pdm09. Among other respiratory viruses, adenovirus (37.5% of positive samples), parainfluenza (18.8%) and RSV (6.3%) were detected.

In Guatemala, based on laboratory data from EW 4-7, 58 samples were analyzed, of which 20.7% were positive for a respiratory virus and 6.9% were positive for influenza. Among the positive influenza samples, 100% were influenza A, not subtyped. Among other respiratory viruses, adenovirus (25.0% of positive samples), human metapneumovirus (25.0%) and RSV (16.7%) were detected.

Costa Rica and Guatemala

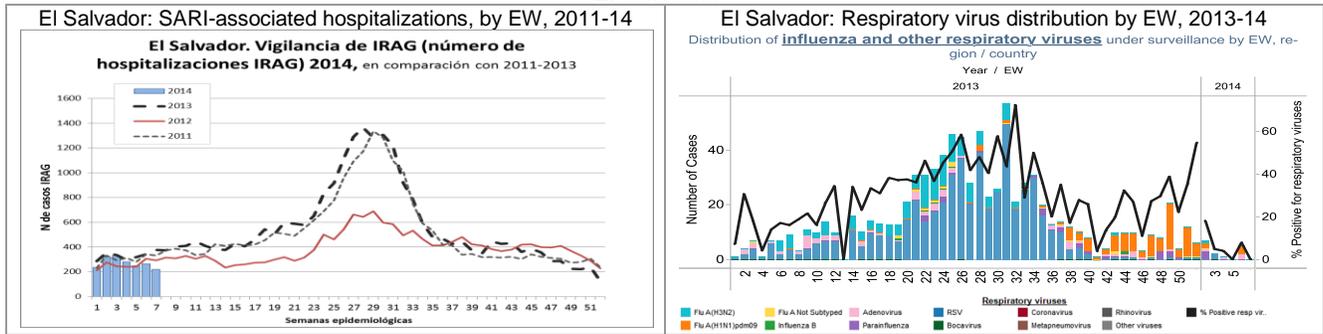


In El Salvador, during EW 7, the proportions of SARI-associated hospitalizations (4.6%), ICU admissions (5.3%) and deaths (2.6%) remained low and within the expected levels for this time of year. According to

⁶ Puerto Rico. Departamento de Salud. Vigilancia de influenza de Puerto Rico SE 7

national laboratory data from EW 4-7, 124 samples were analyzed, of which 4.8% were positive for a respiratory virus and 2.4% were positive for influenza. Among the positive samples, influenza A(H1N1)pdm09 (50.0%) and adenovirus (50.0%) were detected.

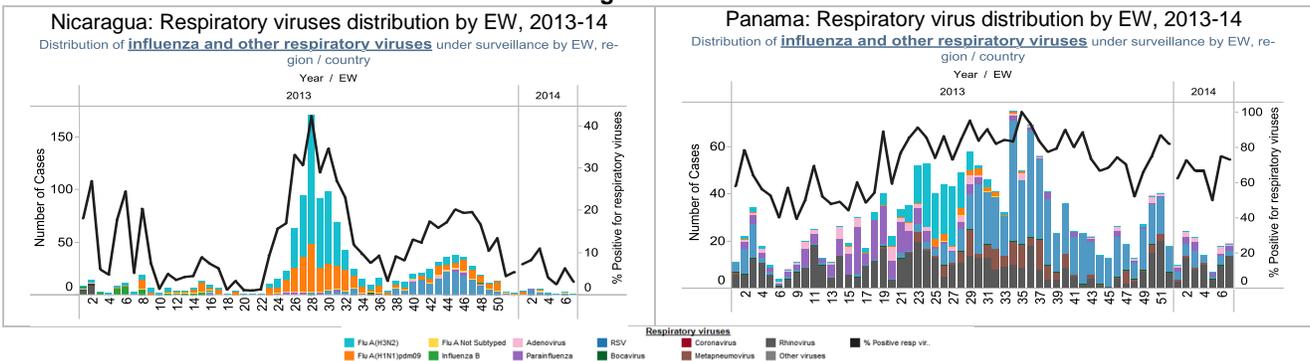
El Salvador



In Nicaragua, according to national laboratory data from EW 4-7, 170 samples were analyzed of which 4.1% were positive for a respiratory virus and 0.6% were positive for influenza. Among the positive samples, RSV (71.4%), parainfluenza (14.3%) and influenza A(H1N1)pdm09 (14.3%) were detected.

In Panama, based on national laboratory data from EW 4-7, 85 samples were analyzed of which 68.2% were positive for a respiratory virus. Among the positive samples, rhinovirus (65.5%) and RSV (17.2%) predominated.

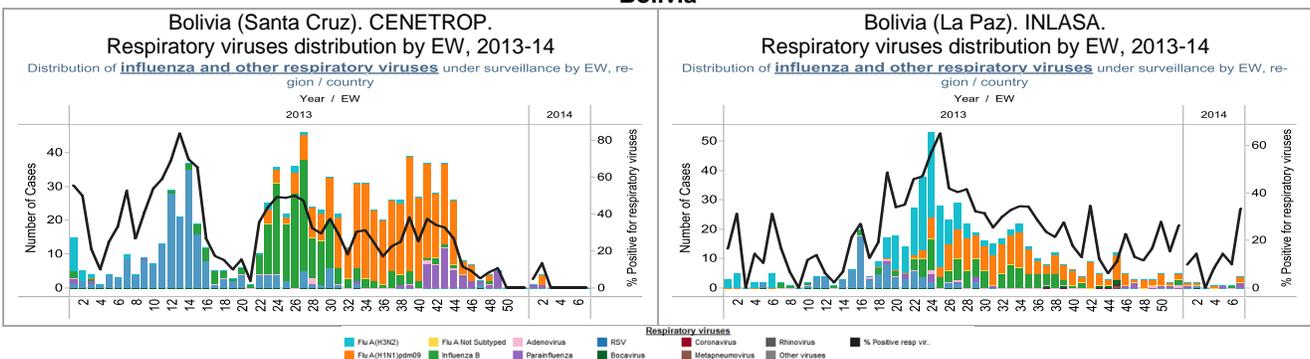
Nicaragua and Panama



South America – Andean countries

In Bolivia, according to laboratory data from CENETROP (Santa Cruz), from EW 4-7, 60 samples were analyzed and all were negative for the tested respiratory viruses, including influenza. According to laboratory data from INLASA (La Paz) from EW 4-7, 41 samples were analyzed of which 17.1% were positive for a respiratory virus and 9.8% were positive for influenza. Among the positive samples, influenza A(H1N1)pdm09, influenza B and parainfluenza were detected.

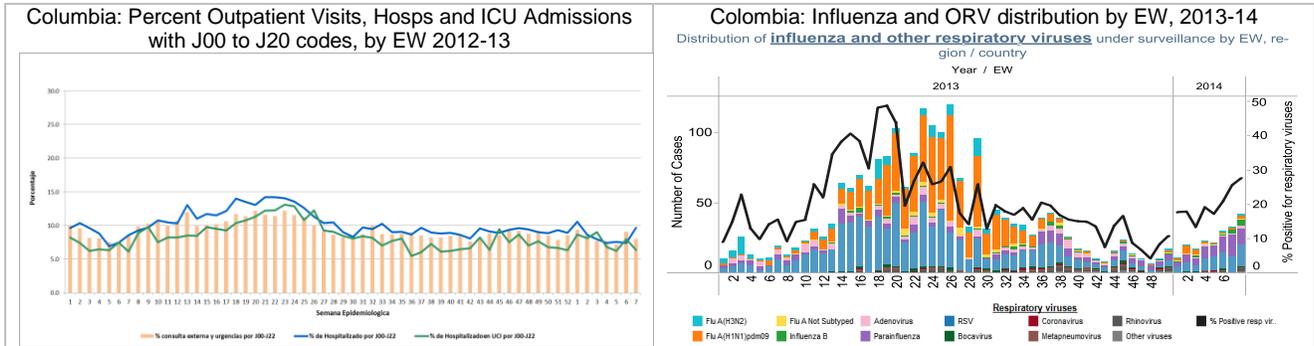
Bolivia



In Colombia, nationally during EW 7, the proportions of hospitalizations (9.7%), ICU admissions (6.4%), and outpatient and urgent visits (8.0%) with ARI-associated ICD-10 codes (J00 to J22) remained low. Based on INS national laboratory data from EW 5-8, 547 samples were analyzed, of which 23.0% were positive for a respiratory virus and 3.1% were positive for influenza. Among the positive influenza samples, 52.9% were

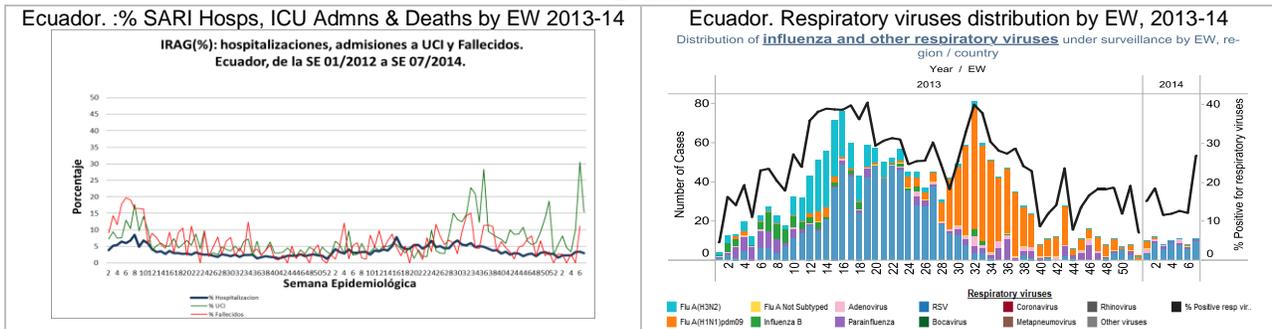
influenza A (66.7% A(H1N1)pdm09 and 22.2% A(H3N2)) and 47.1% were influenza B. Among other respiratory viruses, RSV (38.9% of positive samples) and parainfluenza (37.3%) predominated.

Colombia



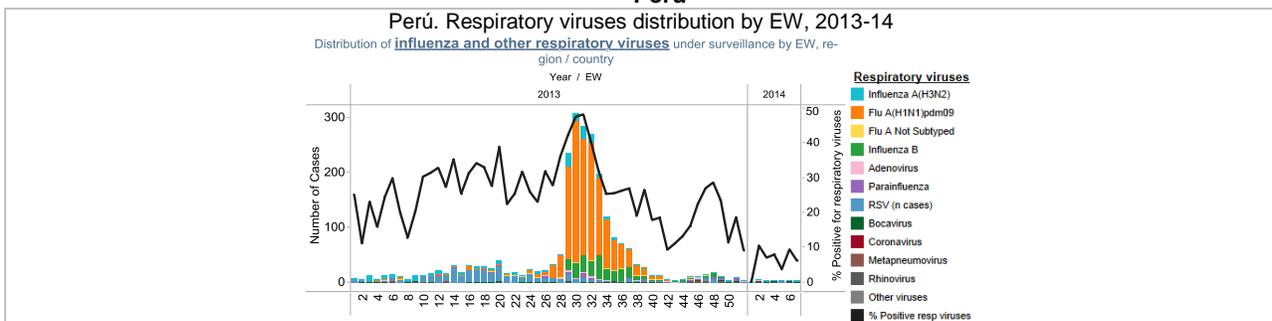
In Ecuador respiratory virus activity remained low. During EW 7, the proportions of SARI-associated hospitalizations (2.9%) and ICU admissions (15.4%) decreased compared to the previous week while the proportion of SARI-associated deaths (11.1%) increased. Based on national reference laboratory data from EW 4-7, 278 SARI samples were analyzed, of which 14.4% were positive for a respiratory virus and 0.4% were positive for influenza. Among the positive samples, RSV predominated (82.5%).

Ecuador



In Peru, based on national laboratory data from EW 4-7, 157 samples were analyzed, of which 6.4% were positive for a respiratory virus. Among the positive samples, RSV (60.0%), and human metapneumovirus (20.0%) predominated.

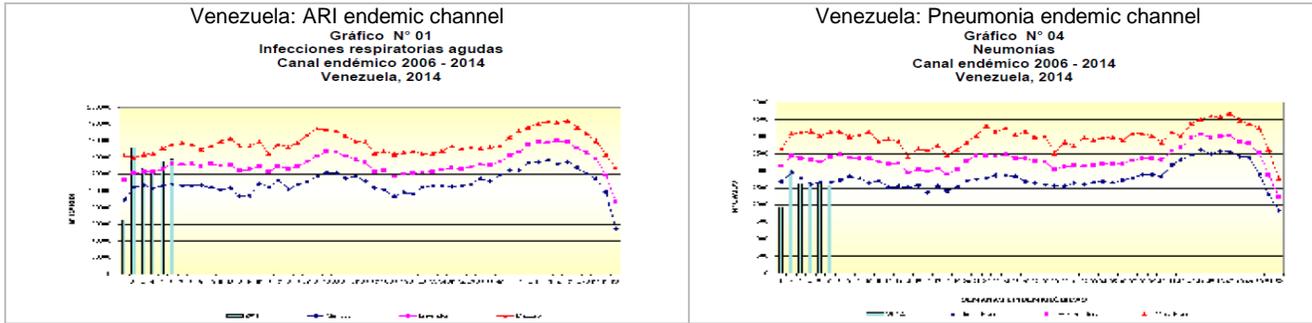
Peru



In Venezuela⁷ during EW 6 the number of ARI cases increased by 2.9% while the number of pneumonia cases decreased by 1.7%, compared to the previous EW. Both were within the expected levels for this time of year. During EW 6, 103 SARI-associated hospitalizations were reported, with children ≤ 1 year of age comprising the largest proportion of cases. Based on virologic data from January 1, 2013 to February 8, 2014, 5,325 samples were analyzed from suspected influenza cases, of which 52.4% were positive for influenza. Among the positive samples, 91.7% were influenza A(H1N1)pdm09.

⁷ Venezuela. Boletín epidemiológico, EW 6.

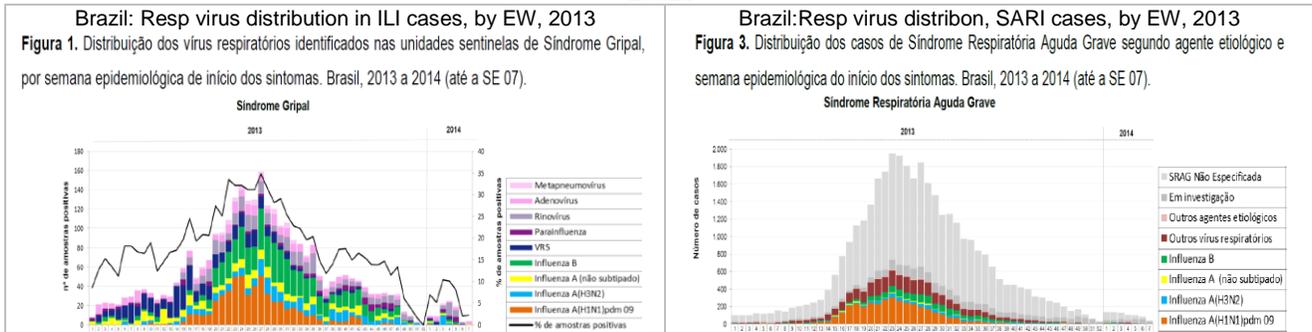
Venezuela



South America – South Cone and Brazil

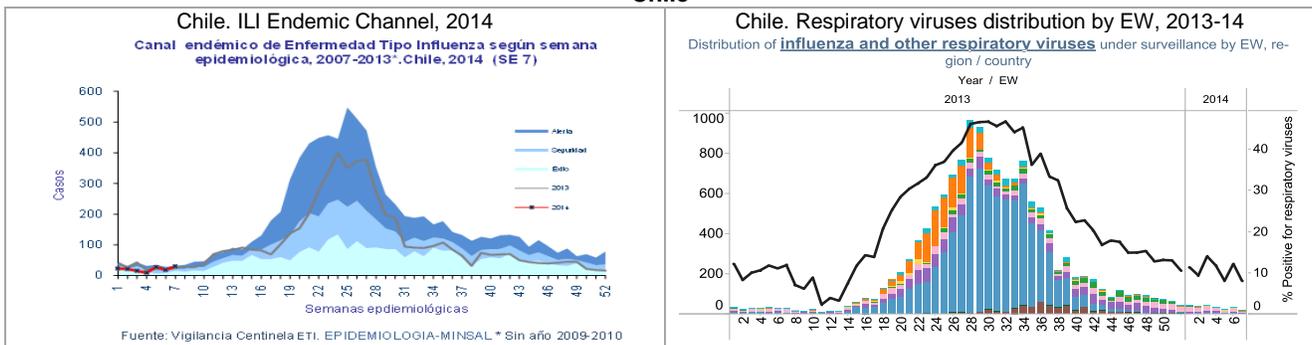
In Brazil⁸, according to ILI sentinel surveillance data through EW 7, 1,296 samples were analyzed, of which 6.9% were positive for influenza or another respiratory virus. During EW 7, 2.3% of samples were positive for a respiratory virus, and among these adenovirus and influenza A (not subtyped) were detected. Based on universal SARI surveillance data during this same period, 737 SARI cases were reported and 4.7% of these were positive for influenza. Among the positive samples, influenza A(H1N1)pdm09 and A(H3N2) predominated. Through EW 7, 71 SARI-associated deaths were reported, of which 5.6% were positive for influenza.

Brazil



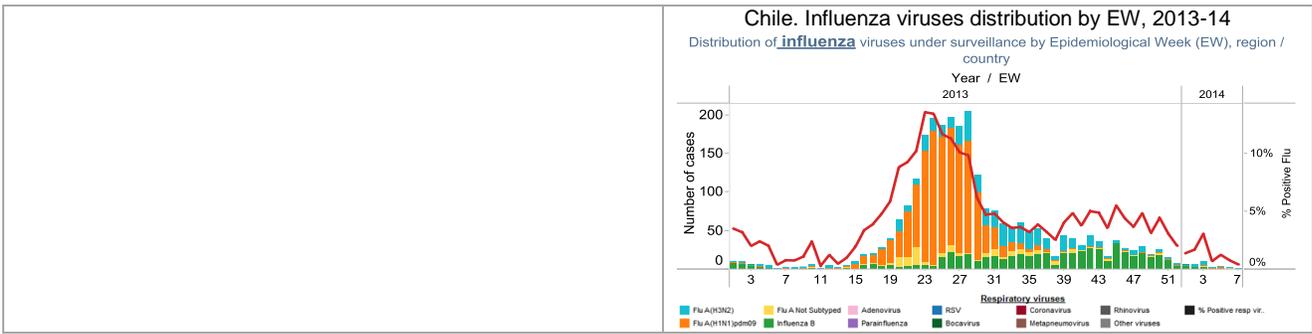
In Chile⁹, ILI activity during EW 7 remained low (rate: 1.9 per 100,000 inhabitants) and was in the alert zone of the endemic channel. Based on laboratory data from EW 6-7, 514 samples were analyzed, of which 10.1% were positive for a respiratory virus and 0.6% were positive for influenza. Among the positive samples, adenovirus predominated (67.3%), followed by parainfluenza (19.2%).

Chile

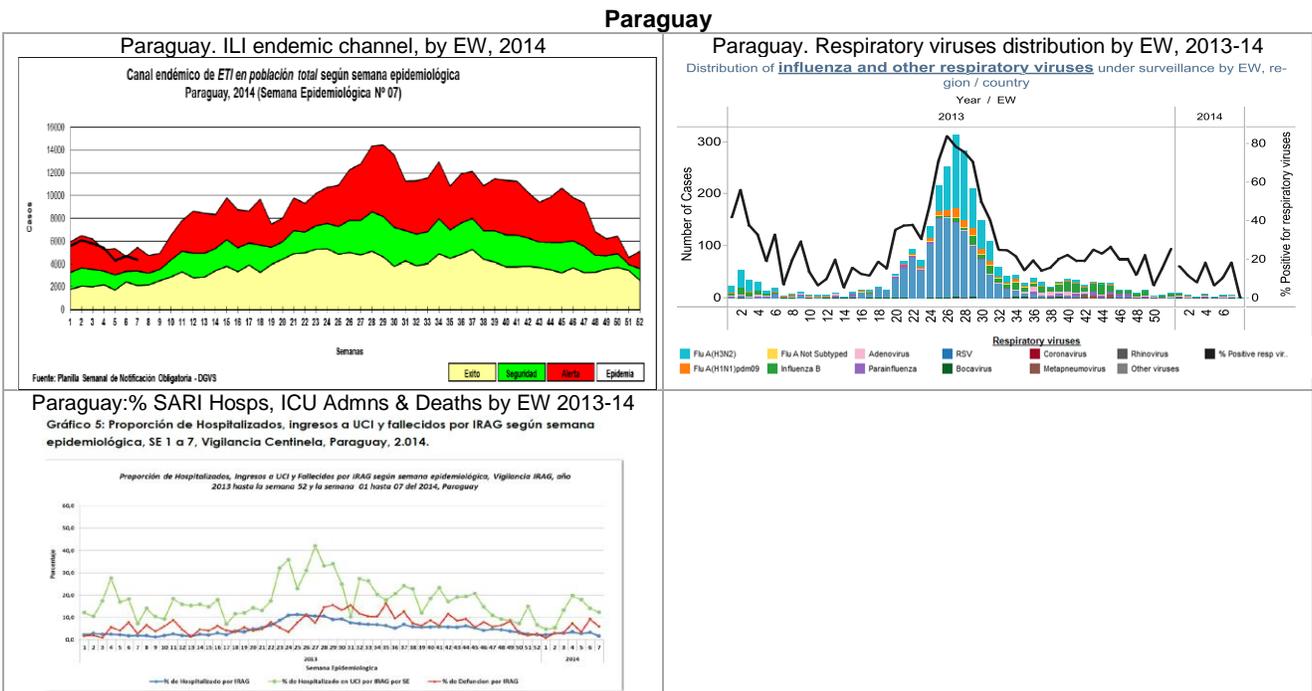


⁸ Brasil. Boletim informativo. Secretaria de Vigilância em Saúde. SE 7, 2013.

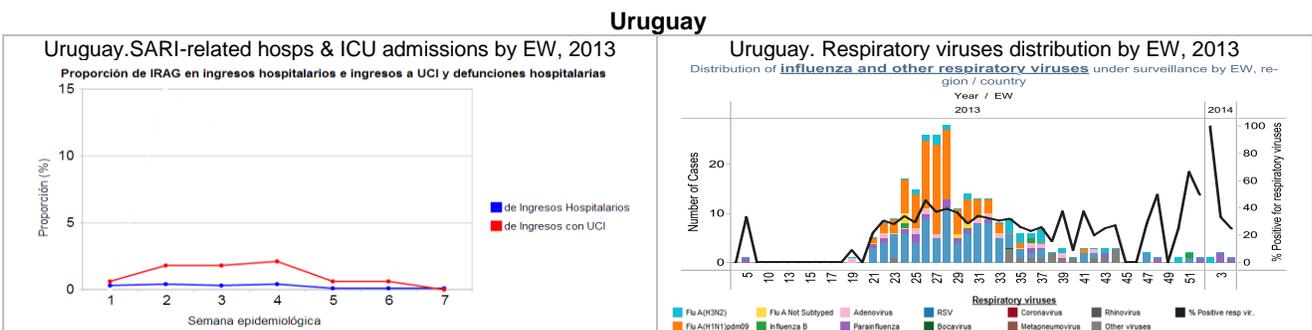
⁹ Chile. Informe de situación. EW 7. Available at: <http://epi.minsal.cl/>



In Paraguay¹⁰ during EW 7, the ILI consultation rate (64.7 per 100,000 inhabitants) decreased slightly from the previous EW and was within the alert zone of the endemic channel. The proportion of SARI-associated hospitalizations (1.6%) 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 5-8, 146 samples were analyzed, of which 9.6% were positive for a respiratory virus and 2.7% were positive for influenza. Among the positive samples, adenovirus (50.0%) and influenza B (28.6%) predominated.



In Uruguay¹¹ during EW 7, the proportions of SARI-associated hospitalizations, ICU admissions and deaths were similar to the previous EW, and remained at low levels. Based on laboratory data from EW 4-7, four samples were analyzed of which one tested positive for parainfluenza.



¹⁰ Paraguay. Informe de situación. Vigilancia de ETI e IRAG. SE 7.

¹¹ Uruguay. Generador de gráficos de la división de epidemiología, Dirección General de Salud – Ministerio de Salud Pública