



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 fourth consecutive week and remained only slightly above the historical average. The number of reported influenza outbreaks also decreased. Hospitalization rates continued to be highest among those less than 20 years of age. The overall number of hospitalizations, ICU admissions, and deaths associated with the pandemic virus decreased this week as compared to last week (EW 46).

In Mexico, since EW 42, the number of ILI and severe acute respiratory illness (SARI) cases has been decreasing, but continues to be higher than what was seen in July and August. Intensity of acute respiratory disease remains high.

In the United States, the proportion of outpatient consultations for ILI decreased for the fifth consecutive week. All ten sub-national surveillance regions reported decreases in the proportion of outpatient visits for ILI as compared to the previous week, and eight are still above their region-specific baseline. Laboratory-confirmed influenza hospitalization rates remained 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 ninth consecutive week, but is trending downwards. A total of 17 influenza-associated pediatric deaths were reported this week, 12 of which were associated with the pandemic virus. The United States is reporting a total of 26 oseltamivir-resistant pandemic viruses since April 2009.

### ***Caribbean***

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

In the French territory of Guadeloupe, ILI consultation counts were stable but higher than expected for this time of year. In St. Martin, the number of ILI consultations increased but is lower than that which was observed early in the pandemic; while in St. Barthelemy, the number of ILI consultations has increased and is greater than what is expected for this time of year.

### ***Central America***

While Costa Rica and Panama reported widespread influenza activity, El Salvador reported no influenza activity. These countries reported unchanged and decreasing trends of acute respiratory disease, low/moderate intensity of acute respiratory disease, and low and moderate impact of acute respiratory disease on health care services.

### **Weekly Summary**

- In North America, acute respiratory disease activity continued to decrease but still is higher than expected in most areas
- In the Caribbean, unchanged 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
- In some countries, the number of specimens positive for pandemic (H1N1) 2009 has been steadily decreasing in recent weeks, however more than 90% of subtyped influenza A viruses were pandemic (H1N1) 2009
- 253 new confirmed deaths in 6 countries were reported; in total there have been 6131 cumulative confirmed deaths

## ***South America***

### **Andean**

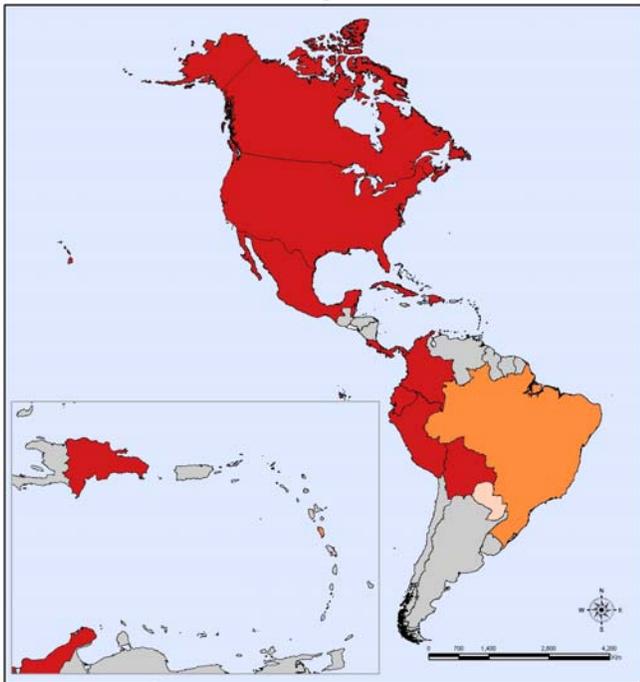
Most of these countries reported widespread influenza activity. Acute respiratory disease trends were reported as unchanged or decreasing. The intensity of acute respiratory disease and the impact of acute respiratory disease on health-care services were reported as low or moderate.

### **Southern Cone**

Brazil and Paraguay reported regional and localized geographical spread of influenza activity, respectively. They reported decreasing trends of acute respiratory disease, low/moderate intensity of acute respiratory disease, and low impact of acute respiratory disease on health care services.

Paraguay reported an increase of 14.5% in ILI consultations in 68% of the health regions; however, SARI cases decreased by approximately 30.8% as compared to the prior week (EW 46).

**Map 1. Pandemic (H1N1) 2009, Geographical Spread by Country. Americas Region. EW 47\*.**



**Geographical Spread**

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

Map Production: PAHO/MSD/CDC  
December 4, 2009  
Cartographic projection: Lambert Equal Area Azimuthal  
Source: Ministries of Health of the countries Consolidated by PAHO/WHO  
Created by PAHO/WHO

\* EW 47 = epidemiological week from November 22 to November 28, 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 47\*.**



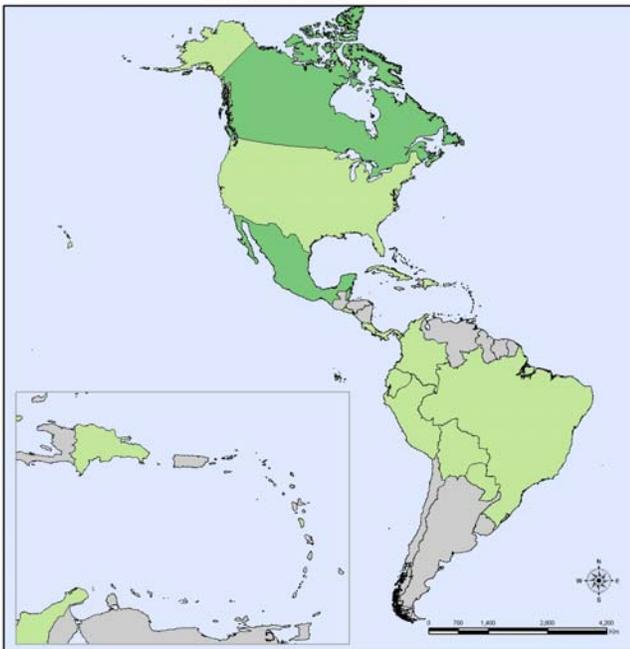
**Trend**

- No information available
- Decreasing
- Unchanged
- Increasing

Map Production: PAHO/MSD/CDC  
December 4, 2009  
Cartographic projection: Lambert Equal Area Azimuthal  
Source: Ministries of Health of the countries Consolidated by PAHO/WHO  
Created by PAHO/WHO

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**Map 3. Pandemic (H1N1) 2009, Intensity of Acute Respiratory Disease in the Population. Americas Region. EW 47\*.**



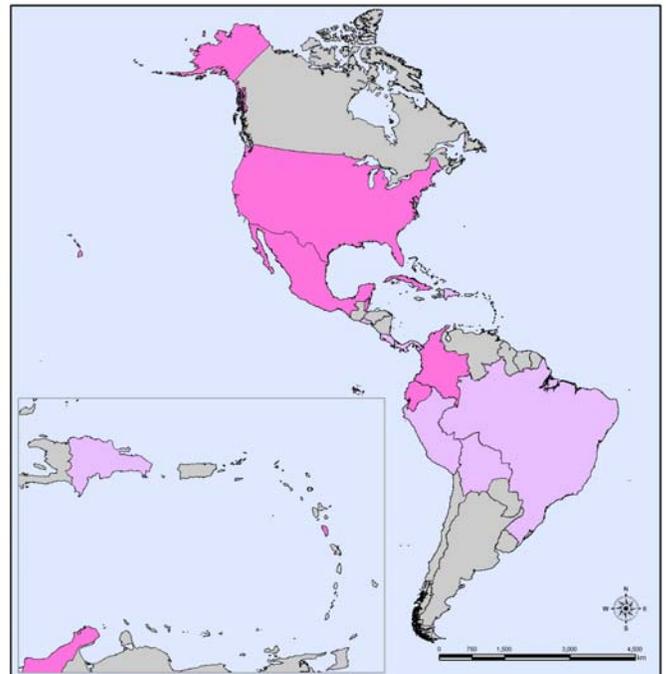
**Intensity of acute respiratory disease**

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

Map Production: PAHO/MSD/CDC  
December 4, 2009  
Cartographic projection: Lambert Equal Area Azimuthal  
Source: Ministries of Health of the countries Consolidated by PAHO/WHO  
Created by PAHO/WHO

\* EW 47 = epidemiological week from November 22 to November 28, 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 47\*.**



**Impact on health-care services**

- No information available
- Low
- Moderate
- Severe

Map Production: PAHO/MSD/CDC  
December 4, 2009  
Cartographic projection: Lambert Equal Area Azimuthal  
Source: Ministries of Health of the countries Consolidated by PAHO/WHO  
Created by PAHO/WHO

\* EW 47 = epidemiological week from November 22 to November 28, 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 young adults. In Canada, underlying comorbidities were present in approximately 50% of hospitalized cases.

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

	Canada	Costa Rica	Guadeloupe, French Guyana and Martinique	Paraguay
<b>Reporting period</b>	August 30-November 28, 2009	Through November 3, 2009	Until November 29, 2009	Until December 4, 2009
<b>Type of cases reported</b>	Hospitalized, confirmed	Hospitalized, confirmed	Hospitalized	Hospitalized
<b>Number of hospitalizations</b>	5,577	2,402	327	156
<b>Percentage of women</b>	49.4	-	56.9	54
<b>Age</b>	Median 28 years	-	-	Median 24 years; highest number in 20-39 year age group
<b>Percent with underlying co-morbidities</b>	52.2	-	-	-
<b>Co-morbidities most frequently reported (%)</b>	-	Asthma (22%), Diabetes Mellitus (11%), COPD (9%), Cardiopathy (7%), Smoking (7%), Obesity (7.0%)	Obesity (16.2%), Asthma (14.7%), Sickle cell anemia (9.1%), Respiratory disease (6.7%)	-
<b>Percent pregnant among women of child-bearing age</b>	16.4*	3.3**	-	

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

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

Overall, approximately half of deceased cases were among women (Table 2). The percentage of cases with underlying co-morbidities varied from 53.1% to 66.7%.

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

	Canada	Mexico	Paraguay
<b>Reporting period</b>	August 30-November 28, 2009	Until December 2, 2009	Until December 4, 2009
<b>Number of confirmed deaths</b>	242	687	46
<b>Percentage of women</b>	48.3	50.2	-
<b>Age</b>	Median 53 years	Highest number in 35-39 year age group	-
<b>Percent with underlying co-morbidities</b>	66.7	-	53.1
<b>Co-morbidities most frequently reported (%)</b>	-	Metabolic (36.8%), smoking (13.5%), cardiovascular (11.6%), respiratory (5.4%)	Chronic cardiopathy (20%), metabolic (17.6%), immunologic (11.8%), neurologic (5.9%)
<b>Percent pregnant among women of child-bearing age</b>	0.0*	-	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

### 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, pandemic (H1N1) 2009 continues to predominate among circulating subtyped influenza A viruses (Table 3). In Haiti, during weeks 33 to 42, influenza A/H3 and pandemic (H1N1) 2009 co-circulated at similar frequencies. From EW 43 through 47, the majority of specimens were positive for influenza type B (n=5), with only one specimen positive for influenza A/H3 and one positive for 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*
Argentina	46	100.0
Canada	47	99.9
USA	47	99.8
<b>MEDIAN percentage pandemic (H1N1) 2009</b>		<b>99.9</b>

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

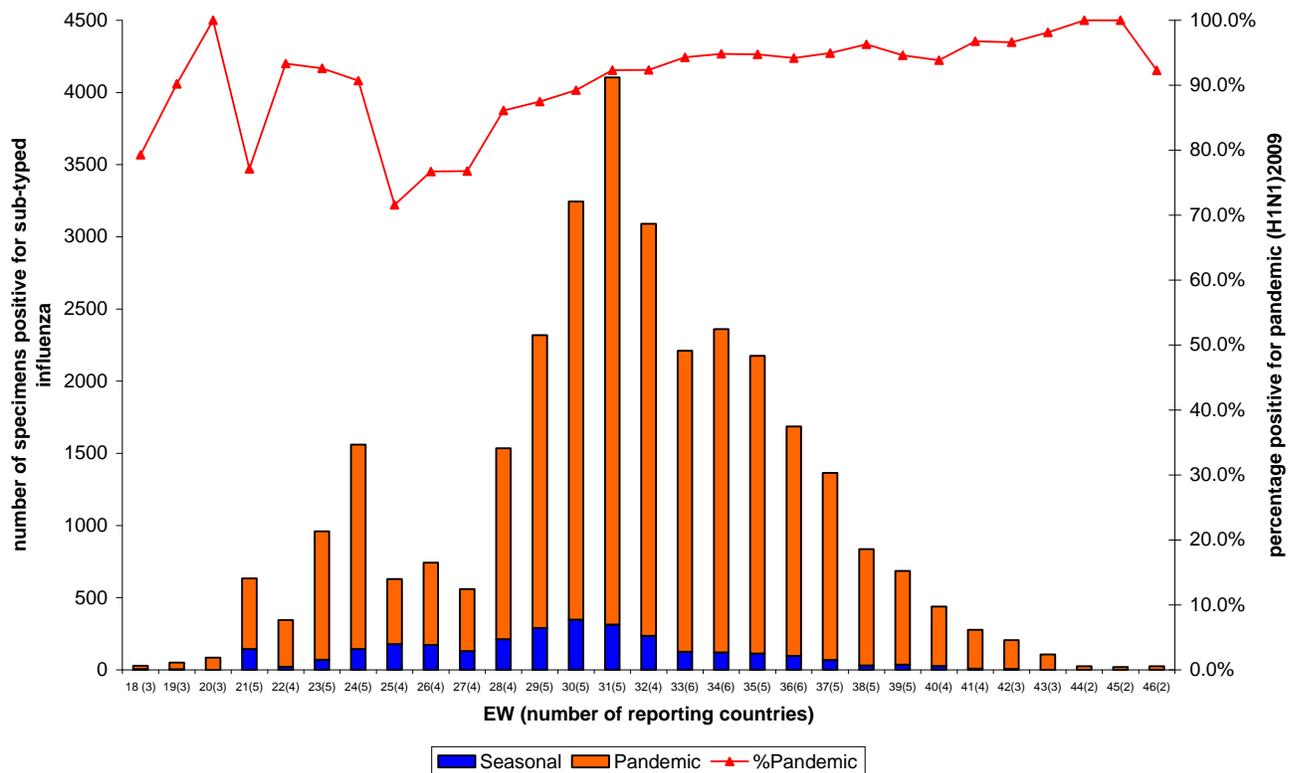
**Table 4: Cumulative relative circulation of pandemic (H1N1) 2009 for selected countries**

Country	Epidemiologic Week	Percentage of pandemic (H1N1) 2009
Argentina	14-46	93.4
Guadeloupe	30-47	99.3
Saint Martin	30-47	95.7
<b>MEDIAN percentage pandemic (H1N1) 2009</b>		<b>95.7</b>

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

The information displayed in Graph 1 is based on information provided on ministry of health websites or through communications from the National Influenza Centers (NIC) of Argentina, Brazil, Chile, Colombia, Haiti and Panama. Since epidemiologic week 34, the total number of specimens positive for pandemic H1N1 (2009) has shown a steady decrease, although the proportion of pandemic virus amongst all subtyped A viruses has remained above 90%.

**Graph 1: Counts of influenza A subtypes and proportion pandemic (H1N1) 2009-selected countries**



#### IV- Antiviral Resistance

The Centers for Disease Control and Prevention (CDC) complete antiviral susceptibility testing on isolates submitted by various countries in the Region. To date, 458 samples submitted from 18 countries from the Region were found to be sensitive to neuraminidase inhibitors (oseltamivir and zanamivir). The United States reported a total of 26 oseltamivir-resistant pandemic viruses since April 2009.

**Annex 1: Weekly monitoring of pandemic epidemiological indicators for countries that provided updated information—Region of the Americas, Epidemiologic Week 47**

Country	Geographic spread	Trend	Intensity	Impact on Health Care Services	EW
Antigua and Barbuda					
Argentina					
Bahamas					
Barbados					
Belize	Widespread	Decreasing	High	Moderate	46
Bolivia	Widespread	Decreasing	Low or moderate	Low	47
Brazil	Regional	Decreasing	Low or moderate	Low	47
Canada	Widespread	Decreasing	High	NIA	47
Chile					
Colombia	Widespread	Decreasing	Low or moderate	Moderate	47
Costa Rica	Widespread	Decreasing	Low or moderate	Low	47
Cuba	Widespread	Unchanged	Low or moderate	Moderate	47
Dominica	Regional	Unchanged	Low or moderate	Moderate	47
Dominican Republic	Widespread	Unchanged	Low or moderate	Low	47
Ecuador	Widespread	Unchanged	Low or moderate	Moderate	47
El Salvador	No activity	Unchanged	Low or moderate	Low	47
Grenada					
Guatemala					
Guyana					
Haiti					
Honduras					
Jamaica					
Mexico	Widespread	Decreasing	High	Moderate	47
Nicaragua					
Panama	Widespread	Decreasing	Low or moderate	Low	47
Paraguay	Localized	Decreasing	Low or moderate	NIA	47
Peru	Widespread	Decreasing	Low or moderate	Low	47
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	47
Uruguay					
Venezuela					

NIA = No information available

**Annex 2: Number of deaths confirmed for the pandemic (H1N1) 2009 virus  
Region of the Americas. Updated as of 4<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 Nov 27)
<b>Southern Cone</b>		
Argentina	613	
Brazil	1,528	
Chile	140	
Paraguay	46	0
Uruguay	20	
<b>Andean Area</b>		
Bolivia	58	0
Colombia	160	3
Ecuador	96	8
Peru	192	
Venezuela	113	
<b>Caribbean Countries</b>		
Antigua & Barbuda	0	
Bahamas	0	
Barbados	3	
Cuba	32	5
Dominica	0	
Dominican Republic	23	
Grenada	0	
Guyana	0	
Haiti	0	
Jamaica	5	
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	23	
Guatemala	18	0
Honduras	16	0
Nicaragua	11	
Panama	11	0
<b>North America</b>		
Canada	357	48
Mexico	687	77
United States	1,929	112
<b>TOTAL</b>	<b>6,131</b>	<b>253</b>

As of **4 December**, a total of **6,131 deaths** have been reported among the confirmed cases in **27 countries** of the Region.

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).