



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 has decreased for the last two weeks but remained above the historical average for the seventh consecutive week. The number of influenza outbreaks remained high and these outbreaks were mostly reported in the school setting. From EW44 to EW 45, there was more than a two-fold increase in the number of deaths (35 to 84) and an almost two-fold increase in the number of hospitalizations (163 to 261). Hospitalization rates continued to be highest in those less than 20 years of age.

In Mexico, trends of acute respiratory disease remained unchanged, with high intensity of acute respiratory disease, and moderate impact of acute respiratory disease on health care services. The states of Aguascalientes, Coahuila, Mexico, Durango, and Baja California had the greatest increases in the incidence of confirmed cases as compared to last week.

In the United States, the proportion of outpatient consultations for ILI decreased for the third consecutive week. All ten sub-national surveillance regions reported decreases in the proportion of outpatient visits for ILI as compared to the previous week, but all reported the ILI proportion to be above the region-specific baseline. Laboratory-confirmed influenza hospitalization rates remained high, especially in children 0–17 years of age. The proportion of deaths attributed to pneumonia and influenza remained above the epidemic threshold for the seventh consecutive week. A total of 21 influenza-associated pediatric deaths were reported this week. In total, since August 30, 2009, 113 pediatric deaths associated with the pandemic virus have occurred. The United States is investigating a possible cluster of four oseltamivir-resistant cases in a hospital setting.

Caribbean

These countries all reported decreasing trends in acute respiratory disease and low or moderate impact of acute respiratory disease on health care services. Intensity of acute respiratory disease was reported as high in Cuba, but low/moderate in the remaining countries.

In the French territories, influenza-like illness activity has been decreasing and in some areas is below what is expected for this time of year.

Weekly Summary

- Respiratory illness activity remained above what is expected for this time of year in Canada, Mexico, and the United States; in the United States, the proportion of deaths attributed to pneumonia and influenza remained above the epidemic threshold
- The United States is investigating a possible cluster of four oseltamivir-resistant cases in a hospital setting
- Caribbean countries reported mostly decreasing trends and low to moderate intensity of acute respiratory disease
- 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 Ecuador and Venezuela, which reported an increasing trend
- A median of 99.9% of subtyped influenza A viruses were pandemic (H1N1) 2009
- The United States reported a total of 21 oseltamivir-resistant pandemic (H1N1) 2009 cases since April 2009
- 554 new confirmed deaths in eight countries were reported; in total there have been 5,360 cumulative confirmed deaths

Central America

These countries reported mostly decreasing trends of acute respiratory disease; Guatemala, however, reported an increasing trend of acute respiratory disease. Overall, intensity of acute respiratory disease remained low/moderate and impact of acute respiratory disease on health care services was low.

South America

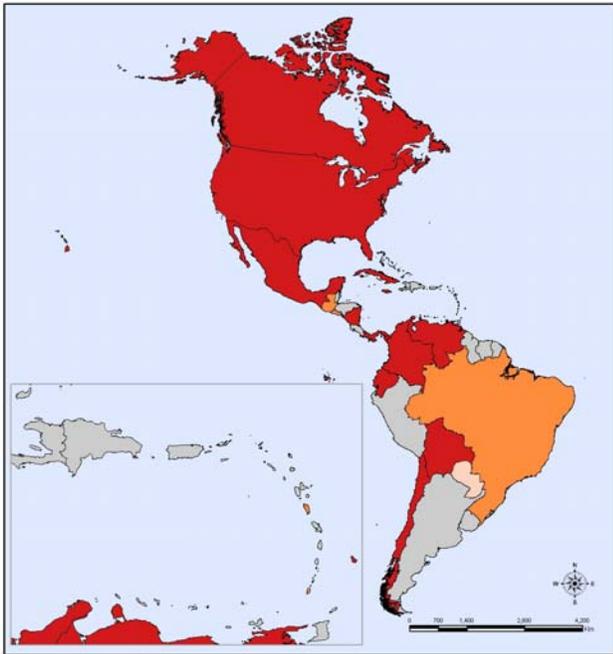
Andean

These countries reported mostly widespread influenza activity, low/moderate intensity of acute respiratory disease, and low or moderate impact of acute respiratory disease on health care services. Ecuador and Venezuela reported new increasing trends of acute respiratory disease; while Colombia, after seven weeks of increasing trends, reported a decreasing trend of acute respiratory disease.

Southern Cone

These countries reported both unchanged and decreasing trends of acute respiratory disease with widespread and regional influenza activity. Intensity of acute respiratory disease was low/moderate and impact of acute respiratory disease on health care services was low.

**Map 1. Pandemic (H1N1) 2009,
Geographical Spread by Country.
Americas Region. EW 45*.**

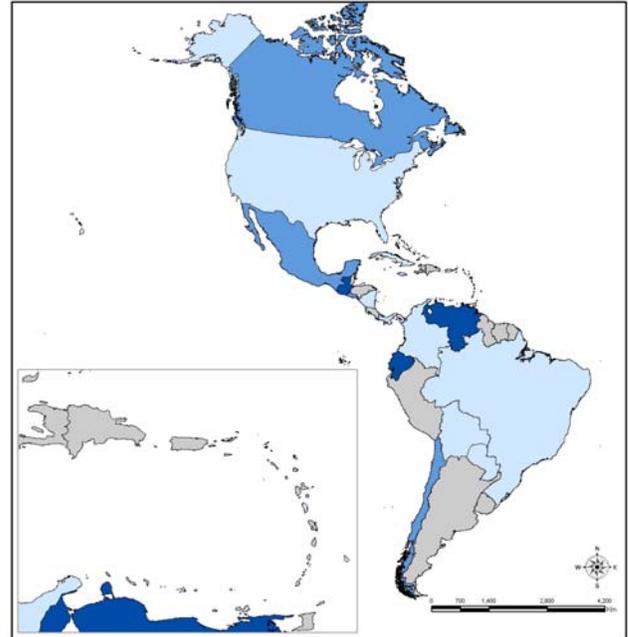


Geographical Spread
 □ No activity
 □ No information available
 □ Localized
 □ Regional
 □ Widespread

Map Production:
PAHO/HS/D/CD
November 20, 2009
 Cartographic projection:
Lambert Equal Area Azimuthal
 Source: Ministries of Health of the countries
Consolidated by PAHO/WHO
Created by PAHO/WHO

* EW 45 = epidemiological week from November 8 to November 14, 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 45*.**



Trend
 □ No information available
 □ Decreasing
 □ Unchanged
 □ Increasing

Map Production:
PAHO/HS/D/CD
November 20, 2009
 Cartographic projection:
Lambert Equal Area Azimuthal
 Source: Ministries of Health of the countries
Consolidated by PAHO/WHO
Created by PAHO/WHO

* EW 45 = epidemiological week from November 8 to November 14, 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 45*.**

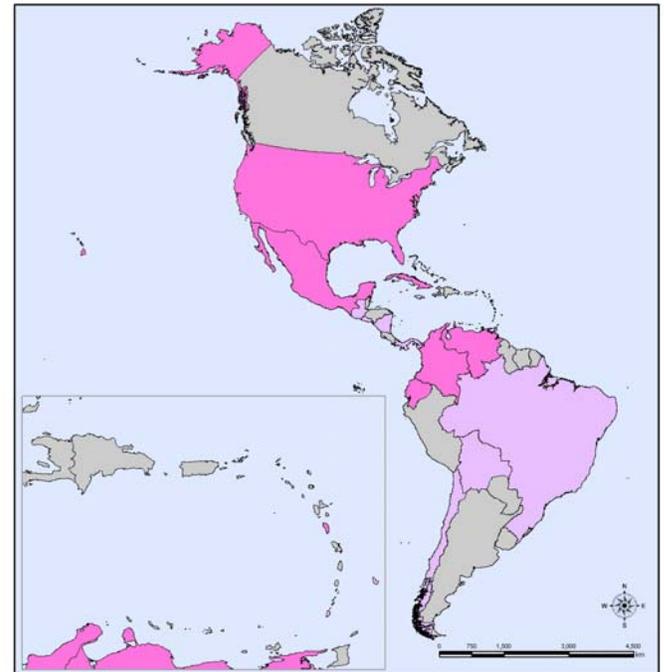


Intensity of acute respiratory disease
 □ No information available
 □ Low or moderate
 □ High
 □ Very high

Map Production:
PAHO/HS/D/CD
November 20, 2009
 Cartographic projection:
Lambert Equal Area Azimuthal
 Source: Ministries of Health of the countries
Consolidated by PAHO/WHO
Created by PAHO/WHO

* EW 45 = epidemiological week from November 8 to November 14, 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 45*.**



Impact on health-care services
 □ No information available
 □ Low
 □ Moderate
 □ Severe

Map Production:
PAHO/HS/D/CD
November 20, 2009
 Cartographic projection:
Lambert Equal Area Azimuthal
 Source: Ministries of Health of the countries
Consolidated by PAHO/WHO
Created by PAHO/WHO

* EW 45 = epidemiological week from November 8 to November 14, 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.

Approximately half of hospitalized cases were among women (Table 1). Hospitalizations were highest in young adults and children. In Canada, underlying comorbidities were present in approximately 60% of hospitalized cases.

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

| | Country | | | | |
|--|---|---|--|---|---|
| | Canada | CAREC ¹ | Guadeloupe, French Guyana and Martinique | Paraguay | Peru |
| Reporting period | From August 30, 2009 to November 14, 2009 | Until November 11, 2009 | Until November 15, 2009 | Until November 20, 2009 | Until November 16, 2009 |
| Type of cases reported | Hospitalized, confirmed | Hospitalized, confirmed | Hospitalized | Hospitalized | Severe, confirmed |
| Number of hospitalizations | 3,432 | 283 | 314 | 155 | 635 |
| Percentage of women | 49.6% | 46.2% | 56.4% | 54% | 52% |
| Age | Median 26 years | Most affected age group: 0-14 and 20-49 years | Median 25 years (French Guyana) | Median 24 years; highest number in 20-39 year age group | Highest percentage (38%) 0-9 year age group |
| Percent with underlying co-morbidities | 59.0% | - | - | - | - |
| Co-morbidities most frequently reported (%) | - | Obesity (8%) | Obesity (14.6%), Asthma (12.4%), Sickle cell anemia (9.2%), Respiratory disease (6%) | - | - |
| Percent pregnant among women of child-bearing age | 16.8%* | 10.3%** | - | - | - |

* 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

¹ 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 55.6% to 77.6%.

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

| | Countries | | | |
|--|---|-------------------------|---|---|
| | Canada | CAREC ² | Mexico | Peru |
| Reporting period | From August 30, 2009 to November 14, 2009 | Until November 11, 2009 | Until November 17, 2009 | Until November 16, 2009 |
| Number of confirmed deaths | 129 | 18 | 520 | 192 |
| Percentage of women | 51.9% | - | 49.8% | 53% |
| Age | Median 52.5 years | - | Highest number in 35-39 years age group | Mean 36.8 years; highest percentage in 50-59 years and 0-9 years age group |
| Percent with underlying co-morbidities | 70.4% | 55.6% | - | 77.6% |
| Co-morbidities most frequently reported (%) | - | Obesity (50%) | Metabolic (36%), Smoking (15.8%), Cardiovascular (8.8%), Respiratory (6.2%) | Metabolic (23.4%), Cardiovascular (21.4%), Respiratory (12.5%), Neurologic (8.3%), Renal (7.8%) |
| Percent pregnant among women of child-bearing age | 0%* | 16.7%** | - | - |

* 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

² 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.

Pandemic (H1N1) 2009 continues to predominate among circulating subtyped influenza A viruses (Tables 3, 4). Of note is that in Haiti, from weeks 36 through 44, only 61% of circulating subtyped influenza A viruses were pandemic (H1N1) 2009 and the remainder were H3N2.

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

| Country | Epidemiologic Week | Percentage of pandemic (H1N1) 2009* |
|---|--------------------|-------------------------------------|
| Canada | 45 | 99.9 |
| USA | 45 | 99.9 |
| MEDIAN percentage pandemic (H1N1) 2009 | | 99.9 |

*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* |
|---|---------------------|-------------------------------------|
| CAREC ³ | 1-45 | 95.0 |
| Guadeloupe | 30-45 | 99.6 |
| French Guyana | 30-45 | 92.5 |
| Haiti | 36-44 | 61.0 |
| Nicaragua | Through November 18 | 96.7 |
| Saint Martin | 30-45 | 97.0 |
| MEDIAN percentage pandemic (H1N1) 2009 | | 95.8 |

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

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, 365 samples submitted from 18 countries were found to be sensitive to neuraminidase inhibitors (oseltamivir and zanamivir). In the United States, since April 2009, a total of 21 cases of oseltamivir-resistant pandemic virus have been identified.

³ CAREC countries and territories include Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, Bermuda, British Virgin Islands, Cayman Islands, Dominica, Grenada, Guyana, Jamaica, Montserrat, Netherlands Antilles, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, and Turks and Caicos Islands

Annex 1: Weekly monitoring of pandemic epidemiological indicators for countries that provided updated information—Region of the Americas, Epidemiologic Week 45

| Country | Geographic spread | Trend | Intensity | Impact on Health Care Services | EW |
|----------------------------------|-------------------|------------|-----------------|--------------------------------|----|
| Antigua and Barbuda | | | | | |
| Argentina | | | | | |
| Bahamas | | | | | |
| Barbados | Widespread | Decreasing | Low or moderate | Low | 45 |
| Belize | | | | | |
| Bolivia | Widespread | Decreasing | Low or moderate | Low | 45 |
| Brazil | Regional | Decreasing | Low or moderate | Low | 45 |
| Canada | Widespread | Unchanged | High | NIA | 45 |
| Chile | Widespread | Unchanged | Low or moderate | Low | 45 |
| Colombia | Widespread | Decreasing | Low or moderate | Moderate | 45 |
| Costa Rica | | | | | |
| Cuba | Widespread | Decreasing | High | Moderate | 45 |
| Dominica | Regional | Decreasing | Low or moderate | Moderate | 45 |
| Dominican Republic | | | | | |
| Ecuador | Widespread | Increasing | Low or moderate | Moderate | 45 |
| El Salvador | Regional | Unchanged | Low or moderate | Low | 45 |
| Grenada | Regional | Decreasing | Low or moderate | Low | 45 |
| Guatemala | Regional | Increasing | Low or moderate | Low | 44 |
| Guyana | | | | | |
| Haiti | | | | | |
| Honduras | | | | | |
| Jamaica | Widespread | Decreasing | Low or moderate | Low | 44 |
| Mexico | Widespread | Unchanged | High | Moderate | 45 |
| Nicaragua | Widespread | Decreasing | Low or moderate | Low | 45 |
| Panama | Widespread | Decreasing | Low or moderate | Low | 45 |
| Paraguay | Localized | Decreasing | High | N/A | 45 |
| Peru | | | | | |
| Saint Kitts and Nevis | | | | | |
| Saint Lucia | | | | | |
| Saint Vincent and the Grenadines | | | | | |
| Suriname | | | | | |
| Trinidad and Tobago | | | | | |
| United States of America | Widespread | Decreasing | High | Moderate | 45 |
| Uruguay | | | | | |
| Venezuela | Widespread | Increasing | Low or moderate | Moderate | 45 |

NIA = No information available

**Annex 2: Number of deaths confirmed for the pandemic (H1N1) 2009 virus
Region of the Americas. Updated as of 20th November 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. 13) |
|----------------------------|-----------------------------|-------------------------------|
| Southern Cone | | |
| Argentina | 593 | 0 |
| Brazil | 1,368 | 0 |
| Chile | 140 | 0 |
| Paraguay | 43 | 0 |
| Uruguay | 20 | 0 |
| Andean Area | | |
| Bolivia | 57 | 1 |
| Colombia | 149 | 9 |
| Ecuador | 88 | 6 |
| Peru | 190 | 0 |
| Venezuela | 103 | 0 |
| Caribbean Countries | | |
| Antigua & Barbuda | 0 | 0 |
| Bahamas | 0 | 0 |
| Barbados | 3 | 0 |
| Cuba | 20 | 13* |
| Dominica | 0 | 0 |
| Dominican Republic | 23 | 1 |
| Grenada | 0 | 0 |
| Guyana | 0 | 0 |
| Haiti | 0 | 0 |
| Jamaica | 5 | 0 |
| Saint Kitts & Nevis | 1 | 0 |
| Saint Lucia | 1 | 0 |
| Saint Vincent & Grenadines | 0 | 0 |
| Suriname | 2 | 0 |
| Trinidad & Tobago | 5 | 0 |
| Central America | | |
| Belize | 0 | 0 |
| Costa Rica | 38 | 0 |
| El Salvador | 23 | 0 |
| Guatemala | 18 | 0 |
| Honduras | 16 | 0 |
| Nicaragua | 11 | 0 |
| Panama | 11 | 0 |
| North America | | |
| Canada | 250 | 89 |
| Mexico | 540 | 58 |
| United States | 1,642 | 377 |
| TOTAL | 5,360 | 554 |

*The increase in the number of deaths for Cuba was accumulated over a two week period

As of **20 November**, a total of **5,360 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 (2 deaths), French Guiana (1 death) and Martinique (1 death).