



Regional Update

Pandemic (H1N1) 2009

(November 9, 2009 - 17 h GMT; 12 h EST)

The information contained within this update is obtained from data provided by Ministries of Health of Member States and National Influenza Centers through reports sent to Pan American Health Organization (PAHO) or updates on their web pages.

I- Evolution of the pandemic

North America

Widespread influenza activity and increased or unchanged trends in acute respiratory disease continued this week.

In Canada, the national influenza-like illness (ILI) consultation rate increased again relative to the last week and remained above average for the fifth consecutive week. There was another sharp increase in the number of influenza outbreaks and these continued to be reported mostly in school settings. The proportion of tests positive for influenza again increased this week to 36.3% from 29.0% (EW 42).

In the United States, ILI consultations decreased slightly but remained well above the national baseline. Laboratory-confirmed influenza hospitalization rates remained high, especially in persons 5–49 years of age. The proportion of deaths attributed to pneumonia and influenza remained above the epidemic threshold for the fifth consecutive week. Five of ten subnational surveillance regions reported decreases in proportion of outpatient visits for ILI as compared to the previous week, but all ten reported a the ILI proportion to be above their region-specific baseline. A total of 18 influenza-associated pediatric deaths were reported this week, of which 15 were associated with the pandemic virus.

Mexico reported a large number of confirmed cases and deaths this week, but the overall trend of the epidemic curve¹ appears to shift downward based on the number of confirmed cases. Also, the greatest number of laboratory-confirmed cases¹ was seen in the Federal District, Chiapas, Yucatan, Nueva Leon, San Luis Potosi, and Jalisco.

Caribbean

These countries continue to report variable spread of influenza and variable trends in acute respiratory disease. Intensity of acute respiratory disease was reported as both high and low/moderate, while impact of acute respiratory disease on health care services was reported as both low and moderate.

In countries providing these data, severe acute respiratory infection (SARI) hospitalization rates² continued to increase for the fourth consecutive week, reaching the highest rate this year in EW 42.

In the French Overseas Territories, ILI activity has been variable, with some Territories reporting decreases in activity while others are reporting increases.

Weekly Summary

- The trends of acute respiratory disease in North America increased or were unchanged; there were 18 influenza-associated pediatric deaths reported in the United States this week
- Caribbean countries reported variable trends in acute respiratory disease this week
- Central America continues to report overall decreasing trends in acute respiratory disease
- Most of South America had stable or decreasing trends of acute respiratory disease, with the exception of Colombia, which again reported an increasing trend and Argentina, which reported pockets of influenza-like illness activity in Buenos Aires and Santa Fe
- Venezuela and Brazil are investigating cases of acute respiratory infection in the indigenous Yanomami community
- A median of 99.7% of subtyped influenza A viruses were pandemic (H1N1) 2009
- 113 new confirmed deaths in 8 countries were reported; in total there have been 4,512 cumulative confirmed deaths

¹ <http://portal.salud.gob.mx/contenidos/noticias/influenza/estadisticas.html> Accessed November 6, 2009

² Participating CAREC member countries, which include, Barbados, Bahamas, Jamaica, St Vincent and the Grenadines, and Trinidad and Tobago, were assessed together

Central America

This week, trends of acute respiratory disease remained unchanged or were decreasing. Intensity of acute respiratory disease remained low/moderate and impact of acute respiratory disease on health care services was low.

South America

Andean

These countries continued to report widespread influenza activity. The majority of the countries reported decreasing trends in acute respiratory disease. Colombia, however, continues to report increasing trend. Overall, intensity of acute respiratory disease remained low/moderate as did impact of acute respiratory disease on health care services.

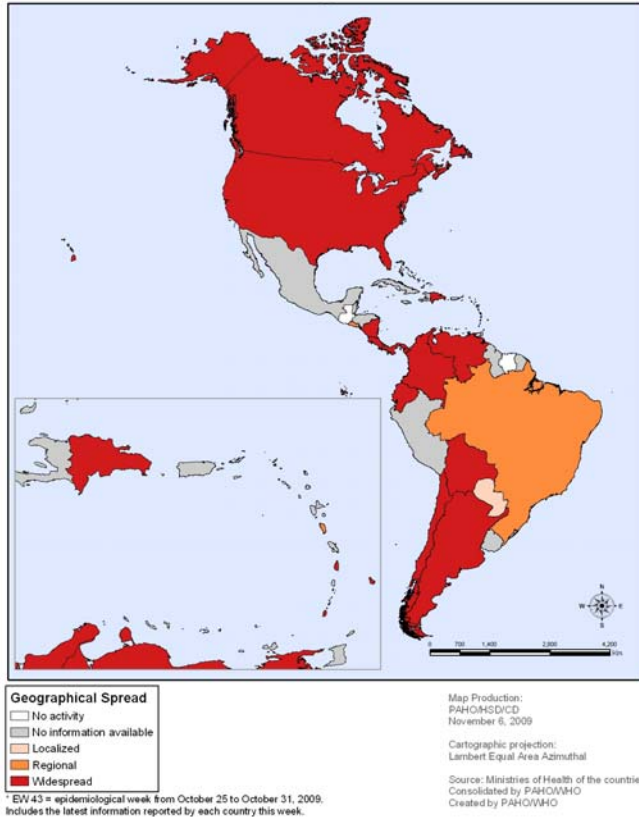
Venezuela reported an outbreak of acute respiratory infection in indigenous Yanomami communities. More details on this outbreak are included in section IV of this report.

Southern Cone

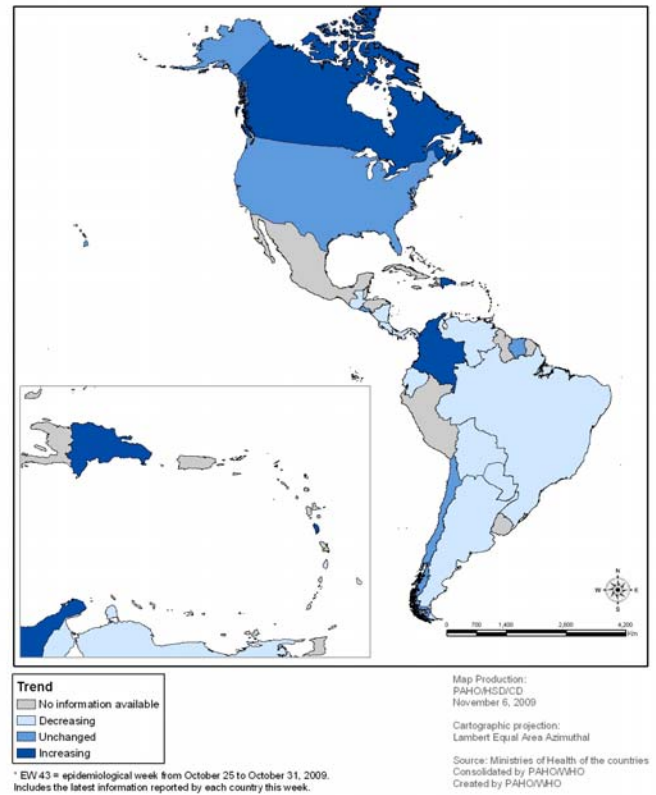
Argentina reported pockets of influenza activity in parts of Buenos Aires and Santa Fe, with twelve new confirmed cases, two deaths, and several ILI cases currently under investigation. Of note is that Argentina reported 1,013 new confirmed cases this week, but only 12 correspond to cases with symptom onset this week, and the remainder are cases that were laboratory confirmed this week.

In the other countries, there were no significant changes in trends of acute respiratory disease activity as compared to last week and most countries experienced a decreasing or unchanged trend of acute respiratory disease, with low/moderate intensity of acute respiratory disease, and low/moderate impact on health care services.

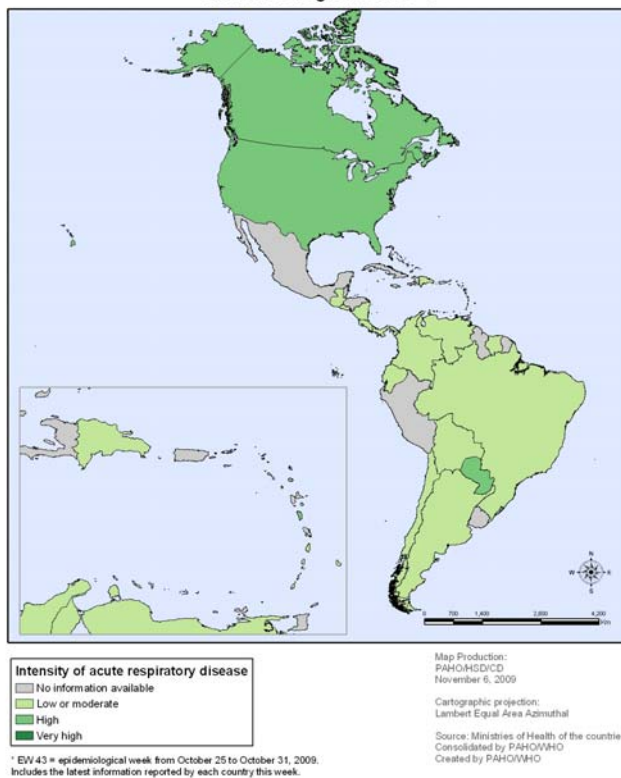
**Map 1. Pandemic (H1N1) 2009,
Geographical Spread by Country.
Americas Region. EW 43*.**



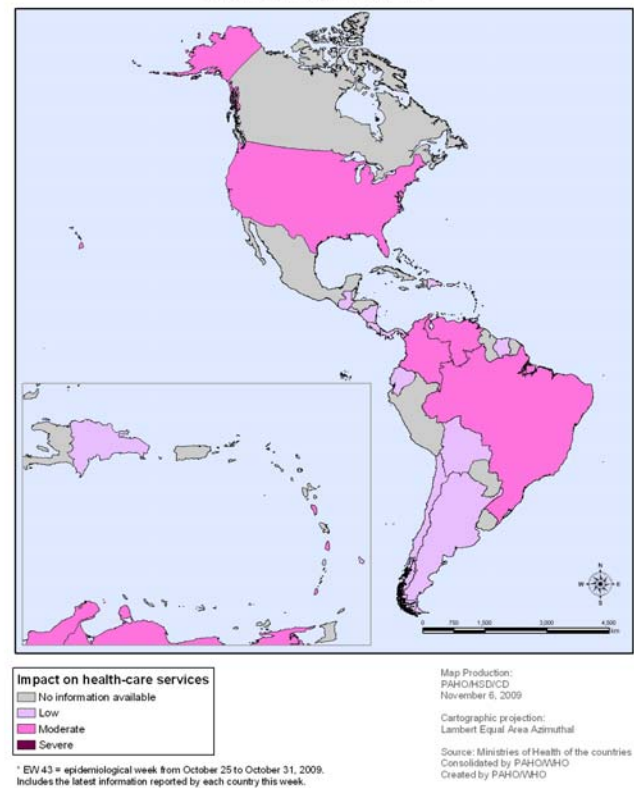
**Map 2. Pandemic (H1N1) 2009,
Trend of respiratory disease activity compared to the previous week.
Americas Region. EW 43*.**



**Map 3. Pandemic (H1N1) 2009,
Intensity of Acute Respiratory Disease in the Population.
Americas Region. EW 43*.**



**Map 4. Pandemic (H1N1) 2009,
Impact of Acute Respiratory Disease on Health-Care Services.
Americas Region. EW 43*.**



II- Description of hospitalizations and deaths among confirmed cases of pandemic (H1N1) 2009

A table containing case counts reported to PAHO is included in Annex 2.

Approximately half of hospitalized cases were among women (Table 1). Children and young adults continue to be the age group with highest hospitalization rates. Underlying comorbidities were present in approximately 60% of hospitalized cases, while approximately 20% of confirmed cases in child-bearing age women were pregnant.

Table 1: Description of hospitalizations and severe cases—selected countries

	Countries			
	Canada	CAREC ³	Costa Rica	Guyana
Reporting period	August 30 through October 31, 2009	Through October 28, 2009	Through November 3, 2009	Through EW 44
Type of cases reported	Hospitalized, confirmed	Hospitalized, confirmed	Hospitalized, confirmed	Hospitalized***
Number of hospitalizations	854	239	1849	286
Percentage of women	52.1%	47.8%	-	57.7%
Age	25 years	Most affected age groups: 0-14 years and 20-49 years	-	-
Percent with underlying co-morbidities	57.1%	-	-	-
Co-morbidities most frequently reported (%)	-	Obesity (9.1%)	Asthma (22.4%), Diabetes Mellitus (11.1%), COPD (9.7%), Cardiopathy (7.3%), Smoking (7.4%), Obesity (7.0%)	Obesity (14.3%), Asthma (11.5%), Sickle cell anemia(10.1%), Respiratory (5.2%)
Percent pregnant among women of child-bearing age	19.3%*	19.1%**	-	-

*The denominator was restricted to women of childbearing age between 15 and 44 years

** The denominator used was all deaths as information was not provided about women of child-bearing age

***These cases were not all confirmed to be pandemic (H1N1) 2009

³ CAREC countries and territories include Anguilla, Antigua, Barbados, Belize, Cayman Islands, Dominica, Guyana, Jamaica, Netherlands Antilles, St. Kitts and Nevis, St. Lucia, St. Vincent, Suriname, Turks and Caicos Islands

Approximately half of deceased cases were among women (Table 2), and overall, most deaths were among adults. The percentage of cases with underlying co-morbidities varied from 62.5% to 76.9%.

Table 2: Description of deaths among confirmed cases of pandemic (H1N1) 2009 in selected countries

	Countries			
	Bolivia	Canada	CAREC ⁴	Mexico
Reporting period	Through EW 43	August 30 through October 31, 2009	Through October 28, 2009	Through November 4, 2009
Number of confirmed deaths	56	24	16	398
Percentage of women	46.4%	54.2%	-	47.5%
Age	Highest number in 15-44 year age group	48	-	Highest number in 30–39 year age group
Percent with underlying co-morbidities	-	76.9%	62.5%	-
Co-morbidities most frequently reported (%)	-	-	Obesity (56.3%)	Metabolic conditions (34.4%), smoking (18.1%)
Percent pregnant among women of child-bearing age	-	0%*	-	-

*The denominator was restricted to women of childbearing age between 15 and 44 years

⁴ CAREC countries and territories include Anguilla, Antigua, Barbados, Belize, Cayman Islands, Dominica, Guyana, Jamaica, Netherlands Antilles, St. Kitts and Nevis, St. Lucia, St. Vincent, Suriname, Turks and Caicos Islands

III- Viral circulation

For the purpose of this analysis, only countries which reported data on influenza A subtypes were considered. We excluded from the calculations of the percentages, results from samples of influenza A that were not subtyped or were unsubtypeable.

Circulation of pandemic (H1N1) 2009 is still predominant, except for Chile, where no pandemic (H1N1) 2009 was reported this week (Table 3).

In the Caribbean (Table 4), to date, the majority of subtyped influenza A was pandemic (H1N1) 2009.

Table 3: Relative circulation of pandemic (H1N1) 2009 for selected countries, last EW Available

Country	Epidemiologic Week	Percentage of pandemic (H1N1) 2009*
Canada	43	99.7%
Chile	42	0.0%
USA	43	99.9%
MEDIAN percentage pandemic (H1N1) 2009		99.7%

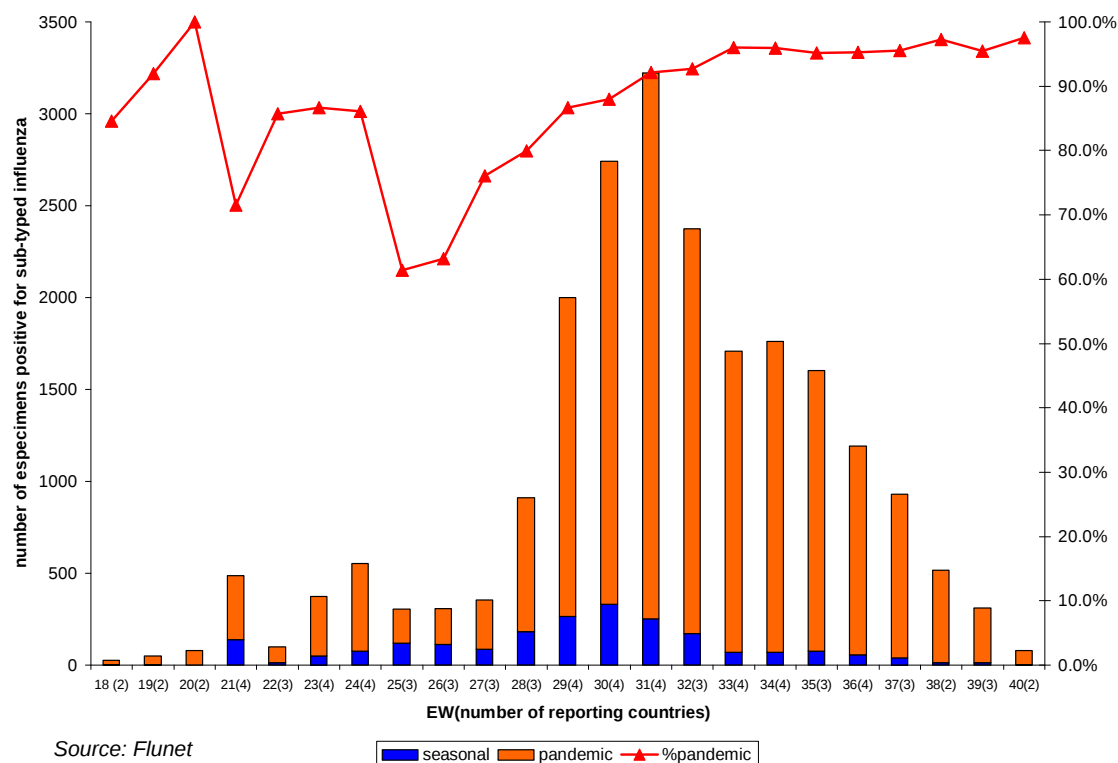
*Percentage of pandemic (H1N1) 2009 virus = Pandemic (H1N1) 2009 virus / All subtyped influenza A viruses

Table 4: Cumulative relative circulation of pandemic (H1N1) 2009 for selected countries

Country	Epidemiologic Week	Percentage of pandemic (H1N1) 2009
Guadeloupe	29-43	97.3%
Guyana	30-43	92.1%
Chile	01-42	98.2%
Saint Martin	01-43	96.6%
MEDIAN		97.0%

*Percentage of pandemic (H1N1) 2009 virus = Pandemic (H1N1) 2009 virus / All subtyped influenza A viruses

Graph 1: Counts of influenza A subtypes and proportion pandemic (H1N1) 2009—Selected Countries



In Graph 1, cumulative virologic data by subtype and epidemiologic week are presented. These data are reported from the National Influenza Centers (NIC) in Brazil, Chile, Colombia, and Panama.

Since the appearance of the pandemic virus (EW 16), the proportion of pandemic virus amongst all subtyped A viruses has been increasing. Initially, from EW 21 through EW 30, the proportion of pandemic virus was 70% to 90%, but since EW 31, has consistently been greater than 90%. Of note, since EW 32, the total number of subtyped influenza cases has been decreasing, coincident with the conclusion of the Southern Hemisphere winter season.

IV- Topic of Interest

Venezuela

On October 30th Venezuela reported the detection of an outbreak of Acute Respiratory Infection (ARI) in various communities of the Yanomami indigenous groups, of the parish of Mawaca, in the *High Orinoco* municipality of the Amazon State (Venezuela). This municipality extends 50,300 Km², with an approximate population of 18,538 inhabitants, which are predominantly of the following indigenous groups: Yanomami, Yekwuana, Piaroa, and Arahucos. The Yanomami is the most numerous group with 12,049 inhabitants. The population density is of 0.36 inhabitants x Km².

Due to the outbreak, a multidisciplinary and multi-ethnic team was deployed for the epidemiological investigation that included active case-finding, provision of healthcare, and implementation of control measures. Ill persons were found to that the clinical symptoms consistent with influenza-like illness, which was accompanied by diarrhea in some children. From 21 October to 03 November there were 1,004 cases of ARI, 265 cases of pneumonia, and 8 deaths were reported to be associated with this outbreak. The epidemic curve of the outbreak reveals a peak on 26 to 28 October 2009.

During the investigation, nine clinical specimens were obtained, two of which were from fatal cases. Of the 9 samples tested, six were negative for influenza, one was positive for seasonal influenza, and two were positive for pandemic influenza (H1N1) 2009. The confirmed pandemic (H1N1) 2009 cases were from Platanal and have recovered. The specimens from the fatal cases were both negative for influenza A.

As part of control measures, treatment with oseltamivir was initiated in symptomatic cases and chemoprophylaxis was provided to contacts given the high household density.

Of note, prior to the beginning of the outbreak two events that increased the risk of transmission were held in the *High Orinoco* municipality. The first was a day where community workers provide healthcare and the second was a sporting event. These activities resulted in increased contact between communities and people from other regions of the country.

Venezuela will continue its investigation and provision of care for all in this municipality, and strengthen its culturally-sensitive epidemiologic surveillance system that involves the utilization of trained community health workers.

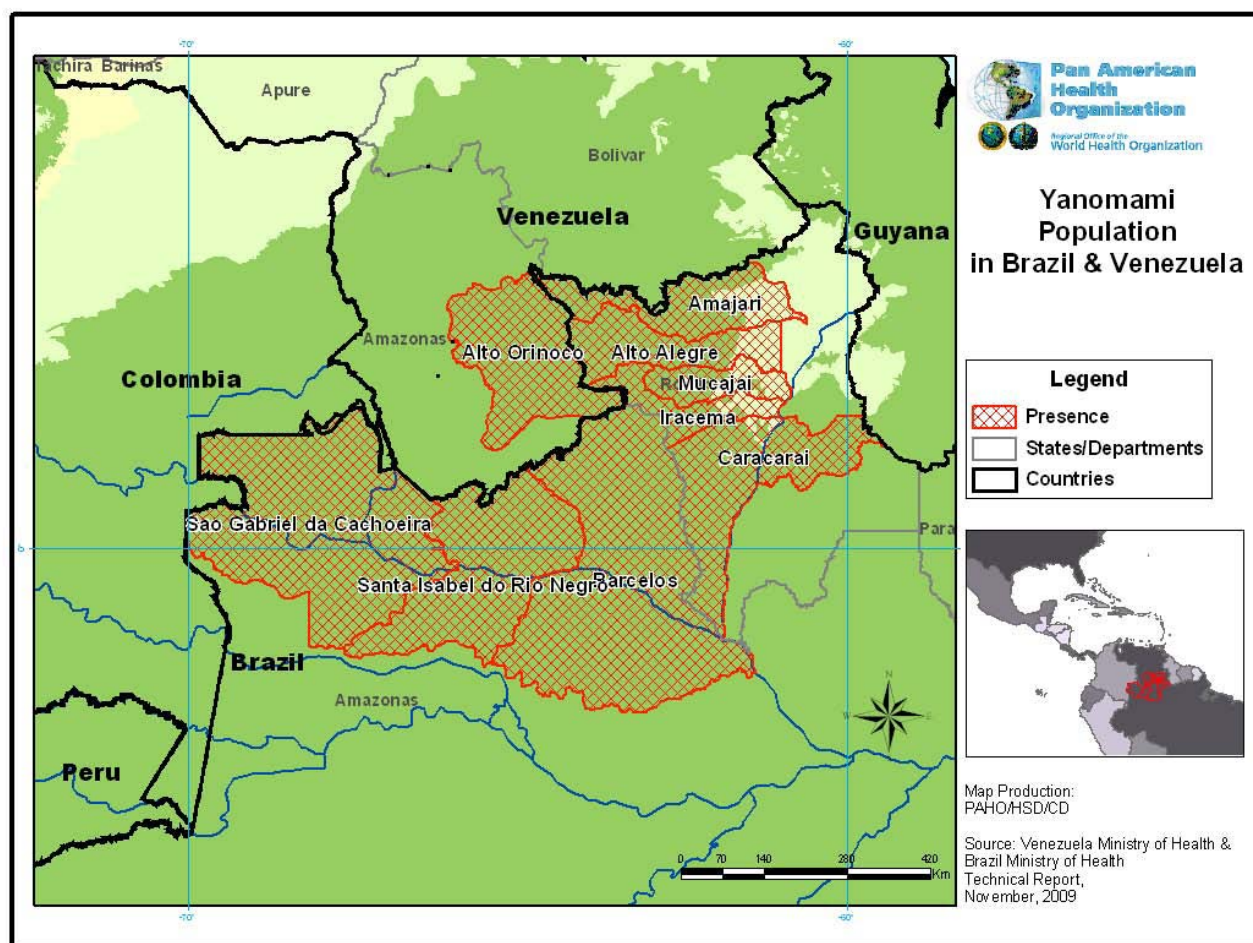
Brazil

Yanomami health district in Brazil has also detected an increase in cases of influenza-like illness (ILI) in its Yanomami population, but no pandemic (H1N1) 2009 has been identified. This district includes eight municipalities in the states of Roraima and Amazon (Brazil), extending 9,664,975 hectares. The population is estimated to be 18,766 people from the Yanomami and Yekwuana ethnic groups. The ILI and Severe Acute Respiratory Illness (SARI) cases identified in this population reporting since EW30 are detailed in the table below:

EW	ILI	SARI
30	176	32
31	109	10
32	76	5
33	6	4
34	9	0
35	100	29
36	44	9
37	122	40
38	16	18
39	123	12
40	101	3
41	261	-
TOTAL	1143	162

Source: Technical note of the Secretariat of Health Surveillance, Ministry of Health Brazil

Map 1: Municipalities in Venezuela and Brazil with Yanomami populations, as of November 6, 2009. Source: Report from IHR-NFP Venezuela, November 6, 2009, and Technical Note from the Brazilian Ministry of Health.



Annex 1: Weekly monitoring of pandemic epidemiological indicators for countries that provided updated information—Region of the Americas, Epidemiologic Week 43

Country	Geographic spread	Trend	Intensity	Impact on Health Care Services	EW
Antigua and Barbuda					
Argentina	Widespread	Decreasing	Low or moderate	Low	43
Bahamas					
Barbados	Widespread	Decreasing	Low or moderate	Low	42
Belize					
Bolivia	Widespread	Decreasing	Low or moderate	Low	43
Brazil	Regional	Decreasing	Low or moderate	Moderate	43
Canada	Widespread	Increasing	High	NIA	43
Chile	Widespread	Unchanged	Low or moderate	Low	43
Colombia	Widespread	Increasing	Low or moderate	Moderate	43
Costa Rica	Widespread	Decreasing	Low or moderate	Low	43
Cuba					
Dominica	Regional	Increasing	High	Moderate	43
Dominican Republic	Widespread	Increasing	Low or moderate	Low	43
Ecuador	Widespread	Decreasing	Low or moderate	Low	43
El Salvador	Regional	Unchanged	Low or moderate	Low	43
Grenada	Widespread	Decreasing	Low or moderate	Moderate	43
Guatemala	No activity	Decreasing	Low or moderate	Low	43
Guyana					
Haiti					
Honduras					
Jamaica					
Mexico					
Nicaragua	Widespread	Decreasing	Low or moderate	Low	43
Panama	Widespread	Decreasing	Low or moderate	Low	42
Paraguay	Localized	Decreasing	High	NIA	43
Peru					
Saint Kitts and Nevis					
Saint Lucia	Widespread	Decreasing	Low or moderate	Moderate	43
Saint Vincent and the Grenadines					
Suriname	No activity	Unchanged	Low or moderate	Low	42
Trinidad and Tobago					
United States of America	Widespread	Unchanged	High	Moderate	43
Uruguay					
Venezuela	Widespread	Decreasing	Low or moderate	Moderate	43

**Annex 2: Number of cases and deaths confirmed for the Pandemic (H1N1) 2009 virus
Region of the Americas. Updated as of 6th November 2009, (17 h GMT; 12 h EST).**

Source: Ministries of Health of the countries in the Region.

Country	Cumulative number of confirmed cases	Cumulative number of deaths	New cases (Since October 30th)	New deaths (Since October 30th)
Southern Cone				
Argentina	10,209	593	1,013	8
Brazil**	17,219	1,368	0	0
Chile	12,258	140	1	4
Paraguay	855	43	5	0
Uruguay*	550	20	0	0
Andean Area				
Bolivia	2,310	56	0	0
Colombia	2,912	136	190	6
Ecuador	2,251	80	0	0
Peru	8,868	183	144	3
Venezuela	1,973	95	42	0
Caribbean Countries				
Antigua & Barbuda	4	0	0	0
Bahamas	24	0	0	0
Barbados	154	3	1	0
Cuba	793	7	0	0
Dominica	36	0	6	0
Dominican Republic	491	22	27	0
Grenada	20	0	0	0
Guyana	17	0	0	0
Haiti	91	0	0	0
Jamaica	149	5	0	0
Saint Kitts & Nevis	6	1	0	0
Saint Lucia	55	1	0	1
Saint Vincent & Grenadines	17	0	15	0
Suriname	109	2	1	0
Trinidad & Tobago	211	4	17	0
Central America				
Belize	42	0	6	0
Costa Rica	1,596	38	24	0
El Salvador	800	23	15	1
Guatemala	1,170	18	0	0
Honduras	560	16	17	0
Nicaragua	2,172	11	20	0
Panama	787	11	0	0
North America				
Canada*	10,156	115	0	20
Mexico	54,298	398	4,064	70
United States***	57,602	1,123	0	0
TOTAL	190,765	4,512	5,608	113

*This country no longer updates on the total number of confirmed cases; only on the number of deaths.

**Brazil reports the number of cases of severe acute respiratory infections (SRAG) that have been confirmed for pandemic (H1N1) 2009.

*** Since August 30, 2009 the United States has replaced the weekly report of all laboratory confirmed pandemic (H1N1) 2009 cases with a new reporting system of only confirmed hospitalized cases and deaths. Furthermore, the results of its syndromic surveillance of pneumonias and influenza are also notified. While the later includes all influenza subtypes, 99% of influenza viruses detected are pandemic (H1N1) 2009

As of **6 November**, a total of **190,765 confirmed cases** have been notified in all **35 countries** in the Americas Region. A total of **4,512 deaths** have been reported among the confirmed cases in **27 countries** of the Region. Saint Lucia reported the first death in a confirmed case.

In addition to the figures displayed in **Annex 2**, the following overseas territories have confirmed cases of pandemic (H1N1) 2009: American territories: American Samoa (8); Guam (1); Puerto Rico (20) and U.S. Virgin Islands (49). 2. United Kingdom Overseas Territories: Anguilla (10); Bermuda (15); Cayman Islands (104, 1 death); British Virgin Islands (15); Turks and Caicos Islands (38). French Overseas Communities: Martinique (44, 1 death); Guadeloupe (27, 1 death); Guyane (29); Saint Martin (70); Saint Bartholomew (2); Netherlands Antilles: Aruba (57); Bonaire (34); Curaçao (55)*; Saba (1); St. Eustatius (1); and St. Maarten (26).

* Three cases were reported on a cruise-ship.

The distribution of cases and deaths at the first sub-national level can be found in the interactive map available through the following link: <http://new.paho.org/hq/images/atlas/en/atlas.html>