

ECDC DAILY UPDATE

2009 influenza A (H1N1) pandemic

08 January 2010
14.00 CEST

Main developments in the past 24 hours

- Weekly Influenza Surveillance Overview to be published today;
- Episouth and Epiorth updates included;
- Eurosurveillance updates included;
- Selected scientific articles reviewed;
- A total of 2 078 fatal cases in Europe and EFTA countries and 11 685 in the rest of the world have been reported up to date.

This report is based on official information provided by national public health websites or through other official communication channels. Reported number of confirmed 2009 pandemic influenza A (H1N1) cases admitted to hospitals and intensive care, by country, as of 08 January 2010, 14.00 CEST in EU and EFTA countries are in Table 1. An update on the number of confirmed fatal cases for the world and Europe is presented in Table 2.

Epidemiologic update

All 27 EU and 4 EFTA countries are reporting cases of pandemic (H1N1) 2009 influenza. A total of 2 078 deaths have been reported since April 2009 (Table 2). From week 41 to 51 the numbers of deaths each had shown a steady increase almost doubling every fortnight over six weeks. The fall observed in weeks 52 and 53 was to be expected as it represents official reports placed on national web-sites and a number of Member States have not been doing this in what was a holiday week. While the most deaths have to date been in Western Europe there are increasing numbers of deaths being reported from Central and Eastern Europe. The reported cumulative fatal pandemic (H1N1) cases in the world have now passed 10,000 cases (Table 2). However, because of lack of laboratory confirmation and underreporting among other factors, this is likely to be a gross underestimation of the true number of fatalities associated with the pandemic. Available updates on hospital admissions, per Member State, can be found in Table 1.

Weekly Influenza Surveillance Overview

The ECDC Weekly Influenza Surveillance Overview will be published this afternoon and will be available at: http://www.ecdc.europa.eu/en/activities/surveillance/EISN/Pages/EISN_Bulletin.aspx

Updates from Episouth and EpiNorth

Episouth update

Updates on the pandemic situations in the Mediterranean and Balkans region are provided by EpiSouth. The EpiSouth project aims to create a framework of collaboration on epidemiological issues in order to improve communicable diseases surveillance, communication and training across the countries of the Mediterranean and the Balkans. As per June 2009, the EpiSouth Network counts 26 Countries (9 EU and 17 non-EU).

As of 04 January 2010, a total of 1 948 deaths among biologically confirmed A/H1N1/2009 cases have been reported in the EpiSouth region. A total of 173 new A(H1N1)2009 related deaths were reported since 28 December 2009:

5 in Algeria, 3 in Bosnia and Herzegovina, 1 in Croatia,, 40 in Egypt, 11 in Greece, 10 in Israel, 4 in Kosovo, 8 in Morocco, 6 in Palestine, 8 in Serbia, 17 in Syria.

In week 52, influenza activity was:

- high and decreasing in Serbia,
- high in Algeria, Egypt and Tunisia,
- medium and decreasing in Croatia, Israel and,
- low medium and stable in Turkey,

For more details please refer to the EpiSouth e-Weekly Epidemiological Bulletin (e-WEB):

<http://www.episouth.org/cgi-bin/searchbull?TEMP= 2&QUART=20094>

Episouth update

Updates on the pandemic situations in the North-East European region are provided by EpiNorth. The EpiNorth project aims to improve communicable disease surveillance, control and communication in the Nordic and Baltic countries and north-west regions of Russia. EpiNorth is funded by the European Centre for Disease Prevention and Control (ECDC), the Barents Health Programme and participating public health institutes. EpiNorths Secretariat is at the Norwegian Institute of Public Health.

More about EpiNorth at: <http://www.epinorth.org/eway/default.aspx?pid=230>

Full EPINORTH update at:

http://www.epinorth.org/eway/default.aspx?pid=230&trq=MainArea_5260&MainArea_5260=5273:47009::0:5354:1:::0:0

Moldova: For the period 21 May – 31 December 2009, a total of 5,692 samples were tested in the National Reference-Laboratory at the National Scientific-Practical Centre for Preventive Medicine of the Republic of Moldova, of them 2,585 were positive to influenza A(H1N1). Among those positive to influenza A(H1N1) 25 cases were fatal.

Source: <http://www.sanepid.md/>

Ukraine: As of 5 January 2010, a total of 3,905,542 cases of ILI/SARI were reported in Ukraine, according to the Ministry of Health of Ukraine. Among those cases 225,925 people were hospitalized and 827 patients died. The most serious situation remains in the City of Kiev (for the last week there were reported 5,691 cases, of them 3,618 cases were registered among adults and 2 073 cases – among children).

Source: <http://www.moz.gov.ua/ua/main/press/?docID=14558>

Belarus: According to the Republican Research and Practical Center for Epidemiology and Microbiology, Minsk, Belarus, for the period 18 – 24 December 2009 a total of 432 tests were taken of them 139 samples contained viral antigens, where influenza A virus was found in 11 cases (7.9%), influenza virus B – 5 cases (3.6%), parainfluenza – 13 cases (9.3%), adenoviruses – 55 cases (39.6%), and other – 55 cases (46.3%).

Source: http://www.belriem.org/ru/in_world/490/

According to the Ministry of Health of the Republic of Belarus, since the beginning of the season of SARI to December, 28, 2009 there were reported 1,001,991 cases of SARI in the republic. The incidence of SARI for the week 52 was 24.1% lower than the week 51.

Source: http://www.minzdrav.by/cont/news.php?sn_nid=1306

A vaccination campaign against influenza A(H1N1) has started in Minsk in the beginning of 2010, according to the information from the Belarusian Telegraph Agency. Vaccine "Influvir" used in Minsk is produced in Russia. The plan is to

vaccinate about 60,000 medical specialists and specialists supporting sustenance of the city by the beginning of February. They were vaccinated against seasonal influenza in 2009. As for the other population, it would be possible to buy vaccine against pandemic influenza later this year.

Source: <http://news.belta.by/ru/news/regions?id=471074>

Russia: information from some websites of Directorates of Federal Service for Surveillance on Consumer Rights Protection and Human Well-being (Rospotrebnadzor)

Arkhangelsk oblast – For the period 21 – 27 December 2009, a total of 2,172 cases of SARI were reported in the oblast (1,266 cases were children) and 162 cases of influenza (41 cases were children). As of 28 December 2009, in the oblast were registered 392 laboratory confirmed cases of influenza A (H1N1), of those 16 cases were reported for the period 21-27 December. Vaccination against pandemic influenza continued in the Arkhangelsk oblast: 8,369 people were vaccinated by 28 December 2009.

Source: <http://29.rospotrebnadzor.ru/press/release/16005/>

Kaliningrad oblast - For the period 21-27 December 2009, a total of 4,348 people had SARI/ILI, among them 2,692 children under 14 years, were reported in the Kaliningrad oblast. The incidence of SARI/ILI for the mentioned week was 15.6% lower than the epidemiological threshold.

Source: http://39.rospotrebnadzor.ru/epidemiologic_situation/16060/

Leningrad oblast – Information as of 24 December 2009. Since 7 December there was reported a trend to reduction of the incidence of SARI/ILI among both adults and children. For the period 14-20 December a total of 7,832 cases influenza and SARI were reported (among them 4,893 children and 2,939 adults). 106 people, among them 69 children, were admitted to different hospitals. In the oblast were reported 236 laboratory confirmed cases of influenza A(H1N1). As of 21 December 2009, a total of 348,017 people were vaccinated against pandemic influenza, which is 22.3% of all population of the Leningrad oblast.

Source: http://www.47.rospotrebnadzor.ru/epidemiologic_situation/obzor/736

Murmansk oblast – For the period 21-27 December 2009, a total of 5,321 cases of influenza and SARI were reported. Among infected 72.4% were children aged 0-14 years. For the mentioned week there were hospitalized 91 people, of which 82 cases were children (for the previous week 51 there were 116 hospitalized, among them 98 children). As of December, 28, in Murmansk oblast were reported 352 laboratory confirmed cases of pandemic influenza. Among infected 46% were children under 18 years. The vaccination against pandemic influenza continued. 65,935 people had been vaccinated by the 28th of December 2009.

Source: http://www.murmanpotrebnadzor.ru/activities/view_item/25777/79

Pskov oblast – For the period 14-20 December 2009, a total of 1,398 cases of SARI (among them 842 children) and 26 cases of influenza (among them 5 children) were reported. For the mentioned week 49 people were admitted to the hospitals (among them 36 children).

Source: http://60.rospotrebnadzor.ru/epidemiologic_situation/16019/

City of Saint-Petersburg – For the weeks 51 and 52 the decrease in the incidence of SARI/ILI was reported with no clusters. Vaccination campaign continued: 70,205 people (17.6% of all population of the city) were vaccinated by the 25th of December 2009.

Source: <http://www.78rospotrebnadzor.ru./sanepidobstan/view/26/>

Republic of Karelia – As of week 52, the incidence of SARI/ILI reduced by 16.9% for the whole population compared with week 51, but increased by 6 % among children under 14 years of age (1,878 cases of SARI/ILI reported for week 52, among them 1195 children under 14 years and for the week 51 a total number of infected was 2260 people, among them 1127 children under 14 years of age). During the week 52 a total of 63 samples were collected and tested, among them 19 samples were positive to influenza A /H1N1/sw.

Source:

http://10.rospotrebnadzor.ru/news/2009/epidemiologicheskaya_obstanovka_v_respublike_kareliya_za_nedelyu_n_52_s_20_12_2009_po_27_12_2009.html

Eurosurveillance updates

The following articles relating to the pandemic were published In Eurosurveillance, Volume 15, Issue 1, 07 January 2010

Editorial

A new decade, a new seasonal influenza: the Council of the European Union Recommendation on seasonal influenza vaccination. A Nicoll

[HTTP://WWW.EUROSURVEILLANCE.ORG/VIEWARTICLE.ASPX?ARTICLEID=19458](http://www.eurosurveillance.org/viewarticle.aspx?articleid=19458)

Rapid communciations

A nosocomial outbreak of 2009 pandemic influenza A (H1N1) in a paediatric oncology ward in Italy, October – November 2009. M Chironna et al.

A nosocomial outbreak of 2009 pandemic influenza A(H1N1), with eight confirmed cases, occurred in a paediatric oncology ward in Italy, in October/November 2009. The fact that one case was infected despite being isolated and without contact to a symptomatic patient, hints towards potential transmission through a health care worker (HCW) and underlines the importance of vaccination of HCW who are involved in the care of critically ill patients.

[HTTP://WWW.EUROSURVEILLANCE.ORG/VIEWARTICLE.ASPX?ARTICLEID=19454#](http://www.eurosurveillance.org/viewarticle.aspx?articleid=19454#)

When should we intervene to control the 2009 influenza A(H1N1) pandemic? H Sato et al.

We simulated the early phase of the 2009 influenza A(H1N1) pandemic and assessed the effectiveness of public health interventions in Japan. We show that the detection rate of border quarantine was low and the timing of the intervention was the most important factor involved in the control of the pandemic, with the maximum reduction in daily cases obtained after interventions started on day 6 or 11. Early interventions were not always effective.

[HTTP://WWW.EUROSURVEILLANCE.ORG/VIEWARTICLE.ASPX?ARTICLEID=19455](http://www.eurosurveillance.org/viewarticle.aspx?articleid=19455)

Surveillance report

Outbreak of 2009 pandemic influenza A(H1N1), Los Lagos, Chile, April-June 2009. Chilean Task Force for study of Pandemic Influenza A (H1N1)

On 17 May 2009, the first two cases of 2009 pandemic influenza A(H1N1) were confirmed in the Metropolitan region (Santiago, Chile). On 6 June 2009, Chile reported 500 confirmed cases, seven severe and two fatal. Because six of the severe cases and the two deaths occurred in the region of Los Lagos in southern Chile, a retrospective study was conducted using data on emergency room visits as well as laboratory viral surveillance, during the period from 1 April to 31 May, in order to establish the date of the beginning of the outbreak. From 1 to 27 June, data were collected in real time, to establish the real magnitude of the outbreak, describe its transmission, clinical severity and secondary attack rates. Confirmed cases, their household contacts and healthcare workers were interviewed. This analysis showed that the outbreak in Los Lagos started on 28 April. By 27 June, a total of 14.559 clinical cases were identified, affecting mostly 5-19 year-olds. The effective reproduction number during the initial phase (20 days) was 1.8 (1.6–2.0). Of the 190 confirmed cases with severe acute respiratory infection, 71 (37,4%) presented a risk condition or underlying illness.

[HTTP://WWW.EUROSURVEILLANCE.ORG/VIEWARTICLE.ASPX?ARTICLEID=19456](http://www.eurosurveillance.org/viewarticle.aspx?articleid=19456)

SELECTED RECENT SCIENTIFIC PUBLICATIONS

Household transmission of the 2009 Pandemic Influenza A (H1N1) Virus in the United States

Cauchemez S, Donnelly CA, Reed C et al. The New England Journal of Medicine, 31 December 2009

Available from: <http://content.nejm.org/cgi/content/full/361/27/2619>

This important study characterises risk factors and describes the transmission of the virus within households across the US. The authors found that the transmissibility of the 2009 pandemic influenza A(H1N1) virus in households was lower than that seen in past pandemics. It is the first epidemiological study to comment. Most transmissions occur soon before or after the onset of symptoms in a case patient. Interestingly, children were twice as susceptible to infection as adults 19 to 50 years of age; adults older than 50 years of age were less susceptible than younger adults.

Institut de Veille Sanitaire Intérêt d'un traitement précoce par antiviral pour réduire la sévérité et la mortalité par grippe A(H1N1)2009 : données issues de la surveillance des formes graves

Available from: http://www.invs.sante.fr/surveillance/grippe_dossier/docs_professionnels/antiviraux_grippe_a_h1n1_211209.pdf

This is the analysis that ECDC is aware of from Europe looking at the effect of antivirals (oseltamivir) in reducing the risk of severe disease or death in hospital patients. It uses reports of hospitalised patients made to INVS (the national French public health institute dealing with infection) and compares the risk of severe disease or death according to whether a person had had oseltamivir within 48 hours of onset of symptoms. The results are consistent with a protective effect of early antiviral treatment. The authors admit the limitations of their study, namely that it relies on observational data and they cannot exclude confounding. The results are consistent with other international studies see

<http://content.nejm.org/cgi/content/full/361/23/e110>

Outbreak of 2009 Pandemic Influenza A (H1N1) at a New York City School

Lessler J, Reich NG, Cummings DA et al. The New England Journal of Medicine, 31 December 2009

Available from: <http://content.nejm.org/cgi/content/full/361/27/2628>

This article describes in some detail the outbreak of 2009 pandemic influenza A(H1N1) that occurred at a high school in Queens, New York, from April 24 to May 8 2009, characterizing the clinical and epidemiologic aspects of the infection relying on virological testing and symptom reports (but without the benefit of serology). The findings of the study indicate how widely the disease spread through the school even without the benefit of being able to detect asymptomatic infections.

Influenza as a trigger for acute myocardial infarction or death from cardiovascular disease: a systematic review

Warren-Gash C, Liam Smeeth L, Hayward AC. The Lancet, October 2009

Available from: [http://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(09\)70233-6/abstract](http://www.thelancet.com/journals/laninf/article/PIIS1473-3099(09)70233-6/abstract)

This important systematic review looks at the evidence that seasonal influenza (including as defined by the syndromes influenza-like illness and acute respiratory infection) triggers acute myocardial infarction or cardiovascular death. Although many observational studies reported consistent associations between influenza and acute myocardial infarction, there was weaker evidence of an association with cardiovascular death. A pooled estimate from a random-effects model found a non-significant protective effect of influenza vaccination against cardiac events in people with existing cardiovascular disease.

Severe pneumonia associated with pandemic (H1N1) 2009 outbreak, San Luis Potosi, Mexico

Gómez-Gómez A, Magaña-Aquino M, García-Sepúlveda C et al. Emerg Infect Diseases, 1 Jan 2010

Available from: <http://www.ncbi.nlm.nih.gov/pubmed/20031039?dopt=Abstract>

This investigation is a description of the clinical presentation and outcomes of adults hospitalised with pneumonia during the 2009 influenza A(H1N1) pandemic during a one month period of April 10 to May 11, 2009, in one general hospital in San Luis Potosi, Mexico. This was a time of intense local transmission and a sharp rise in the number of admissions with pneumonia. The authors identified 50 patients with suspected influenza pneumonia, of which 11 were then confirmed positive for 2009 pandemic influenza virologically. Eighteen patients out of 50 needed treatment in intensive care units (17 with Acute Respiratory Distress Syndrome and one with Acute Lung Injury) and of those 10 had a fatal outcome. Thirty three out of the 50 had conditions already known to be associated with poor outcome. Twenty out of the 33 only had severe obesity reported (BMI greater than 30).

Table 1. Reported number of confirmed 2009 pandemic influenza A(H1N1) cases admitted to hospitals and intensive care, by country, as of 08 January 2010, 14.00 CEST in EU and EFTA countries.

Country (date of report)	Number of cases currently hospitalised	Cumulative number of cases admitted in hospitals	Number of cases currently in intensive care	Cumulative number of cases admitted to intensive care
Austria (23.12.)	-	-	-	-
Belgium (07.01.)	-	-	-	-
Bulgaria (13.12.)	-	-	-	-
Cyprus(05.01)	-	-	5	26
Czech Republic (06.01.)	-	-	-	-
Denmark (06.01.)	-	-	10	81
Estonia (07.01.)	-	-	-	-
Finland (23.12.)	2	-	6	-
France (07.01.)	-	-	186	1116
Germany (05.01.)	-	-	-	-
Greece (07.01.)	-	-	-	-
Hungary (30.12.)	-	-	-	-
Iceland (10.12.)	3	180	1	20
Ireland (07.01.)	148	1043	9	87
Italy (31.12.)	-	923	-	446
Latvia (07.01.)	-	-	-	-
Liechtenstein (07.01.)	-	-	-	-
Lithuania (08.01.)	-	-	-	-
Luxembourg (27.12.)	-	-	0	0
Malta (04.09.)	-	46	-	1
Netherlands (08.01.)	-	2178	-	-
Norway (06.01.)	4	1317	2	172
Poland (22.12.)	-	-	-	-
Portugal (06.01.)	73	-	18	-
Romania (08.01.)	-	-	-	-
Slovakia (22.12.)	51	260	18	94
Slovenia (07.01.)	76	-	-	-
Spain (30.12.)	-	-	-	-
Sweden (07.01.)	-	-	-	-
Switzerland (07.01.)	8	480	-	87
United Kingdom* (31.12.)	496	-	112	-

Note: Data for the EU and EFTA countries correspond to the Ministry of Health or surveillance centre websites. New updates with changes in figures are highlighted in gray. (-) denotes no information readily available in official sources.

* Data includes information for England only. Other cumulative hospitalisations are: Scotland (1474), Wales (438) and Northern Ireland (574).

Table 2. Reported number of new and cumulative confirmed fatal 2009 pandemic influenza A(H1N1) cases in EU and EFTA countries, and in the rest of the world by country as 08 January 2010, 14.00 CEST.

Country	Number of new fatal cases since previous national update	Cumulative number of fatal cases
EU and EFTA countries		
Austria	-	3
Belgium	-	17
Bulgaria	-	35
Cyprus	1	4
Czech Republic	11	67
Denmark	-	30
Estonia	3	13
Finland	-	36
France	-	256*
Germany	-	159
Greece	12	82
Hungary	-	57
Iceland	-	2
Ireland	-	22
Italy	-	193
Latvia	-	31
Lithuania	1	18
Luxembourg	-	3
Malta	-	3
Netherlands	1	54
Norway	-	29
Poland	-	148
Portugal	-	70
Romania	9	82
Slovakia	-	30
Slovenia	1	14
Spain	-	271
Sweden	-	25
Switzerland	-	15
United Kingdom	-	309
Total	39	2078
Other European countries and central Asia		
Albania	-	6
Armenia	-	3
Belarus	-	20
Bosnia and Herzegovina	-	10
Croatia	1	25
Former Yugoslav Republic of Macedonia	-	14
Georgia	-	18
Kosovo	-	14
Moldova	-	30
Montenegro	-	7
Russia	-	19
Serbia	-	61
Ukraine	-	202
Total	1	429
Mediterranean and Middle-East		
Algeria	7	54
Bahrain	-	7
Egypt	-	172
Iran	-	147
Iraq	-	42
Israel	-	81
Jordan	3	19
Kuwait	-	27
Lebanon	-	5
Libya	-	1
Morocco	-	50

Country	Number of new fatal cases since previous national update	Cumulative number of fatal cases
Occupied Palestinian Territory	5	28
Oman	-	31
Qatar	-	8
Saudi Arabia	-	124
Syria	-	127
Tunisia	-	18
Turkey	-	415
United Arab Emirates	-	6
Yemen	1	28
Total	16	1390
Africa		
Ghana	-	1
Madagascar	-	3
Mauritius	-	8
Mozambique	-	2
Namibia	-	1
Sao Tome & Principe	-	2
South Africa	-	93
Sudan	-	5
Tanzania	-	1
Total	-	116
North America		
Canada	6	416
Mexico	13	880
USA	-	2290
Total	19	3586
Central America and Caribbean		
Bahamas	-	4
Barbados	-	3
Cayman Islands	-	1
Costa Rica	-	47
Cuba	-	49
Dominican Republic	-	23
El Salvador	-	31
Guatemala	-	18
Honduras	-	16
Jamaica	-	7
Nicaragua	-	11
Panama	-	11
Saint Kitts and Nevis	-	2
Saint Lucia	-	1
Suriname	-	2
Trinidad-Tobago	-	5
Total	-	231
South America		
Argentina	-	617
Bolivia	-	59
Brazil	-	1632
Chile	-	150
Colombia	-	196
Ecuador	-	96
Paraguay	-	52
Peru	-	208
Uruguay	-	33
Venezuela	-	121
Total	-	3164
North-East and South Asia		
Afghanistan	-	17
Bangladesh	-	6
China (Mainland)	-	648
Hong Kong SAR China	-	55

Country	Number of new fatal cases since previous national update	Cumulative number of fatal cases
India	25	1035
Japan	-	107
Macao SAR China	-	11
Maldives	-	1
Mongolia	-	26
Nepal	-	2
Pakistan	-	14
South Korea	-	170
Sri Lanka	-	36
Taiwan	-	35
Total	25	2163
South-East Asia		
Brunei Darussalam	-	1
Cambodia	-	6
Indonesia	-	10
Laos Peoples Democratic Republic	-	1
Malaysia	-	77
Philippines	-	30
Singapore	-	19
Thailand	-	192
Vietnam	-	53
Total	-	389
Australia and Pacific		
Australia	-	191
Cook Islands	-	1
Marshall Islands	-	1
New Zealand	-	20
Samoa	-	2
Solomon Islands	-	1
Tonga	-	1
Total	-	217
TOTAL	100	13763

* Deaths reported from France include 1 in Guyana, 9 in New Caledonia, 7 in the French Polynesia, 7 in La Réunion, 1 in Martinique, 2 in Mayotte, 5 in Guadeloupe and 224 in mainland France.

Figure 1. Number of confirmed deaths among 2009 pandemic influenza A(H1N1) cases by week of notification in EU and EFTA countries

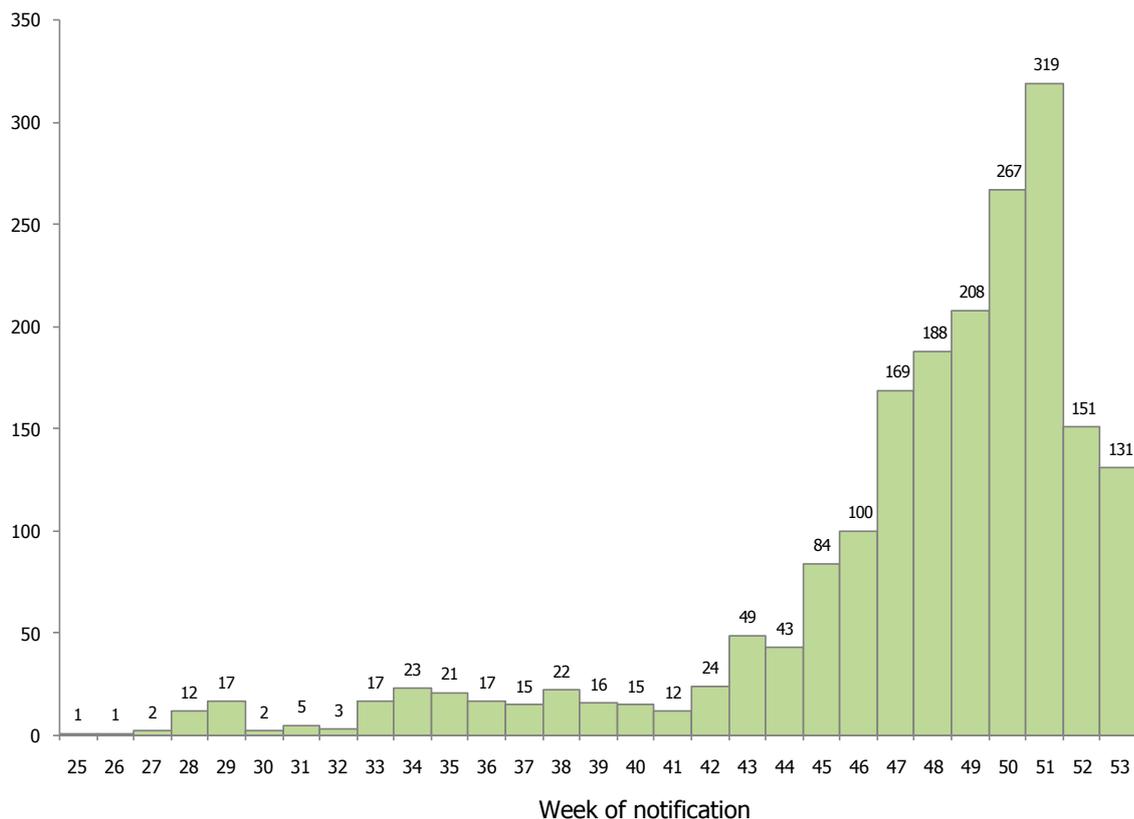
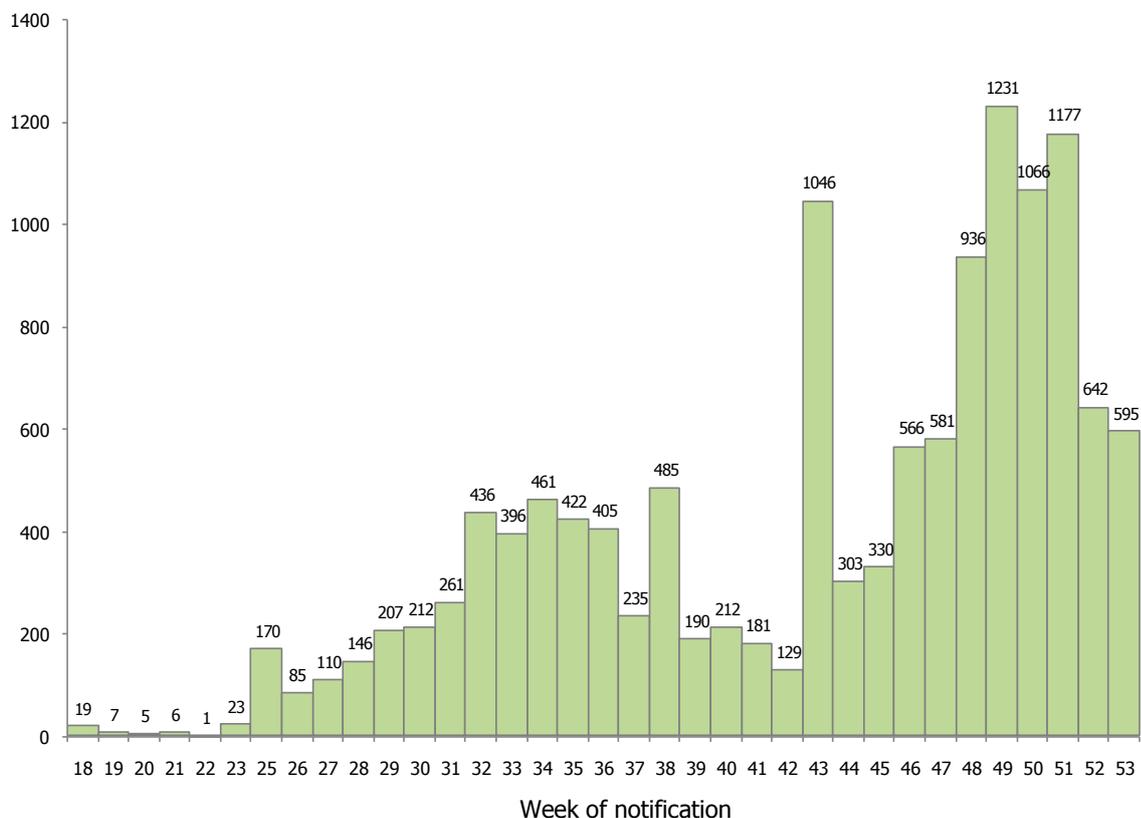


Figure 2. Number of confirmed deaths among 2009 pandemic influenza A(H1N1) 2009 influenza cases by week of notification in the rest of the world*.



* The apparent increase in the number of deaths in week 43 is due to the aggregate reporting of fatal cases from Brazil from weeks 37 to 40 and to our batch report of US fatal cases since 1 August 2009.

Figure 3. Reported cumulative number of confirmed fatal cases of 2009 pandemic influenza A(H1N1) in EU and EFTA countries, as of 08 January 2010, 14.00 CEST

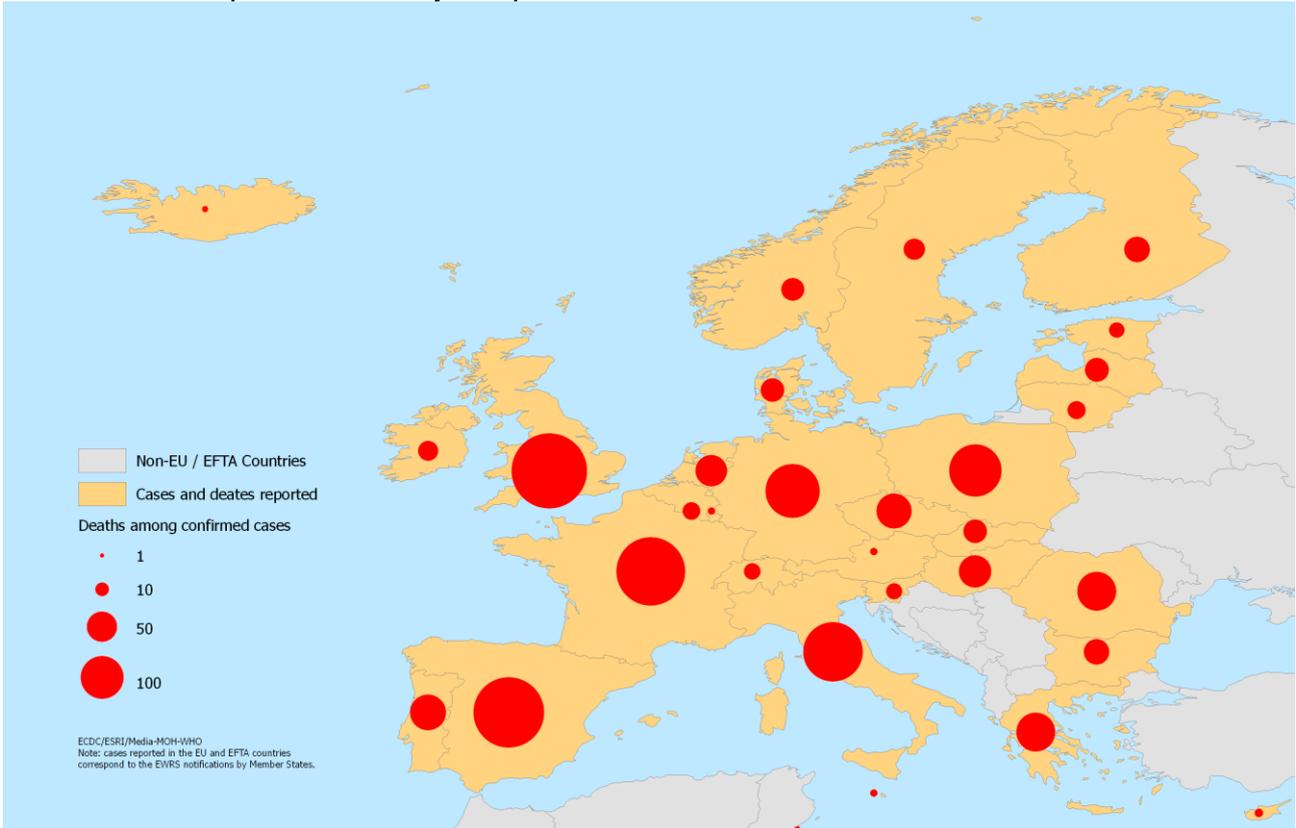


Figure 4. Reported cumulative number of confirmed fatal cases of 2009 pandemic influenza A(H1N1) and country status, by country, as of 08 January 2010, 14.00 CEST

