Regional Update EW 19, 2013



Influenza and other respiratory viruses (May 21, 2013)

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: in Canada and the US, most influenza activity indicators were within expected levels for this time of year. Influenza B remained as the dominant circulating influenza virus in Canada and the US. In Mexico, influenza A(H3N2) remained the most prevalent virus.
- Central America and the Caribbean: similar or increasing respiratory virus activity was reported in this sub-region as compared to previous weeks. In this sub-region, among influenza viruses, influenza A(H1N1)pdm09 has been increasing in Cuba and Dominican Republic in the last weeks. Among other respiratory viruses, parainfluenza (Cuba, Dominican Republic, Honduras and Panama) and RSV (Costa Rica, El Salvador and Guatemala) were also reported.
- S<u>outh America</u>: acute respiratory infection (ARI) activity showed an increasing trend in most countries but remained within expected levels for this time of the year. In the Andean countries, RSV continued as the predominant circulating virus, with co-circulation of influenza A(H3N2), except in Bolivia (Santa Cruz) where influenza B was predominant. In the Southern Cone, RSV also circulated predominantly. In Chile and Brazil, influenza A(H1N1)pdm09 was reported as the circulating virus.

Highlights:

Novel coronavirus infection

- WHO. Global Alert and Response: Novel coronavirus infection update (May 18th, 2013) http://www.who.int/csr/don/2013_05_18_ncov/en/index.html
- PAHO. Epidemiological alert: Human infection caused by novel coronavirus update (May 17th, 2013)
 http://new.paho.org/hq/index.php?option=com_content&view=article&id=8683%3A17-may-2013-middle-east-repiratory-syndrome-coronavirus-mers-cov-update-&catid=2103%3A--hsd0104d-most-recent-ea&Itemid=2291&lang=en

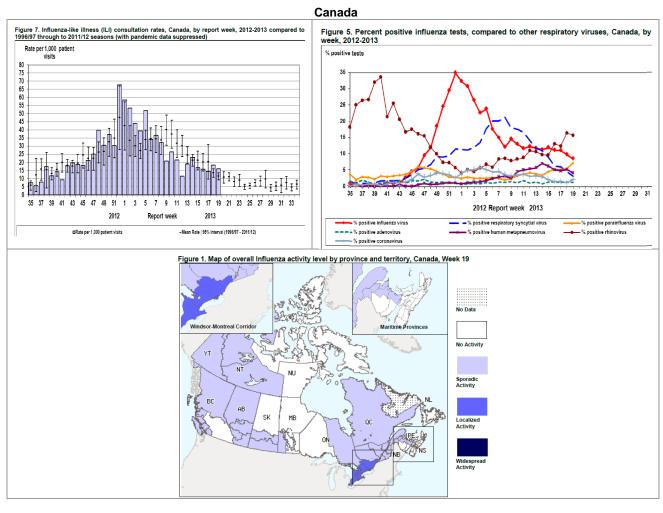
Avian influenza A(H7N9) virus

- Human infection with avian influenza A(H7N9) virus in China May 17th update
 <a href="http://new.paho.org/hq/index.php?option=com_content&view=article&id=8683%3A17-may-2013-middle-east-repiratory-syndrome-coronavirus-mers-cov-update-&catid=2103%3A--hsd0104d-most-recent-ea&Itemid=2291&Iang=en
- PAHO. Epidemiological alert: Human infection caused by influenza A(H7N9) in China update (May 8th, 2013)
 http://new.paho.org/hq/index.php?option=com_content&view=article&id=8632%3A8-may-2013-human-infection-caused-by-avian-influenza-ah7n9-in-china-update&catid=2103%3A--hsd0104d-most-recent-ea&Itemid=2291&lang=en

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

North America:

In Canada¹, in epidemiological week (EW) 19, influenza activity continued its slow decline. Nationally, the influenza-like-illness (ILI) consultation rate (18.3 ILI consultations per 1,000 patient visits) decreased slightly and was above the expected range; however, fewer regions reported localized activity compared to the previous week. During EW 19, the highest consultation rate was observed in children 5-19 years of age (33.2/1,000). Among the total samples analyzed, the percentage of positive influenza tests decreased from 9.8% in EW 18 to 8.6% in EW 19. Of all the positive influenza cases, 86.5% were influenza B (which was the predominant strain, but detections continued to decrease for the third consecutive week) and 13.5% were positive for influenza A viruses [41.9% were A(H1N1)pdm09, 19.4% were influenza A(H3), and 38.7% were influenza A(unsubtyped)]. As for other respiratory viruses, detections of rhinovirus decreased slightly to 15.8% in EW 19, but have been slowly increasing since EW 01.



In the United States², during EW 19, influenza activity remained low. Nationally, the proportion of ILI consultations (0.9%) was below the national baseline of 2.2%. Regionally, all 10 regions reported a proportion of outpatient visits for ILI below their region-specific baseline levels. Nationally, the proportion of deaths attributed to pneumonia and influenza for EW 19 (6.4%) was below the epidemic threshold for this time of year. In EW 19, one influenza-associated pediatric death was reported (associated with influenza A unsubtyped). A cumulative rate for the season of 44.3 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported; 50% of hospitalizations were among adults 65 years and older. Among all samples tested during EW 19 (n=2,416), the percentage of samples positive for influenza (5.1%) increased slightly as compared to the previous week. Nationally, among the positive

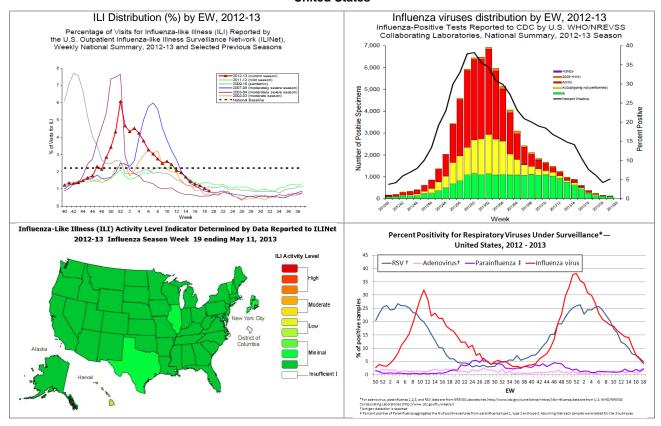
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¹ FluWatch Report. EW 19. Available at http://www.phac-aspc.gc.ca/fluwatch/

² USA: CDC FluView report. EW 19. Available at: http://www.cdc.gov/flu/weekly/

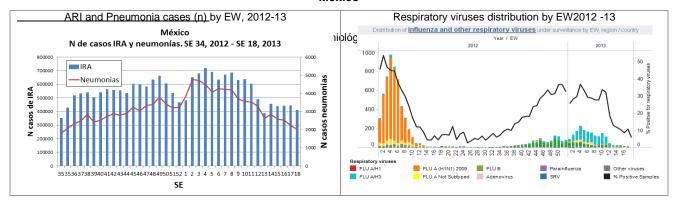
samples, 75.8% were influenza B and 24.2% were influenza A [13.3% A(H3N2), 10% A(H1N1)pdm09 and 76.7% influenza A unsubtyped]. In EW 18, as for other respiratory viruses, detections of parainfluenza increased slightly to 2.3% and RSV (4.9% among samples tested) continued to decrease.

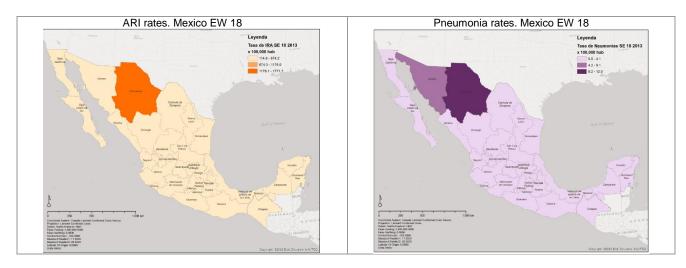
United States



In Mexico³, nationally in EW 18, the number of ARI cases (n=412,151) decreased by 7% as compared to EW 17 (n=444,609). The number of pneumonia cases (n=2019) also decreased and was 8.8% less than the number reported during EW 13 (n=2214). Regionally, the states that reported the highest rates of pneumonia per 100,000 habitants of in EW 18 were: Colima (5) Sonora (4.4), Nuevo Leon (4), Aguascalientes (3.8) and Jalisco (3.4). According to laboratory data, in 2013, between EWs 15-18, among the samples tested (n=595) the percent positivity for influenza viruses was ~9%. In EWs 15-18, among the positive influenza cases, 83% were influenza A (56.9% influenza A (H3N2), 20.5% A(H1N1)pdm09 and 0.2% influenza A unsubtyped) and 17% were influenza B.

Mexico

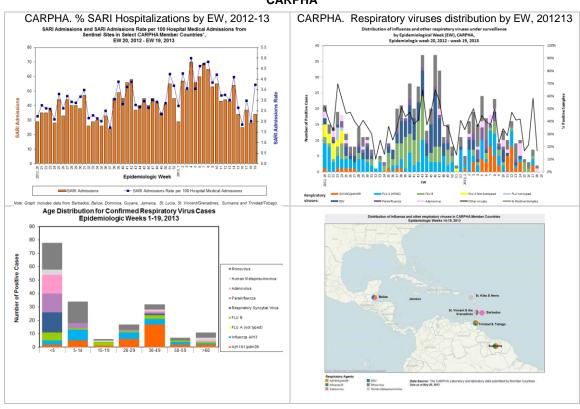




Caribbean

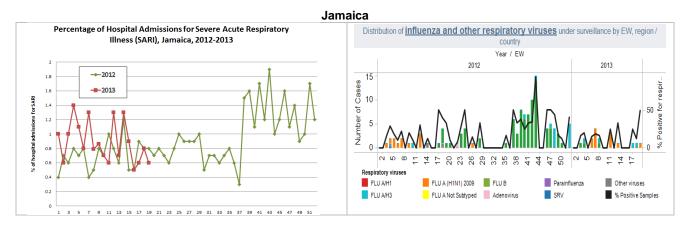
CARPHA⁴, received weekly SARI/ARI data from 7 countries for EW 19, 2013: Belize, Barbados, Dominica, Jamaica, St. Lucia, St. Vincent & the Grenadines and Trinidad & Tobago. In EW 19, 2013, the proportion of severe acute respiratory infection (SARI) hospitalizations was 3.7%. The highest rate of SARI was among children 6 months to 4 years of age (7.9%). One SARI deaths was reported by Barbados in EW 19, 2013. For cases with dates of onset between EW 14 to EW 19, 2013, the following viruses have been laboratory confirmed in member countries: influenza A (H1N1)pdm09 (Belize, Suriname, Trinidad & Tobago), influenza B (Suriname, Trinidad & Tobago), adenovirus (Barbados, Belize), human metapneumovirus (St. Vincent & Grenadines, St. Kitts & Nevis), rhinovirus (St. Vincent & Grenadines, Trinidad & Tobago), RSV (Belize). In 2013, to date, the CARPHA laboratory has confirmed 179 cases as positive for one or more respiratory agent. The overall percentage positivity for specimens tested in 2013 is 35.2%.





⁴ Agencia de Salud Pública del Caribe (CARPHA por sus siglas en inglés) EW 19.

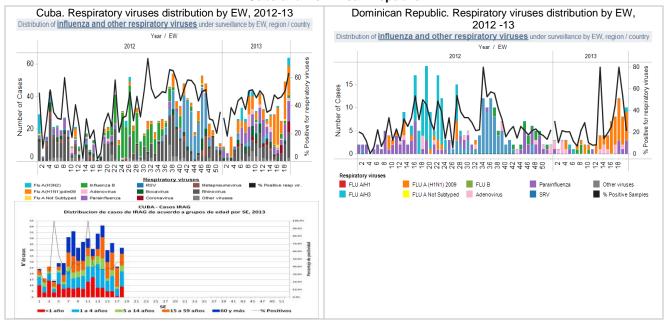
In Jamaica for EW 19 sentinel data show that the proportion of consultations for ARI was 4.1% which was 0.1% below that reported for the previous week. The proportions of admissions due to SARI was less than 1% and stable compared to the previous week. There were no SARI deaths reported for EW 19. Among samples tested in EW 19 (n = 2), the percent positivity for respiratory viruses was 50.0%. Influenza A (H3N2) and influenza A (H1N1)pdm09 were identified between EW's 17 and EW 19, 2013.



In Cuba, according to national laboratory data, among all samples analyzed (n=328) between EW 16 to 19, the average percent positivity for respiratory viruses was 51.2% and 26.5% for influenza viruses. Influenza A(H1N1)pdm09, the predominant virus detected, has had sustained circulation in the last weeks. Among other respiratory viruses, among the samples tested, parainfluenza increased the percent positivity in EW 19 from 11.3% to 15.8% compared with EW 18. Among the SARI cases, 157 samples were analyzed between EW 16 to 19, with influenza A (H1N1)pdm09 and rhinovirus detected mainly during the same period.

In the Dominican Republic, according to laboratory data, from EWs 17 to 20, among samples analyzed (n=91), the average percentage positive for respiratory viruses was 50.3% and 37.4% for influenza viruses. Influenza A(H1N1)pdm09, the predominant virus detected, has had sustained circulation in the last weeks.

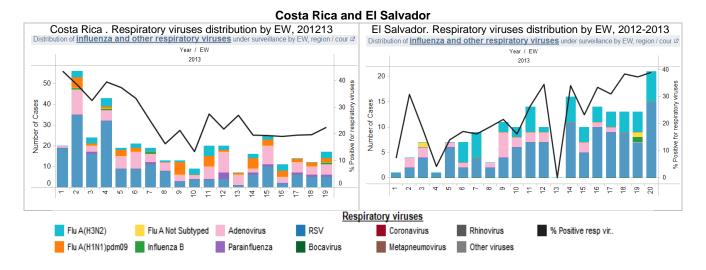
Cuba and Dominican Republic



Central America

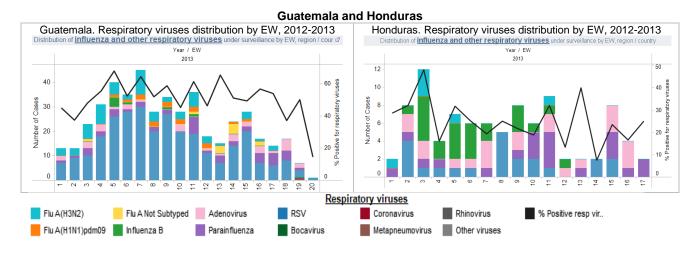
In Costa Rica, according to laboratory data between EW 16-19, among all samples tested (n =267), the percent positivity for respiratory viruses was 20.1% and for influenza viruses was 6.1%; both remained similar to the previous weeks. During the period between EW 16-19, among the total samples tested, RSV (6.7% of positivity) and adenovirus (6.4% of positivity) were the most prevalent viruses. Among positive influenza viruses, influenza A (94%) predominated (co-circulation of influenza A(H1N1)pdm09 and A(H3N2)).

In El Salvador, according to national laboratory data from EWs 17-20, of all samples tested (n =165), 36.3% were positive for all respiratory viruses and 11.8% for influenza viruses. Among the total samples tested, RSV was the most dominant virus (24.2% of positivity), followed by influenza A(H3N2).



In Guatemala, according to national laboratory data from EWs 17-20, of all samples tested (n =93), 38.8% were positive for respiratory viruses and 1.9% for influenza viruses. As for other respiratory viruses, among the total samples tested, RSV was the most dominant virus (19.4% of positivity) followed by parainfluenza (10.8% of positivity).

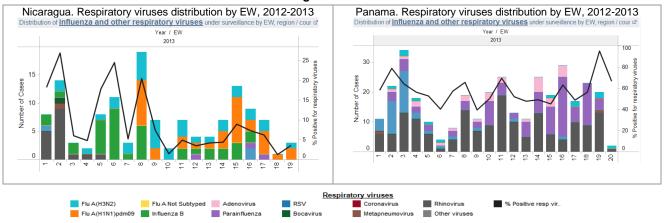
In Honduras, according to national laboratory data from EWs 14-17, of all samples tested (n =93), 18.2% were positive for respiratory viruses and no influenza viruses were detected. Adenovirus and parainfluenza were the most prevalently detected viruses.



In Nicaragua, according to national laboratory data from EWs 16-19, of all samples tested (n =397), 4.6% were positive for all respiratory viruses and 3.8% for influenza viruses. Influenza A(H1N1)pdm09 and influenza A(H3N2) were the predominant respiratory viruses detected.

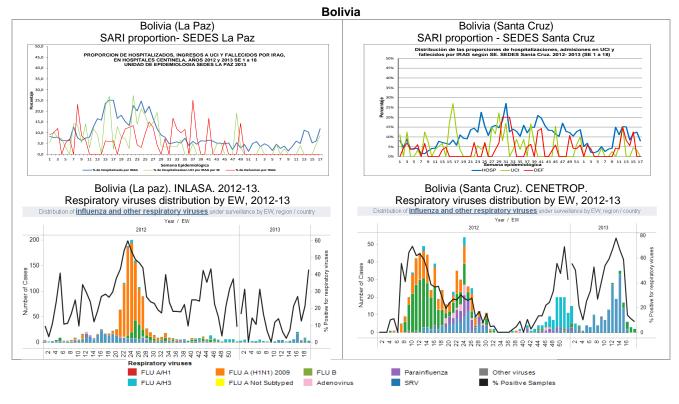
In Panama, according to national laboratory data from EWs 17-20, of all samples tested (n =100), 66.6% were positive for respiratory viruses and 12.1% were positive for influenza viruses. Among the total samples tested, rhinovirus was the most dominant virus (33% of positivity), followed by parainfluenza (23% of positivity). Among positive influenza viruses, influenza A(H3N2) was the predominant virus detected.

Nicaragua and Panama



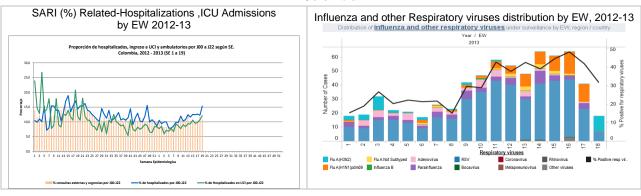
South America - Andean countries

In Bolivia, according to data from Santa Cruz, during EW 18 the proportion of SARI hospitalizations was 8% (decreased since the previous week). According to laboratory data from CENETROP (Santa Cruz), among 48 samples analyzed between EWs 18-19 of 2013, the percent positivity for all respiratory viruses was 10%. Influenza B continued to be the most prevalent respiratory virus. In La Paz, in EW 19, the proportion of SARI hospitalizations decreased as compared to the previous week. According to laboratory data from INLASA (La Paz), among 72 samples processed in EWs 18-19 of 2013, the percent positivity for all respiratory viruses was 31%, and for influenza viruses was 11%. RSV and influenza A(H3N2) were the predominant respiratory viruses identified.



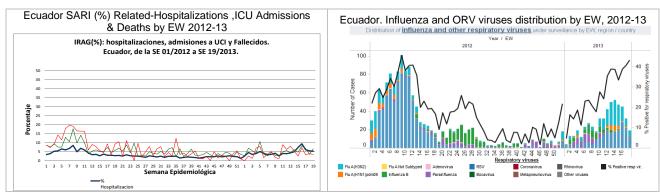
In Colombia, nationally and in EW 18, the proportion of ARI outpatients (J codes) was 11% and the proportion of ARI hospitalizations (J codes) was 15%, showing an upward trend. According to the INS laboratory data including statistics from the Departments of Bogotá, Antioquia and Nariño, between samples and viruses analyzed (n=155) in EW 17-18, the positivity was 38% for all respiratory viruses and 16% for influenza viruses. Among the positive samples for respiratory viruses, 51% were RSV, 22% were influenza A(H1N1)pdm09 (mainly in Bogotá) and 19% were influenza A(H3N2) (mainly in Nariño).

Colombia

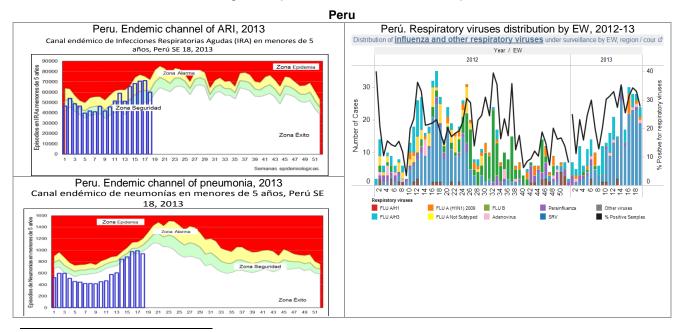


In Ecuador, the proportion of SARI hospitalizations during EW 19 (5%) remained similar to the previous week. According to national laboratory data from the national laboratory (NIH), among 96 SARI samples tested between EWs 18-19, the percent positivity was 37% for respiratory viruses and 16% for influenza viruses. Among all the positive samples, RSV and influenza A(H3N2) were the most dominant viruses.

Ecuador



In Peru⁵, nationally, in EW 18, the number of ARI cases and pneumonia cases in children less than 5 years of age decreased and remained below the epidemic threshold. According to national laboratory data, during EWs 18-19, among the 120 samples analyzed, the percentage positivity was 30% for all respiratory viruses and 4% for influenza viruses. Among all the positive viruses, RSV was the predominant virus.

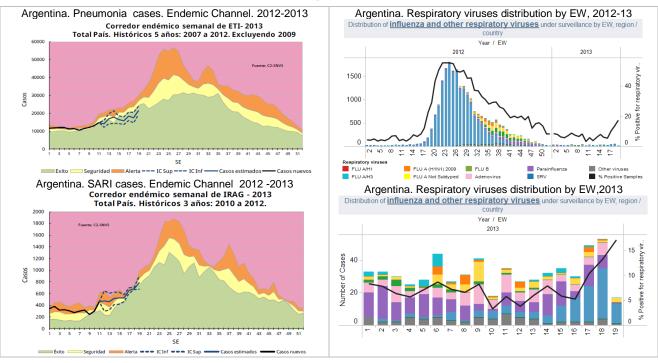


⁵ Perú. Sala de Situación de Salud. EWs 18, 2013. Ministerio de Salud. Dirección General de Epidemiología

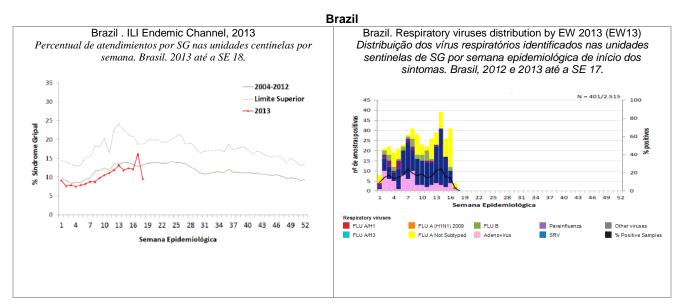
South America - Southern Cone

In Argentina⁶, according to national estimates, the activity of ILI and SARI during EW 19 were within the expected levels for this time of year with increasing trends. According to national laboratory data, 497 samples were processed between EWs 18-19 of 2013, of which 15.2% were positive for all respiratory viruses and 1.8% for influenza viruses. Among the samples tested, 9% were RSV (the predominant virus) and 2% were parainfluenza.

Argentina

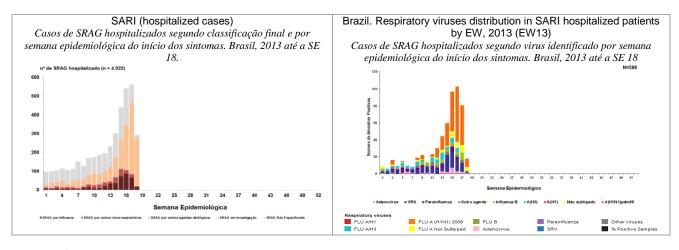


In Brazil⁷, in EW 18, the proportion of ILI consultations was within the expected level for this time of the year showing a decreasing trend as compared to the previous weeks. Nationally, among all the analyzed ILI samples, RSV and influenza A not subtyped were the most dominant circulating viruses. Among SARI cases, an increasing trend was observed in the last weeks, mainly from Sao Paulo, Mina Gerais, Pernambuco, Paraná, Rio Grande do Sul and Santa Catarina. Among the SARI cases, influenza A(H1N1)pdm09 was the most dominant circulating virus especially in the State of Sao Paulo.

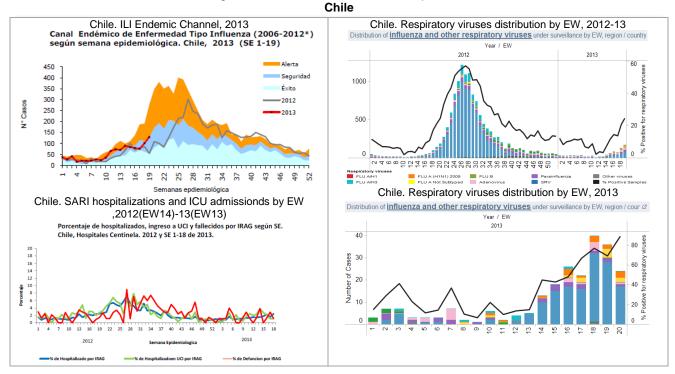


⁶ Argentina. Boletin integrado de vigilancia. SE 19.

⁷ Brasil. Boletim informativo. Secretaria de Vigilância em Saúde. SE 19, 2013.



In Chile⁸, nationally, in EW 19, 2013, the ILI activity (rate: 8.3/ 100,000 pop.) increased from the previous EW to the alert zone of the endemic channel. The proportion of SARI hospitalizations in EW 18 (2.5%) was higher as compared to the previous week. According to national laboratory data, in EWs 18-19, 1,294 samples were analyzed, of which 23% were positive for respiratory viruses and 5% for influenza viruses. Among the positive samples, 47% were RSV, which was the most prevalent virus. Influenza A(H1N1)pdm09 increased in the last weeks. Among SARI cases, RSV was the most prevalent virus detected.



In Paraguay⁹, nationally in EW 19, the proportion of ILI consultations (4.8%) and the proportion of SARI-related hospitalizations (2.4%) remained low and within the expected range for this time of the year. According to data from the national laboratory, among 70 samples processed between EWs 18-19, 2,3% were positive for respiratory viruses and 0% for influenza viruses. RSV and parainfluenza were the viruses detected. Among the 26 samples from SARI cases, in EWs 18-19, RSV predominated.

⁸ Chile. Informe de situación. EW 19. Disponible en: www.pandemia.cl

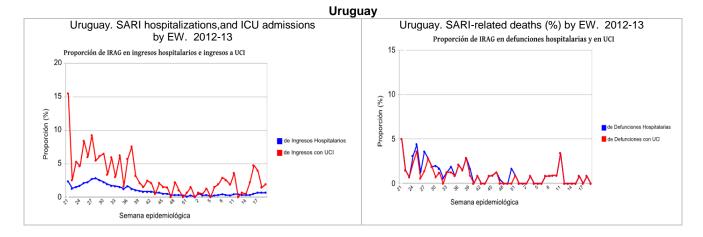
⁹ Paraguay. Informe de situación. Vigilancia de ETI e IRAG. SE 19, 2013

Paraguay Paraguay. ILI cases Paraguay. Respiratory viruses distribution by EW, 2012-13 Proporción de consulta por ETI según semana epidemiológica año 2012 y hasta la semana Distribution of <u>influenza and other respiratory viruses</u> under surveillance by EW, region / cour ♂ 19 del 2013, Paraguay 150 60 15,0 50 Number of Cases 09 20 % de consulta por ETI por SE 30 8 42 46 20 Paraguay. SARI cases (%) by EW, 2013 Proporción de Hospitalizados, Ingresos a UCI y Fallecidos por IRAG según semana epidemiológica, Vigilancia IRAG, año 2012 y hasta la semana 19 del 2013, Paraguay 50.0 40,0 30,0

In Uruguay¹⁰, at the national level, the proportion of SARI hospitalizations continued to be at a low level during EW 19. No reported deaths related to SARI in this week.

→ % de Defuncion por IRAG

---% de Hospitalizado en UCI por IRAG por SE



¹⁰ Uruguay. Generador de gráficos de la división de epidemiología, Dirección General de Salud – Ministerio de Salud Pública

Special Topics:

Novel coronavirus infection

- WHO. Global Alert and Response: Novel coronavirus infection update (May 18th, 2013) http://www.who.int/csr/don/2013_05_18_ncov/en/index.html
- PAHO. Epidemiological alert: Human infection caused by novel coronavirus update (May 17th, 2013)
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Avian influenza A(H7N9) virus

- Human infection with avian influenza A(H7N9) virus in China May 17th update
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Other links:

- Interim WHO surveillance recommendations for human infection with avian influenza A(H7N9) virus. 10 May 2013
 http://www.who.int/influenza/human animal interface/influenza h7n9/InterimSurveillanceRecH7N9 10May 13.pdf
- WHO Risk Assessment. Human infections with influenza A(H7N9) virus. 10 May 2013 http://www.who.int/influenza/human_animal_interface/influenza_h7n9/RiskAssessment_H7N9_13Apr13.pdf
- Laboratory biorisk management for laboratories handling human specimens suspected or confirmed to contain avian influenza A(H7N9) virus causing human disease. Interim recommendations. 10 May 2013 http://www.who.int/influenza/human_animal_interface/influenza_h7n9/InterimRecLaboratoryBioriskManage_mentH7N9_10May13.pdf
- Summary of status of development and availability of avian influenza A(H7N9) candidate vaccine viruses.
 10 May 2013
 http://www.who.int/influenza/vaccines/virus/candidates_reagents/summary_a_h7n9_cvv_20130510.pdf
- Standardization of the influenza A(H7N9) virus terminology. 16 April 2013
 http://www.who.int/influenza/human_animal_interface/influenza_h7n9/H7N9VirusNaming_16Apr13.pdf
- Frequently asked questions on human infection with influenza A(H7N9) in China. 30 April 2013 http://www.who.int/influenza/human_animal_interface/faq_H7N9/en/index.html

Message from the WHO GISRS Team to the National Influenza Centers (NIC):

The WHO Collaborating Centre for Reference and Research on Influenza in Tokyo, Japan, would like to share with GISRS their findings on the evaluation of commercially available Rapid Influenza Diagnostic Tests (RIDTs) for detecting avian influenza A(H7N9) viruses.

- The results of 20 commercially available RIDTs licensed in Japan are shown in Table 1. These kits detect influenza A virus nucleoprotein (NP) antigen.
- Twenty-five microlitre serial 10-fold dilutions of A/Anhui/1/2013 (H7N9) virus grown in the embryonated eggs (50% egg infectious dose is 10.1 log10/mL) were tested in duplicate according to the manufacturers' instructions.
- All of the RIDTs detected A/Anhui/1/2013 (H7N9) virus as Type A.

Table 1. The sensitivityof RIDTs to avian influenza A(H7N9) virus

RIDT (alphabetical order)	Manufacturer	Detection	Reaction Time (min)	Format	A/Anhui/1/2013 (H7N9)			
					10-1	10.1 log ₁₀	EID ₅₀ /mL 10 ⁻⁰	10⁴
BD Flu Examan™	Nippon Becton Dickinson Co., Ltd.	A	15	Test plate	+	+	-	-
Brightpoo®−Flu	Nichirei Biosciences Inc.	A	1-10	Test plate	+	+	-	-
Capilia® FluA+B	Tauns Laboratories, Inc.	A	15	Test plate	+	+	-	-
CHECK Flu A+B	Rohto Pharmaceutical Co., Ltd.	A	3-8	Test plate	+	+	ı	-
Clearline® InfuluenzaA/B/(H1N1)2009	Alere Inc.	A	10-15 Test stric	Tool obje	+	+	ı	-
		H1pdm	10-15	Test strip	-	-	1	-
Clearview® Exact Influenza A&B	Alere Inc.	A	8	Test strip	+	+	-	-
ESPLINE® Influenza A&B-N	Fujirebio Inc.	A	15	Test plate	+	+	+	-
ImmunoAce Flu	Tauns Laboratories, Inc.	A	8	Test plate	+	-	-	-
Immunofine™ FLU	Nichirei Biosciences Inc.	A	1-10	Test plate	+	+	-	-
POCTEM® S Influenza	Sysmex Co.	A	8	Test strip	+	+	1	-
Prime Check® FLU+RSV	Alfresa Pharma Co.	A	5-10	Test plate	+	+	1	-
PURORASUTO Flu	Mitsubishi Chemical Medience Co.	A	10	Test plate	+	+	-	-
Quick Chaser Flu A,B (S type)	Mizuho Medy Co., Ltd.	A	5-10	Test plate	+	+	ı	-
QuickNavi™ Flu	Denka Seiken Co., Ltd.	A	8	Test plate	+	+	1	-
QuickNavi™ Flu+RSV	Denka Seiken Co., Ltd.	Α	8	Test plate	+	+	-	-
QuickVue® Rapid SP influ	QUIDEL Corporation	A	10	Test strip	+	+	-	-
RapidTesta® Color FLU stick	Sekisui Medical Co., Ltd.	A	2-10	Test strip	+	+	-	-
RapidTesta® FLU·NEO	Sekisui Medical Co., Ltd.	A	15	Test plate	+	+	-	_
RapidTesta® FLU II	Sekisui Medical Co., Ltd	A	5-15	Test plate	+	+	-	_
Statmark™ FLU Stick-N	Nichirei Biosciences Inc.	Α	1-10	Test strip	+	+	-	-