



Regional Update

Pandemic (H1N1) 2009

(October 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

Regarding WHO **qualitative indicators** (See Annex 1) for monitoring of the pandemic, the three countries in North America report widespread geographic spread. There was an increasing trend of respiratory disease in Canada and Mexico, while decreasing in the United States. The intensity of acute respiratory disease was low to moderate in Canada and high in Mexico and the United States. The impact on Health Services was low in Mexico and moderate in the United States

On its web page¹, as of 8th October, Mexico reports increased activity of pandemic (H1N1) 2009 with the greatest number of cumulative laboratory-confirmed cases in the Federal District, Chiapas, Yucatan, Jalisco, San Luis Potosi, Veracruz and Tamaulipas. When comparing against cases reported in the previous week (1st October), the greatest increases were observed in Durango, Morelos, Baja California Sur, and Puebla. It is important to note that Mexico is currently experiencing concurrent outbreaks of dengue and dengue hemorrhagic fever in several states.

In the United States, the influenza season began 12 weeks earlier than expected. The proportion of visits for influenza-like illness (ILI) has been above the baseline for EW 39 in all regions except two² in the northeast. Regarding the geographical spread of the pandemic, 37³ out of 50 states are experiencing geographically widespread activity (10 more than the previous week). Deaths attributed to pneumonia and influenza have now exceeded what is normally expected for this time of year. The United States has reported 12 cases of oseltamivir-resistant pandemic (H1N1) 2009

Canada has experienced an increase in national ILI consultation rate since EW37 which has been above expected levels. Multiple outbreaks were reported, especially in schools settings. The highest activity of respiratory disease has been reported in the province of British Columbia with 11 influenza outbreaks, and in the Northwest Territories where two outbreaks were detected in schools. Canada has reported two cases of oseltamivir-resistant pandemic (H1N1) 2009.

Caribbean

Cuba and Jamaica report widespread geographic spread while Bahamas and Dominica note regional spread and Saint Kitts and Nevis reported no activity. The trend of respiratory disease increased in most countries

Summary of Last Week

- The intensity of acute respiratory diseases in North America was high in U.S. and Mexico and moderate in Canada.
- Central America experienced low or moderate intensity of acute respiratory diseases, with the exception of Belize that reported activity above what is expected.
- South America continues to report low or moderate activity of respiratory diseases.
- 99.1% of the influenza A viruses subtyped were pandemic (H1N1) 2009.
- 114 new confirmed deaths (3406 deaths accumulated in 25

¹ Source : Mexico's Health Secretariat <http://portal.salud.gob.mx/contenidos/noticias/influenza/estadisticas.html>, Accessed on October 8, 2009

² The two health Regions include the States of Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont

³ Alabama, Alaska, Arizona, Arkansas, California, Colorado, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Hampshire, New Mexico, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Texas, Tennessee, Virginia, Washington, and Wyoming.

and the intensity of acute respiratory disease was high in Cuba and Dominica. The impact on health care services due to acute respiratory disease was both low and moderate.

Dominica has reported experiencing increased ILI activity and Saint Lucia reported influenza-associated outbreaks in the school setting during September.

Central America

Countries in this region reporting widespread geographic spread are Costa Rica, Nicaragua, and Panama, while in El Salvador the spread was regional. Trends in respiratory disease were decreasing or unchanged for all countries. The intensity of acute respiratory disease was mostly low or moderate while impact on health care services due to acute respiratory disease was low in Guatemala, Nicaragua, Panama and moderate in Costa Rica and El Salvador.

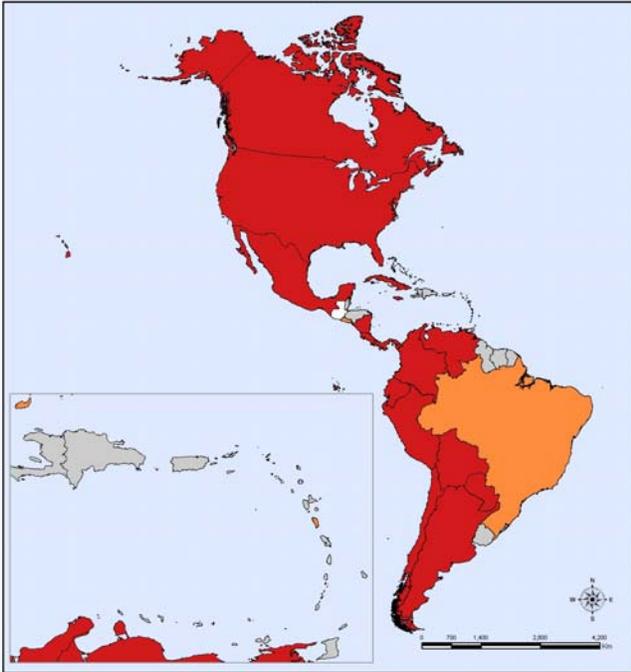
Belize reports experiencing a second wave of pandemic (H1N1) 2009 with increased ILI above expected levels for this time of year. Most patients are being seen in outpatient facilities with mild to moderate manifestations and the Districts of Belize, Cayo and Corozal mostly affected. Honduras also reports increased activity of influenza. Of note, El Salvador, Honduras, Nicaragua, Panama are detecting a recent increase in their cases of dengue fever as compared to the same time period last year. The current rainy season favors the co-circulation of influenza and dengue viruses.

South America

In the Andean regions of South America, geographical spread was widespread. The trend of respiratory was mainly decreasing or unchanged and the intensity was low or moderate. The impact on health services was low in Bolivia, Colombia, and Peru and moderate in Ecuador and Venezuela.

Paraguay reported a different situation than the rest of the Southern Cone countries, as it experienced high intensity and moderate impact on health services. The rest of the Southern Cone countries presented low intensity and decreasing trend. In Chile, for example, of the 367,041 clinical cases and 12,252 confirmed cases since the beginning of the pandemic, only 121 clinical cases and two confirmed cases were detected in this week. Similarly, Argentina detected a decrease in hospitalizations for severe acute respiratory infection for the last ten weeks.

**Map 1. Pandemic (H1N1) 2009,
Geographical Spread by Country.
Americas Region. EW 39*.**



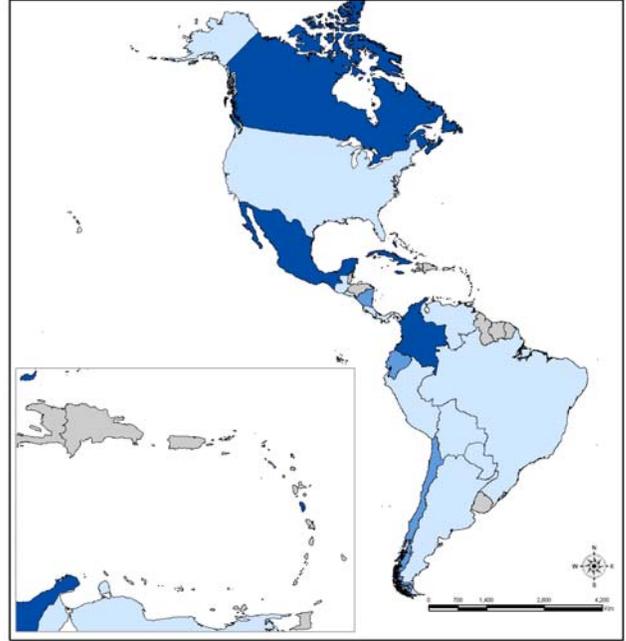
Geographical Spread

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

Map Production:
PAHO/MSD/CD
October 9, 2009
Cartographic projection:
Lambert Equal Area Azimuthal
Source: Ministries of Health of the countries
Consolidated by PAHO/WHO
Created by PAHO/WHO

* EW 39 = epidemiological week from September 27 to October 3, 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 39*.**



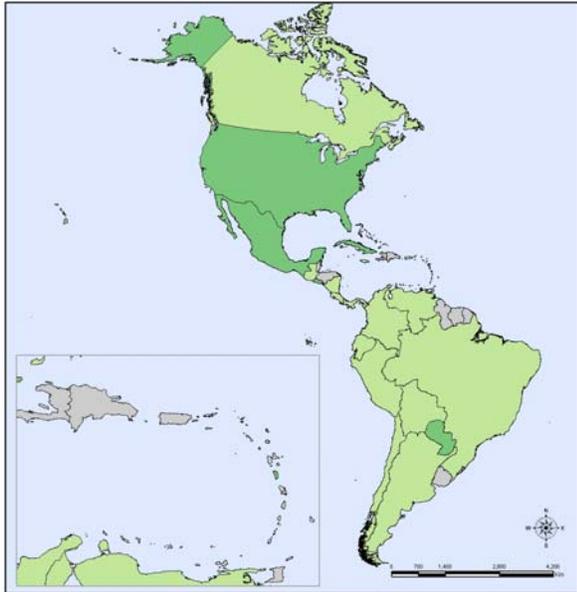
Trend

- No information available
- Decreasing
- Unchanged
- Increasing

Map Production:
PAHO/MSD/CD
October 9, 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 39*.**



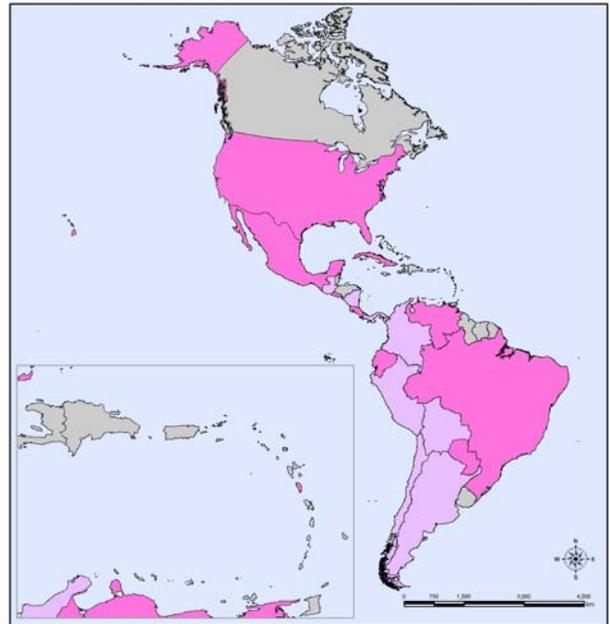
Intensity of acute respiratory disease

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

Map Production:
PAHO/MSD/CD
October 9, 2009
Cartographic projection:
Lambert Equal Area Azimuthal
Source: Ministries of Health of the countries
Consolidated by PAHO/WHO
Created by PAHO/WHO

* EW 39 = epidemiological week from September 27 to October 3, 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 39*.**



Impact on health-care services

- No information available
- Low
- Moderate
- Severe

Map Production:
PAHO/MSD/CD
October 9, 2009
Cartographic projection:
Lambert Equal Area Azimuthal
Source: Ministries of Health of the countries
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* EW 39 = epidemiological week from September 27 to October 3, 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.

Among confirmed hospitalized confirmed cases (Table 1), approximately 40-50% were women. The most affected age group was those under the age of 40. Canada and Chile observed that 60% of hospitalized cases had underlying comorbidities but Paraguay observed a much lower range. Approximately 10-30% of these cases were in pregnant women.

Table 1: Description of hospitalizations among confirmed cases of pandemic (H1N1) 2009 in selected countries

	Country					
	Argentina*	Canada	Chile	Costa Rica	Paraguay	CAREC**
Reporting period	Until EW 38	Until EW 38	Until October 6, 2009	Until October 7, 2009	Until October 9, 2009	Until September 30, 2009
Number of hospitalizations	10,773	1,479	1585	1328	128	150
Percent female		51.3	51.7	39.5	55	46.8
Age	Highest rate in the group <5 years of age	Median 23 years	Median 33 years		Median 24	"Most affected groups were 0–14 and 20–49"
Comorbidities	-	61.7%	53.0%	-	20%	
Percent pregnant among women of child-bearing age	-	27.7****%		-	-	10.8%***

*Hospitalizations among all persons with severe acute respiratory illness

** 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

***This proportion was calculated based on the number of cases reported as pregnant (n=7) and the total number of women reported (n=65)

****The denominator was restricted to women between age 15-44

In assessing the deaths among confirmed cases, women represent 45-60%(Table 2). The age deaths have taken place mostly among adults. More than two thirds of deceased cases had underlying comorbidities, while less than thirty percent of the deceased cases were in pregnant women.

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

	Country					
	Argentina	Canadá	Chile	México	Paraguay	CAREC*
Reporting period	Until EW38	Until EW38	Until October 6, 2009	Until October 6, 2009	Until October 9, 2009	Until September 30, 2009
Number of confirmed deaths	539	78	133	245	42	9
Percent female	"No differences"	59%	50%	50.2%	45%	-
Age	Highest rate in group 50–59 years	Median 50 years	Median 49 years	The group with the most cases 40–49 years	The group with the most cases 20–39 years	-
Co-morbidities		81.4%	67.9%		71%	88.9%
Co-morbidities most frequently reported	-	-		Metabolic disorders 31.8% Smoking 22.9%	-	
Percent pregnant among women of child-bearing age	-	28.6%****	-	-	-	22.2***%

* 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

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

****The denominator was restricted to women between age 15-44

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 appears to continue to be the influenza virus in circulation. The only country reporting a significant circulation of seasonal influenza viruses is Cuba.

**Table 3. Relative circulation of pandemic (H1N1) 2009 for selected countries
Last EW Available**

Country	Epidemiological Week	Percentage of Pandemic (H1N1) 2009 [#]
Canada	38	99.10%
Chile	39	100%
Cuba	39	72.80%
El Salvador	39	93.00%
USA	39	99.80%
MEDIAN percentage pandemic (H1N1) 2009		99.1%

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

**Table 4. Relative circulation of pandemic (H1N1) 2009 for selected countries
Aggregated**

Country	Epidemiological Week	Percentage of Pandemic (H1N1) 2009 [#]
Chile	EW 01-39	98.20%
Cuba	EW 01-39	74.70%
El Salvador	EW 01-39	57.80%
Haiti	April 30-September 09, 2009	63.20%
Nicaragua	Until October 08, 2009	96.60%
MEDIAN percentage pandemic (H1N1) 2009		74.7%

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

IV- Clinical Issues

Clinical characteristics of hospitalized cases

Infrequently, hospitalizations and deaths have resulted from pandemic (H1N1) 2009 influenza virus. Jain et al recently published an article in the New England Journal of Medicine describing clinical characteristics of patients hospitalized with 2009 (H1N1) pandemic influenza in the United States from April 2009 to mid June 2009. Of the 272 cases studied, 25% were admitted to an intensive care unit and 7% died. Forty-five percent of the patients were children under the age of 18 years, and few (5%) severe illnesses were reported among persons 65 years of age or older. Nearly three quarters of the patients had one or more underlying medical conditions including asthma, diabetes, heart, lung, and neurologic diseases, and pregnancy. Of the 249 patients who underwent chest radiography on admission, 40% (n=100) had findings consistent with pneumonia. Of the 268 patients for whom data were available regarding the use of antiviral drugs, therapy was initiated in 200 patients (75%) at a median of 3 days after the onset of illness. Data suggest that the use of antiviral drugs was beneficial in hospitalized patients, especially when such therapy was initiated early.

This manuscript is available at: <http://content.nejm.org/cgi/reprint/NEJMoa0906695v1.pdf>

Infection control evidence: Surgical mask versus N95 respirator use for the prevention of influenza transmission

To date, there is no consensus about the effectiveness of surgical mask as compared to N95 respirators for protecting health care workers (HCW) against influenza transmission.

Loeb M et al. published the results of a multicenter randomized trial in the Journal of the American Medical Association comparing N95 respirators with surgical mask use in HCWs. This clinical trial involved nurses working in medical units or pediatric units in eight Canadian tertiary care hospitals. Participants were evaluated for clinical and laboratory-confirmed respiratory illness using influenza serology and polymerase chain reaction (PCR) to detect a variety of respiratory viruses. Only 30% of nurses in each study group were vaccinated against influenza (trivalent influenza vaccine 2008-2009).

The results show that the incidence of influenza was similar in the two groups: surgical mask (23.6%) and N95 respirators (22.9%). In this study some factors were not addressed, for example, hand washing, the correct use of N95 respirators, and the implementation of respiratory or contact precautions. Despite some limitations, this is the first randomized trial to serve as a basis for identifying appropriate ways to protect HCW's.

Countries should provide specific attention to the implementation other strategies known to prevent the transmission of influenza in health care settings, such as administrative controls, application of standard and droplet precautions, and hand washing.

This manuscript is available at: http://www.who.int/csr/resources/publications/SwineInfluenza_infectioncontrol.pdf

Annex 1: Weekly monitoring of pandemic epidemiological indicators for countries that provided updated information. Region of the Americas.

Country	Geographic spread	Trend	Intensity	Impact on Health Care Services	EW
Antigua and Barbuda					
Argentina	Widespread	Decreasing	Low or moderate	Low	38
Bahamas	Regional	Increasing	Low or moderate	Moderate	38
Barbados					
Belize					
Bolivia	Widespread	Decreasing	Low or moderate	Low	39
Brazil	Regional	Decreasing	Low or moderate	Moderate	39
Canada	Widespread	Increasing	Low or moderate		39
Chile	Widespread	Unchanged	Low or moderate	Low	39
Colombia	Widespread	Increasing	Low or moderate	Low	39
Costa Rica	Widespread	Decreasing	Low or moderate	Moderate	39
Cuba	Widespread	Increasing	High	Moderate	39
Dominica	Regional	Increasing	High	Moderate	39
Dominican Republic					
Ecuador	Widespread	Unchanged	Low or moderate	Moderate	39
El Salvador	Regional	Decreasing	High	Moderate	39
Grenada					
Guatemala	No activity	Decreasing	Low or moderate	Low	39
Guyana					
Haiti					
Honduras					
Jamaica	Widespread	Increasing	Low or moderate	Low	38
Mexico	Widespread	Increasing	High	Moderate	39
Nicaragua	Widespread	Unchanged	Low or moderate	Low	39
Panama	Widespread	Decreasing	Low or moderate	Low	39
Paraguay	Widespread	Decreasing	High	Moderate	39
Peru	Widespread	Decreasing	Low or moderate	Low	39
Saint Kitts and Nevis	No activity	Unchanged	Low or moderate	Low	39
Saint Lucia					
Saint Vincent and the Grenadines					
Suriname					
Trinidad and Tobago					
United States of America	Widespread	Decreasing	High	Moderate	39
Puerto Rico (U.S.)					
Virgin Islands (U.S.)					
Uruguay					
Venezuela	Widespread	Decreasing	Low or moderate	Moderate	39

NIA = No information available

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

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

Country	Number of confirmed cases	Number of deaths	New cases (since Oct. 2)	New deaths (since Oct. 2)
Antigua & Barbuda	3	0	0	0
Argentina	9,049	539	13	1
Bahamas	23	0	0	0
Barbados	131	2	35	1
Belize	36	0	13	0
Bolivia	2,269	56	98	2
Brazil**	9,249	899	0	0
Canada*	10,156	79	0	1
Chile	12,252	134	4	2
Colombia	2,099	100	362	11
Costa Rica	1,494	38	41	1
Cuba	468	7	53	6
Dominica	10	0	8	0
Dominican Republic	424	22	0	0
Ecuador	2,002	67	130	3
El Salvador	763	20	14	1
Grenada	3	0	0	0
Guatemala	810	13	0	0
Guyana	17	0	5	0
Haiti	43	0	38	0
Honduras	524	16	9	0
Jamaica	104	4	7	0
Mexico	36,593	248	3,643	12
Nicaragua	2,100	11	41	0
Panama	787	11	13	0
Paraguay	682	42	43	0
Peru	8,480	153	175	10
Saint Kitts & Nevis	6	1	0	0
Saint Lucia	13	0	0	0
Saint Vincent & Grenadines	2	0	0	0
Suriname	11	2	0	0
Trinidad & Tobago	97	0	0	0
United States***	50,768	833	2,850	58
Uruguay*	550	20	0	0
Venezuela	1,679	89	86	5
TOTAL	153,697	3,406	7,681	114

*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 laboratory confirmed 2009 H1N1-related hospitalizations and deaths with a new system (either laboratory-confirmed or pneumonia and influenza syndromic hospitalizations and deaths resulting from all types or subtypes of influenza). The number of cases remains unchanged since EW 29; meanwhile, the number of deaths reflects those that were reported prior to August 30 (confirmed and probable for pandemic (H1N1) 2009) and those that have been reported under the new reporting system (used as a proxy for confirmed cases of pandemic (H1N1) 2009 given that it represents over 99% of influenza A samples).

As of **9 October**, a total of **153,697 confirmed cases** have been notified in all **35 countries** in the Americas Region. A total of **3,406 deaths** have been reported among the confirmed cases in **25 countries** of the Region.

In addition to the figures displayed in **Annex 1**, the following overseas territories have confirmed cases of pandemic (H1N1) 2009: American Samoa, U.S. Territory (8); Guam U.S. Territory (1); Puerto Rico U.S. Territory (20); Virgin Islands U.S. Territory (49); Bermuda, UK Overseas Territory (1); Cayman Islands, UK Overseas Territory (14); British Virgin Islands, UK Overseas Territory (2); Turks and Caicos Islands (3); Martinique French, Overseas Community (44, 1 death); Guadeloupe, French Overseas Community (27); Guyane, French Overseas Community (29); Saint-Martin, French Overseas Community (19); Saint Bartholomew, French Overseas Community (2); Netherlands Antilles, Aruba (13); Netherlands Antilles, Bonaire (29); Netherlands Antilles, Curaçao (46)*; Netherlands Antilles, St. Eustatius (1); and Netherlands Antilles St. Maarten (22).

* 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>