Regional Update EW 32, 2012

Influenza

(August 21, 2012 - 17 h GMT; 12 h EST)

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.

- In North America, influenza activity remains low. In the U.S., from July 12 through August 16, 2012, a total of 224 infections with influenza A (H3N2) variant (H3N2v) viruses have been reported in 8 states.
- In Central America and the Caribbean, reported co-circulation of different respiratory viruses. Among influenza viruses, influenza B predominated in Cuba and increased detection in Costa Rica and Panama.
- In South America, the acute respiratory disease activity continued to decrease (Argentina, Bolivia, Brazil, Chile and Paraguay), associated with the decreased activity of RSV. Co-circulation of influenza viruses was observed with varying prevalence: influenza B predominates in Peru, influenza A(H3N2) in Chile and influenza A (H1N1)pdm09 in Brazil and Paraguay.

Epidemiologic and virologic influenza update

North America

In Canada, in epidemiological weeks (EW) 31 and 32, 2012, influenza activity remained low. In EW 32, the influenza-like illness (ILI) consultation rate was within the expected levels for this time of year. In EWs 31 and 32, among the total samples analyzed, the proportion of samples positive for influenza (0.6% and 0.3% respectively) decreased. In EWs 31 and 32, of the total cases positive for influenza, the percent positive for influenza A was 77.8%. Concerning other respiratory viruses, the percent positive for rhinovirus remained the highest (18.8%) as compared to other respiratory viruses. Among the samples tested for resistance to oseltamivir (n=1,468), no resistant cases have been detected.

In the United States[1], in EW 32, nationally, the proportion of ILI consultations (1.0%) was below the baseline (2.4%). Nationally, the proportion of deaths attributed to pneumonia and influenza for EW 32 (5.7%) was below the epidemic threshold for this time of year (6.5%). In EW 32, no pediatric deaths associated with influenza were reported. Among all samples tested during EW 32 (n=1199), the percentage of samples positive for influenza (4.09%) decreased slightly as compared to the previous week. Nationally, among the positive samples, 69.4% were influenza A [among the subtyped influenza A viruses, mainly influenza A(H3N2)v] and 30,6% were influenza B. From July 12 through August 16, 2012, a total of 224 infections with influenza A (H3N2) variant (H3N2v) viruses have been reported in eight states (Hawaii [1], Illinois [3], Indiana [138], Michigan [1], Ohio [72], Pennsylvania [4], West Virginia [3], and Wisconsin [2]). So far during the current outbreaks, eight confirmed cases have been hospitalized as a result of their illness; no deaths have occurred. At this time no ongoing human-to-human transmission has been identified. Public health and agriculture officials are investigating the extent of disease among humans and swine, and additional cases are likely to be identified as the investigation continues.

In Mexico, according to laboratory data, in EW 32, of the samples analyzed (n=11), only one case of influenza A(H1N1)pdm09 was detected.

Caribbean

CAREC*, in EW 32, received epidemiological information from 5 countries: Belize, Dominica, Jamaica, St. Vincent & the Grenadines and Suriname. In EW 32, the proportion of severe acute respiratory infection

* Includes Barbados, Belize, Dominica, Jamaica, St Vincents and the Grenadines, St Lucia, Suriname and Trinidad and Tobago

(SARI) hospitalizations was 1.9% which is lower than what was seen in the prior week (3.1%). The SARI rate increased in 3 countries (Belize, Dominica and Jamaica). No SARI-related deaths were reported. In the last 4 weeks (EW 29 to 32) the following viruses have been laboratory confirmed: influenza B (Jamaica), respiratory syncytial virus (Barbados), parainfluenza (St. Vincent and the Grenadines), and rhinovirus (Dominica, St. Vincent and the Grenadines). To date in 2012, the overall percentage positivity for samples tested is 37%, with a 19% positivity for influenza.

In Jamaica for EW 32, the proportion of consultations for Acute Respiratory Illness (ARI) was 3.2% which was 0.3% less than the previous week. The proportion of admissions due to SARI was 0.7% which was the same as that reported for the week before. There were no SARI deaths reported for EW 32. No influenza viruses were detected in EW 31.

In Cuba, according to laboratory data in EW 32, among the samples analyzed (n=48), the percent positivity for respiratory viruses was 25% and the percent positivity for influenza, among all samples analyzed, was 14%. Influenza B has been the predominant respiratory virus since EW 23, followed by influenza A(H1N1)pdm09 and other respiratory viruses.

In the Dominican Republic, according to laboratory data from EW 33, among the samples analyzed (n=18), the percent positivity for respiratory viruses remained low (4%). RSV was detected this EW.

Central America

In Guatemala, in EW 31, according to laboratory data, among all samples tested (n=26), the percentage of positive samples for respiratory viruses was 11.5%, lower than the previous week (43.2%). Parainfluenza and other respiratory viruses were detected.

In Nicaragua, in EW 32, according to laboratory data, among all samples tested (n=73), the percentage of positive samples for respiratory viruses was 13.7%, lower than the previous week (22.1%). SRV, parainfluenza and influenza A(H3N2) were detected.

In Panama, in EW 32, according to laboratory data, among all samples tested (n=43), the percentage of positive samples for respiratory viruses was 95,3%, higher than the previous week (75%). Influenza B, SRV, influenza A (H1N1)pdm09, parainfluenza, adenovirus and other respiratory viruses were detected.

South America – Andean

In Santa Cruz, Bolivia, according to data from CENETROP laboratory, viral circulation remained in low levels in EW 32, among the tested samples (n=23) 8,7% were positive for respiratory viruses. According to INLASA laboratory, which reports viral circulation from La Paz, Oruro, Potosí, Tarija, Pando, Beni and Chuquisaca there has been a decreasing percentage of positive samples since EW 24, reaching 23.1% in EW 31 among the 39 samples analyzed. In La Paz, SARI surveillance in EW 32 showed that the proportions of SARI hospitalizations (5.2%) and SARI admitted in ICU (3.6%) remained similar to the previous week. Three SARI-deaths were reported this week. Among the samples analyzed (n=32) the percentage of positive samples for respiratory viruses remained low (9.4%).

In Peru[2], at the national level, in 2012 through EW 31, the number of pneumonias in children under 5 years old reached a rate of 74/10,000 children, which represents a lower level as compared to the previous year and remaining within the endemic channel. The numbers of ARI cases was within the endemic channels. According to laboratory data at the national level, in EW 32, among the samples analyzed (n=61), the percent positivity for respiratory viruses was 39.3%, which was higher than previous EW, with predominance of influenza B virus (22/23).

South America – Brazil and Southern Cone

In Argentina[3], at the national level and according to laboratory data, the percentage of positive samples for respiratory viruses has shown a decreasing trend since EW 25, reaching 31% among the analyzed samples (n=659) in EW 32, with predominance of RSV (70%) among the positive samples. Meanwhile, influenza A (H1N1) pdm09 and influenza B have been detected since EW 25.

In Brazil[4], in EW 32, the number of SARI cases continued to decrease since its' peak in EW 26. Of the total cases this week, 22% were confirmed to be influenza of which 72% were confirmed to be the influenza A(H1N1)pdm09 virus. In 2012 through EW 32, 1173 SARI deaths were reported (29% of them associated with influenza and among them, 85% associated with A(H1N1)pdm09 virus). The SARI deaths were reported mainly in the Southern and Southeastern regions, peaking in EW 25; since then there has been a decreasing trend through the present week.

In Chile[5], in EW 32 at the national level, ILI activity remained similar to the previous week, remaining in the alert zone of the endemic channel (11.7/100,000 population). The percent of emergency visits for respiratory causes (24.4%) in EW 31 remained similar to the previous week. According to laboratory data at the national level, in the same week, among the samples analyzed (n=1228), the percent positivity for respiratory viruses was 34.5%, which was lower than the previous week, with a predominance of RSV (76%) among the positive samples. According to the SARI surveillance system, the proportion of hospitalizations has shown a decreasing trend since EW 27, reaching 3% in EW 31. Since the beginning of the year, 68 SARI deaths have been reported and in 11 cases, influenza viruses were confirmed (5 for influenza A (H3N2), 1 for influenza A not subtyped, 1 for influenza B y 1 for RSV).

In Paraguay[6], at the national level, in EW 32, the proportion of ILI consultations (7.5%) remained similar to the previous EW. The same pattern was observed with the ILI rate for the same week (153/100,000 population). In the SARI surveillance system, the proportion of hospitalizations (8.1%) did not show significant changes with respect to prior EW. Since the beginning of the year, a total of 161 SARI-deaths were reported of which 24 were confirmed for some respiratory virus, of which 16 were for influenza A(H1N1)pdm09 and 8 for RSV. In EW 32, among the samples analyzed from SARI cases (n=27), the percent positivity for respiratory viruses (25.9%) had remained similar in the last 3 weeks. Influenza B and influenza A(H1N1)pd09 were detected.

Information for the National Influenza Centers:

Identification of the virus of influenza A(H3N2)v

The virus of **influenza A(H3N2)v** is the result of the incorporation of gene M of virus A(H1N1) pdm09 in the swine-origin triple reassortant influenza A(H3N2) virus. For the detection of the circulation of this virus it is necessary to test the influenza samples according to the following algorithm:

- Use the kit of the CDC for the typing of influenza viruses A/B (CDC Influenza Virus rRT-PCR TO/B typing panel (RUO) CDC # FluRUO-01).
- Evaluate all the positive samples for influenza A with the kits of the CDC for subtyping of influenza A, using the primers/probes with its controls for H1 and H3 seasonal, InfApdm and H1pdm for the virus of the pandemic of 2009, respectively (CDC Influenza Virus rRT-PCR A subtyping panel (RUO) CDC # FluRUO-04 & Pooled Influenza Positive Control (RUO) CDC# VA2716).

Interpretation of results:

CASE	Inf A	Inf A pdm	H3	H1	H1pdm	B	RESULT
1	+	-	+	_	_	-	Influenza A(H3N2)
2	+	+	+	-	-	-	Influenza A(H3N2)v[1]
3	+	+	-	-	+	-	Influenza A (H1N1)pdm09
4	+	_	-	+	_	-	Influenza A(H1N1)
5	+	-	-	-	-	-	No subtype available[1]

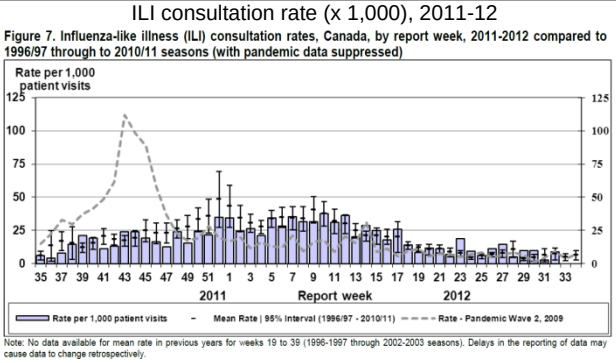
[1] Send sample to CDC

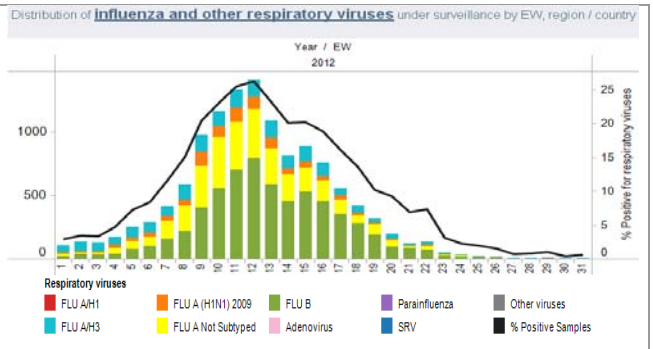
Graphs

North America

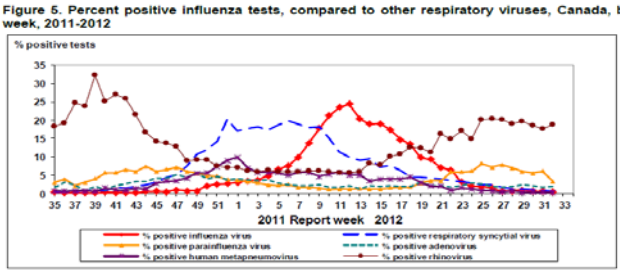
Canada

ILI consultation rate (x 1,000), 2011-12

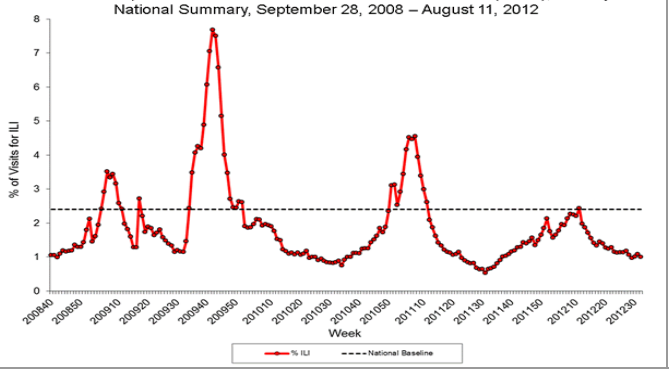


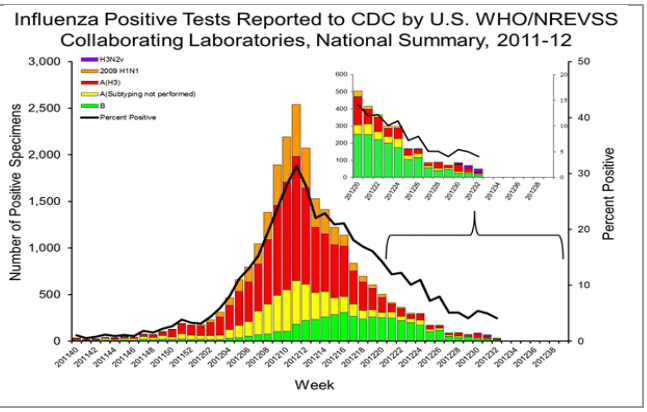


Positive samples for respiratory viruses, 2011-12



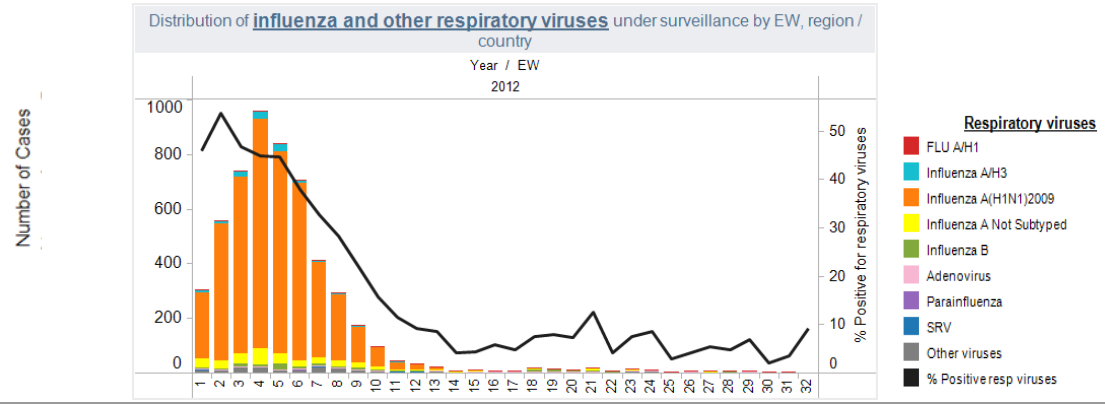
United States





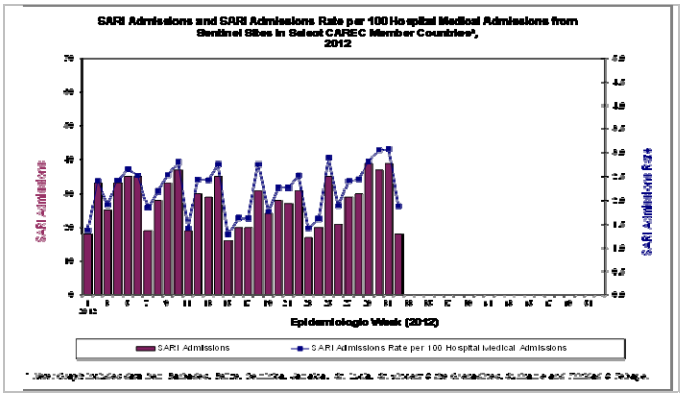
Mexico

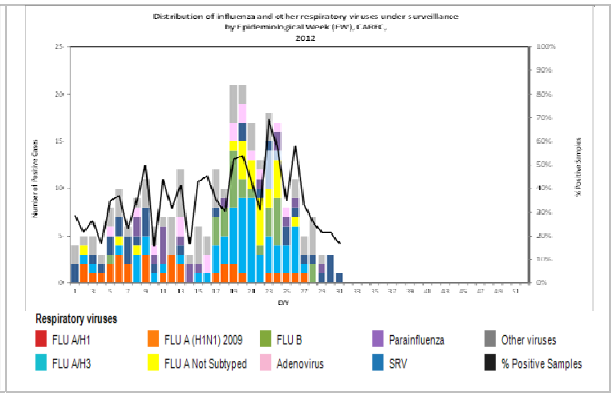
Distribution of respiratory viruses by EW, 2011-2012



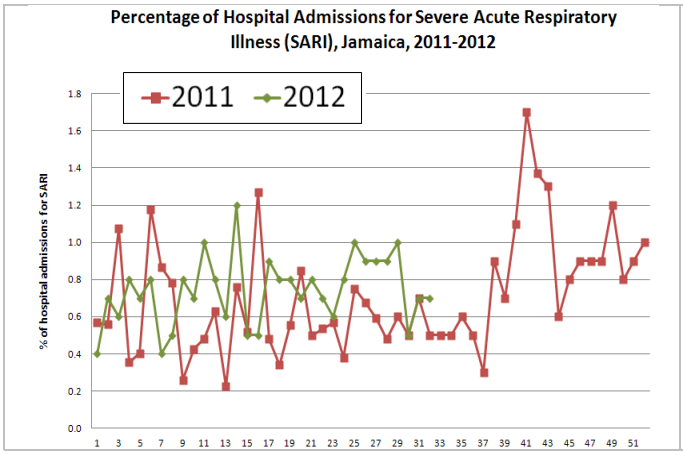
Caribbean

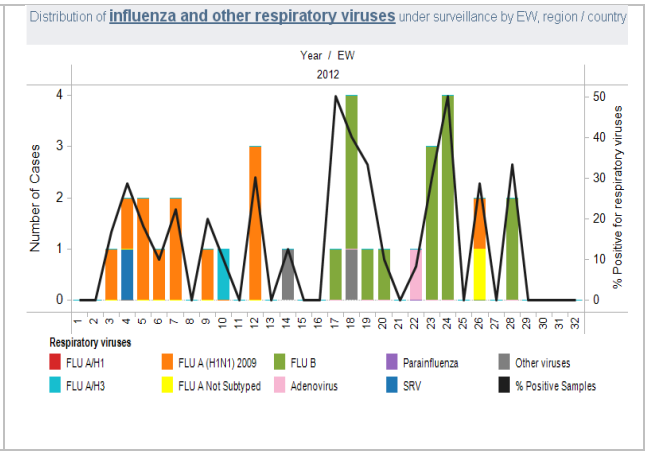
CAREC





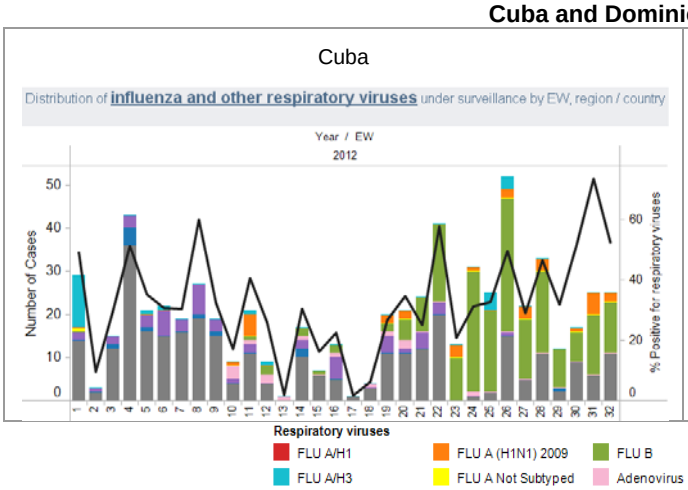
Jamaica



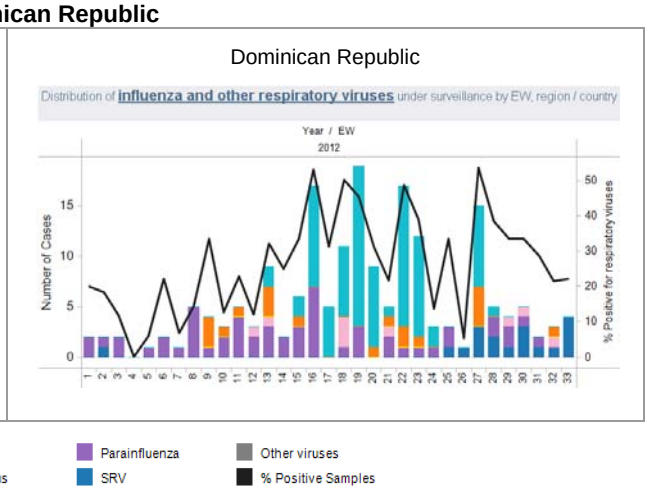


Cuba and Dominican Republic

Cuba



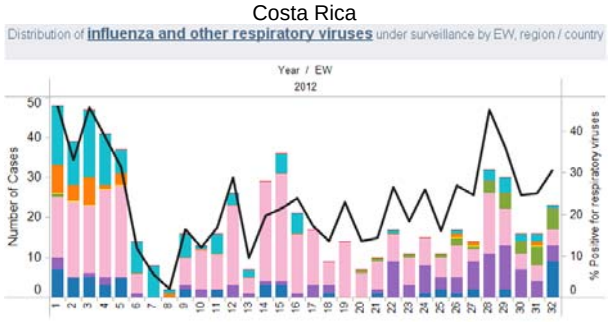
Dominican Republic



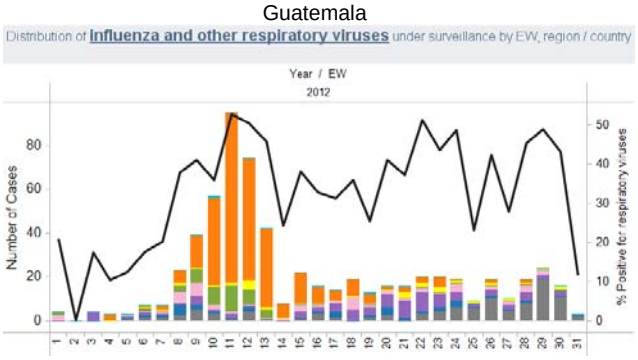
Central America

Costa Rica, Guatemala, Nicaragua and Panama

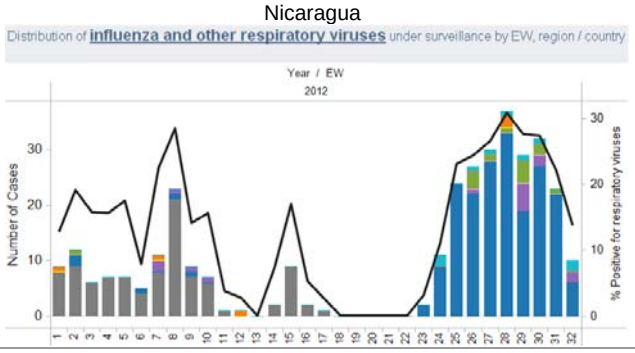
Costa Rica



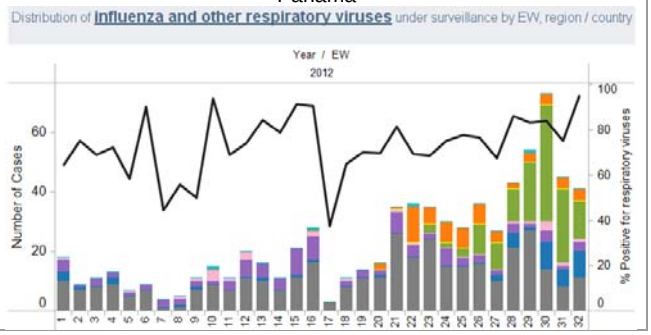
Guatemala



Nicaragua



Panama



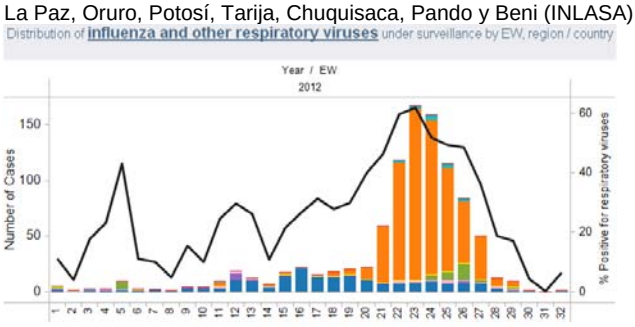
Respiratory viruses

FLU A/H1 | FLU A (H1N1) 2009 | FLU B | Parainfluenza | Other viruses
FLU A/H3 | FLU A Not Subtyped | Adenovirus | SRV | % Positive Samples

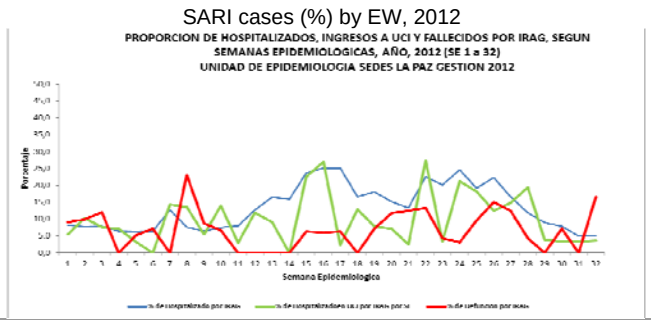
South America - Andean

Bolivia

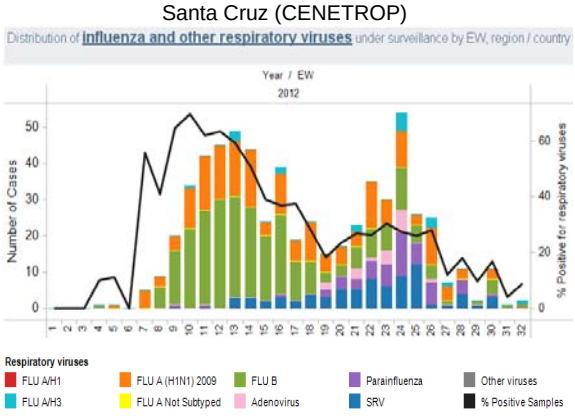
La Paz, Oruro, Potosí, Tarija, Chuquisaca, Pando y Beni (INLASA)



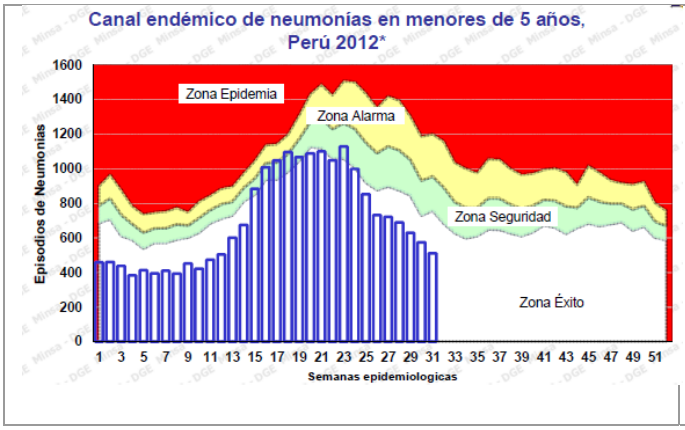
SARI cases (%) by EW, 2012

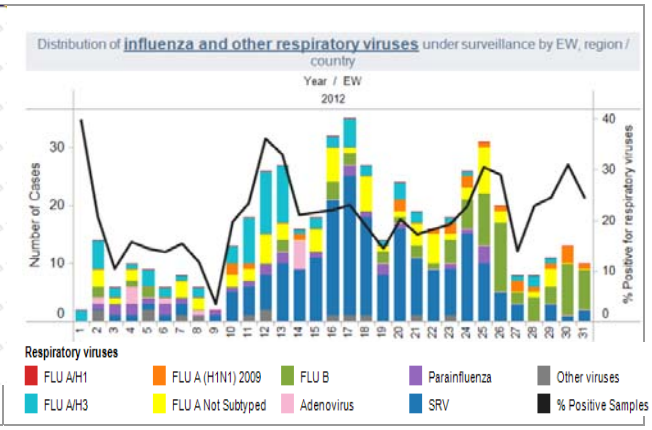


Santa Cruz (CENETROP)



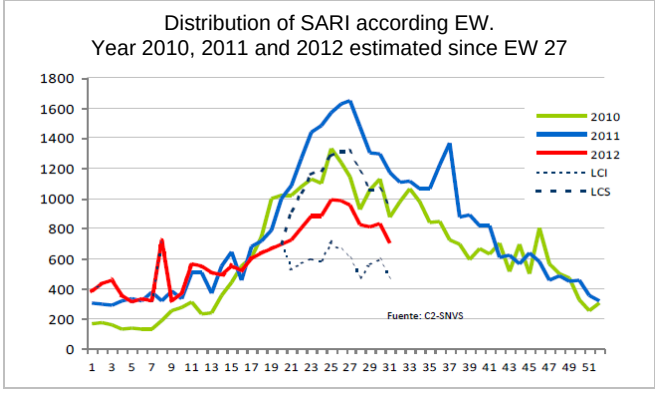
Peru

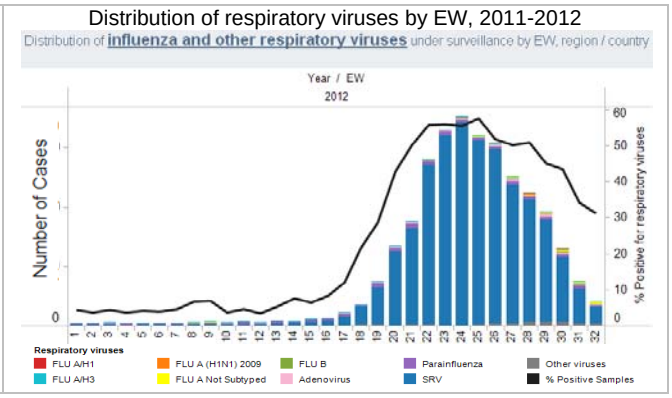




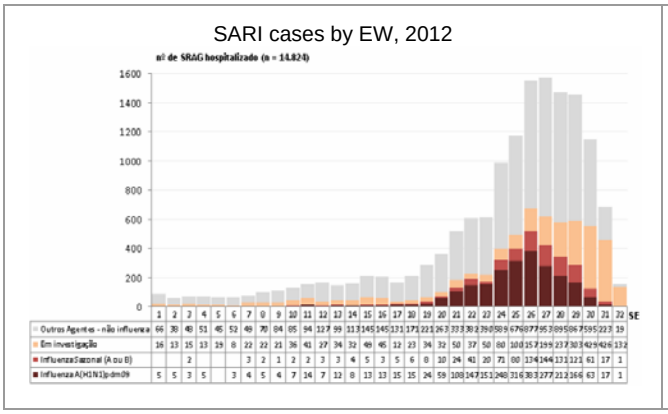
South America – Southern Cone

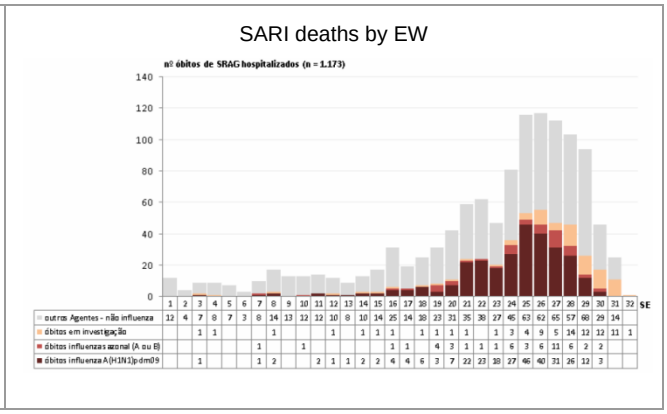
Argentina





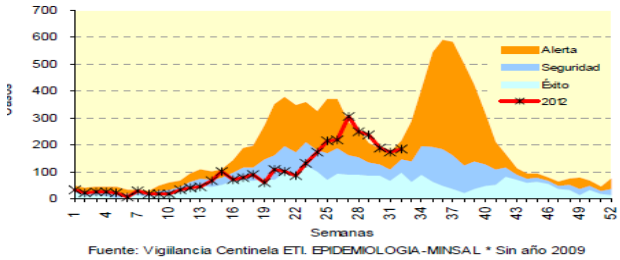
Brazil





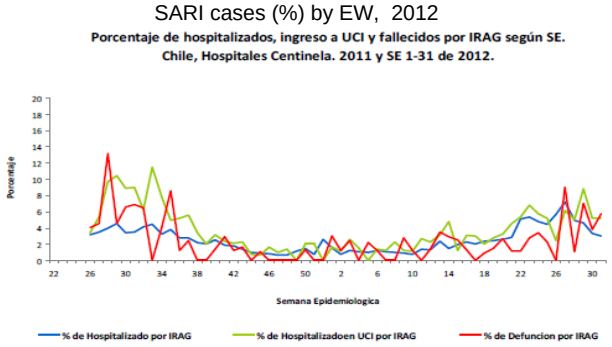
Chile

ILI cases by EW 2012

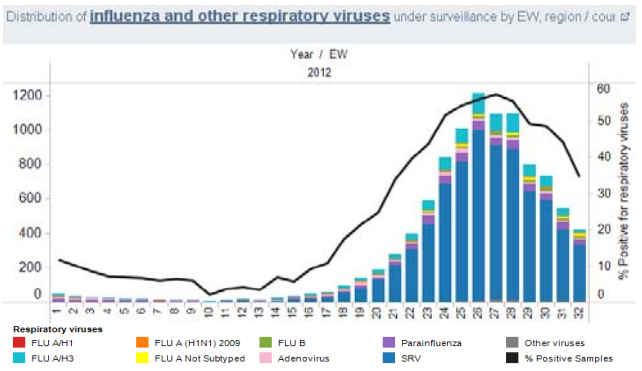


Fuente: Vigilancia Centinela ETI. EPIDEMIOLOGIA-MINSAL * Sin año 2009

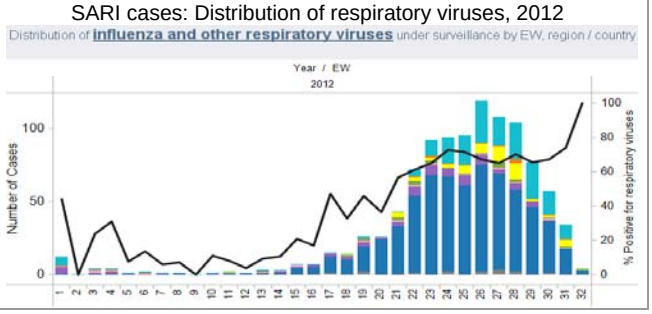
SARI cases (%) by EW, 2012



Distribution of respiratory viruses by EW, 2011-2012

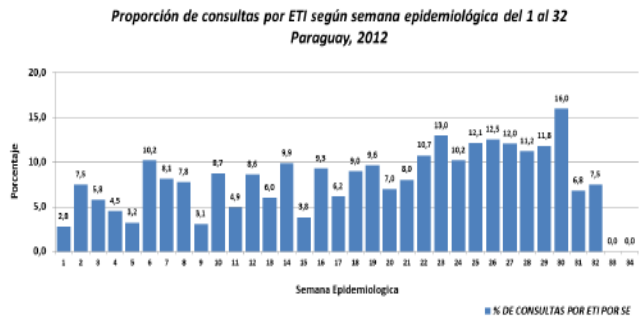


SARI cases: Distribution of respiratory viruses, 2012

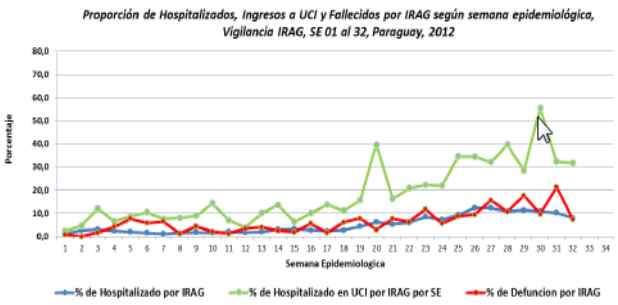


Paraguay

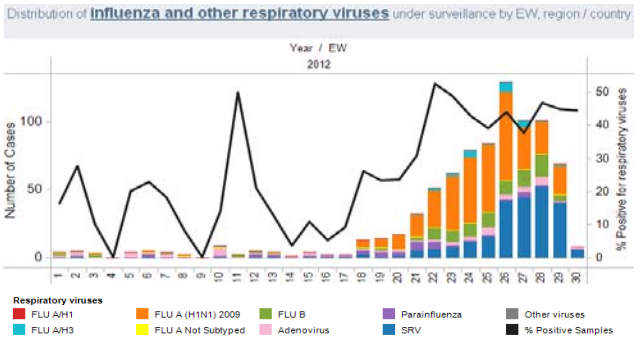
ILI consultation (%) by EW, 2012



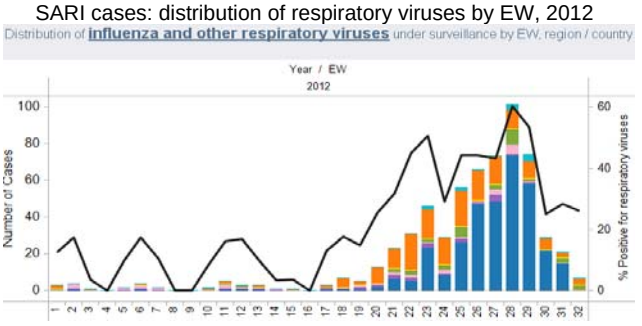
SARI cases (%) by EW 2012



Distribution of respiratory viruses by EW, 2012



SARI cases: distribution of respiratory viruses by EW, 2012



1 US Surveillance Summary. EW 32. Centers for Disease Control and Prevention
2 Peru. Sala de Situación de Salud. SE 31. Ministerio de Salud. Dirección General de Epidemiología
3 Argentina. Actualización situación de enfermedades respiratorias 2012. SE 32.
4 Brasil. Boletim Informativo SE 32. http://portalsaude.saude.gov.br/portalsaude/noticia/6184/785/boletim-informativo-_-influenza.html
5 Chile. Informe de situación. SE 32. Available at: www.pandemia.cl
6 Paraguay. Boletín epidemiológico semanal SE 32. Available at: http://www.vigisalud.gov.py/index.php?option=com_phocadownload&view=category&id=18:vigilancia-eti-e-irag-ano-2011&Itemid=86