



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***

In Canada, the national influenza-like illness (ILI) consultation rate decreased for the fifth consecutive week and fell below the historical average. The number of reported influenza outbreaks also decreased to levels seen before the beginning of the second wave (EW 41). The overall number of hospitalizations, ICU admissions, and deaths associated with the pandemic virus decreased this week as compared to last week (EW 47).

In the United States, the proportion of outpatient consultations for ILI decreased for the sixth consecutive week, but remained above the national baseline. All ten sub-national surveillance regions reported decreases in the proportion of outpatient visits for ILI as compared to the previous week, and six are still above their region-specific baseline. Laboratory-confirmed influenza hospitalization rates remained stable but high, especially in children 0–4 years of age. The proportion of deaths attributed to pneumonia and influenza remained above the epidemic threshold for the tenth consecutive week. A total of 16 influenza-associated pediatric deaths were reported this week, 13 of which were associated with the pandemic virus. A total of 29 oseltamivir-resistant isolates have been detected since April 2009.

### ***Caribbean***

These countries reported unchanged and decreasing trends in acute respiratory disease with low/moderate intensity of acute respiratory disease and low impact of acute respiratory disease on health care services.

In countries providing these data<sup>1</sup>, for the third consecutive week, severe acute respiratory infection (SARI) hospitalization incidence increased (EW 47).

In the French territory of St Martin, there was a small increase in the number of ILI cases but counts remain lower than that which was observed early in the pandemic. In St. Barthelemy, the number of ILI consultations was stable this week. In Guadelupe, ILI counts have been stable for the past three weeks but remain above what is expected for this time of year.

### ***Central America***

Influenza activity was widespread in Nicaragua, regional in El Salvador and without activity in Guatemala. These countries reported unchanged and decreasing trends of acute respiratory disease, low/moderate intensity of acute respiratory disease, and low impact of acute respiratory disease on health care services.

#### **Weekly Summary**

- In North America, acute respiratory disease activity continued to decrease and is lower than expected in some areas
- In the Caribbean, unchanged and decreasing trends in acute respiratory disease were reported
- Central America reported decreasing or unchanged trends in acute respiratory disease
- South America reported decreasing or unchanged trends of acute respiratory disease
- A median of 99.8% of subtyped influenza A viruses in North America were pandemic (H1N1) 2009
- 196 new confirmed deaths in 10 countries were reported; in total there have been 6,335 cumulative confirmed deaths

<sup>1</sup> Participating CAREC member countries, which include, Barbados, Bahamas, Jamaica, St Vincent and the Grenadines, and Trinidad and Tobago, were assessed together

## **South America**

### **Andean**

Most of these countries reported widespread influenza activity, except Colombia, which reported regional geographic spread. These countries reported decreasing or unchanged acute respiratory disease trends. The intensity of acute respiratory disease and the impact of acute respiratory disease on health-care services were reported as low or moderate.

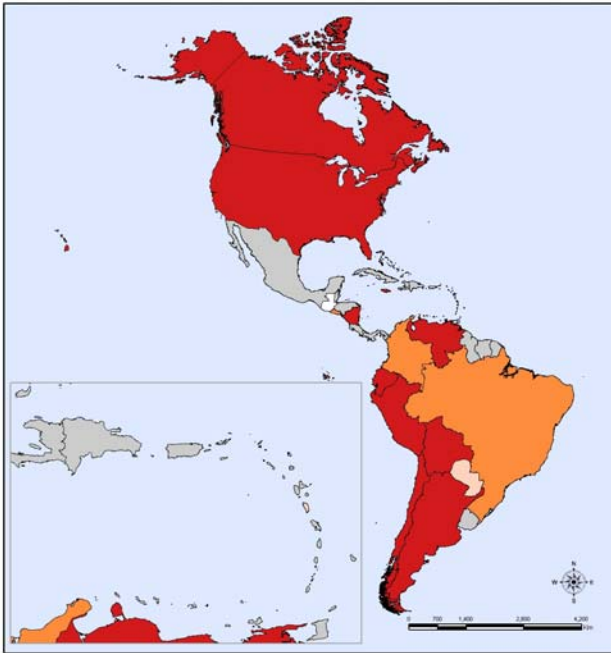
This week, Peru reported a nationally decreasing trend of SARI, and no influenza activity in 22 of 24 departments. In the capital, however, there was an increase (EW 45–47) in the number of hospitalizations for pneumonia, especially among those aged 5–9.

### **Southern Cone**

These countries reported continued decreasing and unchanged trends of acute respiratory disease. The intensity of acute respiratory disease and the impact of acute respiratory disease on health-care services were reported as low or moderate for all countries.

In Argentina, in EW 46, the incidence of ILI was low (7 per 100,000 population); and in Chile, in EW 47, there was low ILI sentinel site activity reported in 13 of 15 regions. Paraguay reported a decrease of 22.1% and 13.5 % in ILI and SARI cases, respectively

**Map 1. Pandemic (H1N1) 2009,  
Geographical Spread by Country.  
Americas Region. EW 48\*.**



**Geographical Spread**

- No activity
- No information available
- Localized
- Regional
- Widespread

Map Production:  
PAHO/MSD/CDC  
December 11, 2009  
Cartographic projection:  
Lambert Equal Area Azimuthal  
Source: Ministries of Health of the countries  
Consolidated by PAHO/WHO  
Created by PAHO/WHO

\* EW 48 = epidemiological week from November 29 to December 5, 2009.  
Includes the latest information reported by each country this week.

**Map 2. Pandemic (H1N1) 2009,  
Trend of respiratory disease activity compared to the previous week.  
Americas Region. EW 48\*.**



**Trend**

- No information available
- Decreasing
- Unchanged
- Increasing

Map Production:  
PAHO/MSD/CDC  
December 11, 2009  
Cartographic projection:  
Lambert Equal Area Azimuthal  
Source: Ministries of Health of the countries  
Consolidated by PAHO/WHO  
Created by PAHO/WHO

\* EW 48 = epidemiological week from November 29 to December 5, 2009.  
Includes the latest information reported by each country this week.

**Map 3. Pandemic (H1N1) 2009,  
Intensity of Acute Respiratory Disease in the Population.  
Americas Region. EW 48\*.**



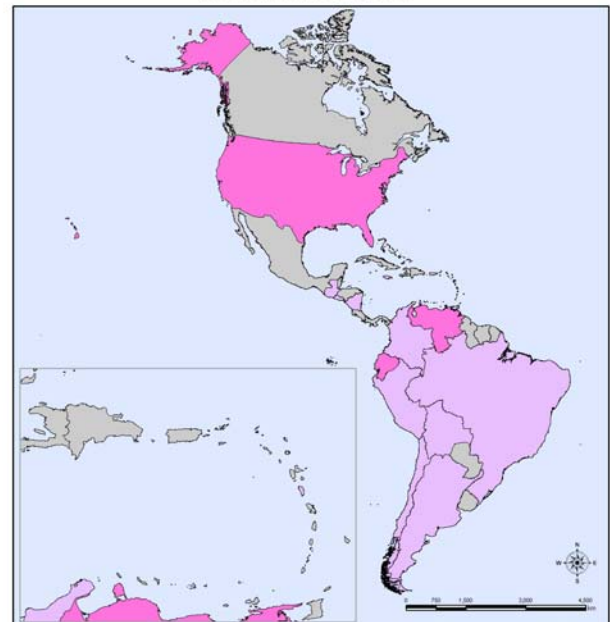
**Intensity of acute respiratory disease**

- No information available
- Low or moderate
- High
- Very high

Map Production:  
PAHO/MSD/CDC  
December 11, 2009  
Cartographic projection:  
Lambert Equal Area Azimuthal  
Source: Ministries of Health of the countries  
Consolidated by PAHO/WHO  
Created by PAHO/WHO

\* EW 48 = epidemiological week from November 29 to December 5, 2009.  
Includes the latest information reported by each country this week.

**Map 4. Pandemic (H1N1) 2009,  
Impact of Acute Respiratory Disease on Health-Care Services.  
Americas Region. EW 48\*.**



**Impact on health-care services**

- No information available
- Low
- Moderate
- Severe

Map Production:  
PAHO/MSD/CDC  
December 11, 2009  
Cartographic projection:  
Lambert Equal Area Azimuthal  
Source: Ministries of Health of the countries  
Consolidated by PAHO/WHO  
Created by PAHO/WHO

\* EW 48 = epidemiological week from November 29 to December 5, 2009.  
Includes the latest information reported by each country this week.

## 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.

The ratio of males to females among hospitalized cases was approximately one (Table 1). Hospitalizations were highest in children and young adults. Underlying comorbidities were present in approximately 50% of hospitalized cases.

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

	Argentina	Canada	CAREC <sup>2</sup>	Chile	Paraguay
<b>Reporting period</b>	Until EW 47	Until EW 48	Until December 2, 2009	Until December 2, 2009	Until December 11, 2009
<b>Type of cases reported</b>	Hospitalized	Hospitalized, confirmed	Hospitalized, confirmed	Severe	Hospitalized
<b>Number of hospitalizations</b>	13,636	7,322	323	1,608	156
<b>Percentage of women</b>	-	49.7	46.1	52	54
<b>Age</b>	Most affected age group: 0-4 years (75.3 x 100,000 hab)	Median 28 years	Most affected age groups 0-14 and 20-49 years	Median 32 years, highest rates in age groups < 1 y. (76.1 x 100,000 hab), 1-4 y.o (16.7 x 100,000 hab)	Median 24 years; highest number in 20-39 year age group
<b>Percent with underlying co-morbidities</b>	-	50.5%	-	54%	-
<b>Co-morbidities most frequently reported (%)</b>	-	-	Obesity (7.1%)	Asthma (17%), arterial hypertension (10%), diabetes (8%), COPD (7%)	-
<b>Percent pregnant among women of child-bearing age</b>	-	21.1*	10.7**	4.2***	

\* Percent of pregnant women among women 15 to 44 years of age

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

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

<sup>2</sup> CAREC countries and territories include Anguilla, Antigua, Barbados, Belize, Bermuda, Cayman Islands, Dominica, Grenada, Guyana, Jamaica, Netherlands Antilles, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, and Turks and Caicos Islands

Overall, approximately half of deceased cases were among women (Table 2). The percentage of cases with underlying co-morbidities varied from 47.3% to 77%.

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

	Argentina	Bolivia	Canada	CAREC <sup>3</sup>	Chile	Colombia	Mexico	Paraguay	Peru
<b>Reporting period</b>	Until EW 47	Until EW 48	Until EW 48	Until December 2, 2009	Until December 2, 2009	Until EW 48	Until December 7, 2009	Until December 4, 2009	Until December 7, 2009
<b>Number of confirmed deaths</b>	613	58	348	19	150	183	713	46	200
<b>Percentage of women</b>	"No gender difference"	46.6	50.3	-	48.7	-	50.1	-	53
<b>Age</b>	Highest rate in 50-59 year age group	Highest number in 15-64 year age group	Median 52.5 years	-	Mean 44 years	Highest number in 15-64 year age group	Highest number in 35-39 year age group	-	Median 38.5 years, highest percentage in 50-59 years age group
<b>Percent with underlying co-morbidities</b>	-	-	66.8	47.3	63.3	-	-	74	77
<b>Co-morbidities most frequently reported (%)</b>	-	-	-	Obesity (47.3%)	Pulmonary disease (including COPD, asthma) (14.5%), Diabetes Mellitus (14.5%), Arterial hypertension (12.8%), Obesity (8.6%)	-	Metabolic (37.4%), smoking (13.7%), cardiovascular (11.9%), respiratory (5.2%)	Chronic cardiopathy (20%), metabolic (17.6%), immunologic (11.8%), neurologic (5.9%)	Metabolic (including obesity and DM) (23.5%), cardiovascular (20.5%), respiratory (including COPD, asthma) (12.5%), renal (8.5%), neurologic (8.5%)
<b>Percent pregnant among women of child-bearing age</b>	-	-	8.9*	15.8**	0.7***	-	-	11.8**	-

\* Percent of pregnant women among women 15 to 44 years of age

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

\*\*\* The numerator was one and the denominator used was all deaths as information was not provided about women of child-bearing age

<sup>3</sup> CAREC countries and territories include Anguilla, Antigua, Barbados, Belize, Bermuda, Cayman Islands, Dominica, Grenada, Guyana, Jamaica, Netherlands Antilles, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, and 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.

Currently in North America, pandemic (H1N1) 2009 continues to predominate among circulating subtyped influenza A viruses (Table 3).

**Table 3: Relative circulation of pandemic (H1N1) 2009 for selected countries—last EW available**

Country	Epidemiologic Week	Percentage of pandemic (H1N1) 2009*
Canada	48	99.9
USA	48	99.7
<b>MEDIAN percentage pandemic (H1N1) 2009</b>		<b>99.8</b>

\*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
Canada	From EW 35 to EW 48	99.8
Chile	Until EW 47	98.3
Nicaragua	Through December 9	96.7
<b>MEDIAN percentage pandemic (H1N1) 2009</b>		<b>98.3</b>

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

## IV- Topic

### Influenza virus mutations

- Influenza viruses are constantly evolving, and acquiring mutations is part of their natural evolution
- Mutations, including the D222G in the hemagglutinin (HA) gene and others, are monitored and investigated by the WHO Global Influenza Surveillance Network (GISN)
- So far, the detections of D222G are sporadic and date back to April; there is no evidence that the virus with this mutation is geographically or temporally clustered
- The D222G mutation has been detected in both severe and mild cases
- The D222G mutation does not alter the sensitivity of the pandemic (H1N1) 2009 virus to the recommended antivirals (oseltamivir and zanamivir)

**Annex 1: Weekly monitoring of pandemic epidemiological indicators for countries that provided updated information—Region of the Americas, Epidemiologic Week 48**

Country	Geographic spread	Trend	Intensity	Impact on Health Care Services	EW
Antigua and Barbuda					
Argentina	Widespread	Decreasing	Low or moderate	Low	47
Bahamas					
Barbados					
Belize					
Bolivia	Widespread	Decreasing	Low or moderate	Low	48
Brazil	Regional	Decreasing	Low or moderate	Low	48
Canada	Widespread	Decreasing	Low or moderate	NIA	48
Chile	Widespread	Unchanged	Low or moderate	Low	48
Colombia	Regional	Decreasing	Low or moderate	Low	48
Costa Rica					
Cuba					
Dominica	Localized	Unchanged	Low or moderate	Low	48
Dominican Republic					
Ecuador	Widespread	Unchanged	Low or moderate	Moderate	48
El Salvador	Regional	Unchanged	Low or moderate	Low	48
Grenada					
Guatemala	No Activity	Decreasing	Low or moderate	Low	47
Guyana					
Haiti					
Honduras					
Jamaica	Widespread	Decreasing	Low or moderate	Low	48
Mexico					
Nicaragua	Widespread	Decreasing	Low or moderate	Low	48
Panama					
Paraguay	Localized	Decreasing	Low or moderate	NIA	48
Peru	Widespread	Unchanged	Low or moderate	Low	48
Saint Kitts and Nevis					
Saint Lucia					
Saint Vincent and the Grenadines					
Suriname					
Trinidad and Tobago					
United States of America	Widespread	Decreasing	Low or moderate	Moderate	48
Uruguay					
Venezuela	Widespread	Decreasing	Low or moderate	Moderate	48

NIA = No information available



**Annex 2: Number of deaths confirmed for the pandemic (H1N1) 2009 virus  
Region of the Americas. Updated as of 11<sup>th</sup> December 2009 (17 h GMT; 12 h EST).**

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

Country	Cumulative number of deaths	New deaths (since Dec 4)
<b>Southern Cone</b>		
Argentina	613	0
Brazil	1,528	
Chile	150	10*
Paraguay	46	0
Uruguay	20	
<b>Andean Area</b>		
Bolivia	58	0
Colombia	183	20*
Ecuador	96	0
Peru	203	3
Venezuela	116	3
<b>Caribbean Countries</b>		
Antigua & Barbuda	0	
Bahamas	1	1
Barbados	3	
Cuba	32	0
Dominica	0	
Dominican Republic	23	
Grenada	0	0
Guyana	0	
Haiti	0	
Jamaica	6	1
Saint Kitts & Nevis	1	
Saint Lucia	1	
Saint Vincent & Grenadines	0	
Suriname	2	
Trinidad & Tobago	5	
<b>Central America</b>		
Belize	0	
Costa Rica	38	
El Salvador	30	7*
Guatemala	18	
Honduras	16	0
Nicaragua	11	0
Panama	11	0
<b>North America</b>		
Canada	373	16
Mexico	713	26
United States	2,038	109
<b>TOTAL</b>	<b>6,335</b>	<b>196</b>

\*The new deaths reported this week were accumulated over a period of several weeks

As of **11 December**, a total of **6,335 deaths** have been reported among the confirmed cases in **28 countries** of the Region. This week the Bahamas reported the first death associated with the pandemic (H1N1) 2009 virus in the country

In addition to the figures displayed in **Annex 2**, the following overseas territories have confirmed deaths of pandemic (H1N1) 2009: United Kingdom Overseas Territories; Cayman Islands (1 death); French Overseas Communities: Guadeloupe (5 deaths), French Guiana (1 death) and Martinique (1 death).