Heterogeneous pandemic influenza activity across the European Region

Key points: week 49/2009

- This report is based on data received from 40 of the 53 Member States in the WHO European Region.
- 35% of specimens collected from sentinel sources in the European Region tested positive for influenza virus.
- Over the past 3 weeks, the incidence of clinical respiratory illness has increased in 6 countries and decreased in 10 others.
- Out of 28 countries that tested at least 20 samples, 16 reported that 30% or more of sentinel specimens had tested positive for influenza.
- 15 countries throughout the European Region reported high or very high intensity of influenza, with 7 of these reporting a moderate impact on health services.
- Pandemic (H1N1) 2009 was dominant in 33 countries and accounted for nearly 100% of influenza A virus subtype detections in sentinel specimens and over 98% of detections in non-sentinel specimens.
- From 4 to 10 December, 27 countries reported a total of 412 deaths involving laboratory-confirmed cases of pandemic (H1N1) 2009 virus infection.

Current situation: week 49/2009

Six countries (Czech Republic, Estonia, France, Hungary, Montenegro and Switzerland) reported increases in influenza-like illness (ILI) and/or acute respiratory infection (ARI) consultations (defined as countries with increases in each of the previous three weeks). Of these countries, 5 tested at least 20 sentinel specimens and have reported a mean influenza positivity rate of 51% (median 54%) with a range of 28–71%. Clinical respiratory disease activity has declined over the past 3 weeks in 10 countries (Belgium, Bulgaria, Iceland, Ireland, Israel, the Netherlands, Norway, Portugal, Sweden and Ukraine). This decrease in clinical activity was confirmed by the virological data, with a general decreasing trend in the percentage of positive specimens in 8 out of 10 countries. In week 47, the overall percentage of positive sentinel specimens was 44% (median) and decreased to 26% (median) in week 49.

The intensity of clinical activity was described as very high in Lithuania, and 14 countries reported high intensity. Twenty-three countries reported ILI and/or ARI as geographically widespread. The impact on health services was described as moderate in 16 countries. None of the countries reported a severe impact.

The Russian Federation has been reporting ARI deaths to the EuroFlu platform since week 43. From week 43 to week 49, it reported a total of 102 ARI deaths , of which the majority (n=41) were reported in week 48. Ninety-three percent of these deaths occurred in the population aged 15 to 64.

From 4 to 10 December, 27 countries reported a total of 412 deaths involving laboratory-confirmed cases of pandemic (H1N1) 2009 virus infection. This raises the total number of deaths reported since April 2009 from 1243 to 1655. Bosnia and Herzegovina, Estonia and Montenegro reported their first such deaths during this week.

Virological update: week 49/2009

Sentinel physicians collected 3437 respiratory specimens this week, of which 1190 (35%) were positive for influenza virus. Of these virus detections, 1188 were type A (1123 pandemic A(H1), 63 not subtyped, 1 influenza A(H1), 1 influenza A(H3)) and 2 were type B. Of the 28 countries testing 20 or more sentinel specimens this week, influenza-positive rates ranged from 4% (Iceland) to 71% (Czech Republic and Greece), with a mean of 35%.

In addition, 9435 non-sentinel specimens were reported positive for influenza virus in week 49/2009: 9410 type A (8400 pandemic A(H1), 29 A(H3), 92 seasonal A(H1), 889 not subtyped) and 25 type B.

Based on the antigenic characterization of 417 influenza viruses reported from week 40/2009 to week 49/2009, 416 were pandemic A(H1N1), A/California/7/2009-like and one was B/Brisbane/60/2008-like.

Of the total of 105 773 specimens that have tested positive for influenza virus since week 40/2009, 93 965 (89%) were pandemic influenza A(H1) and these accounted for 99% of all influenza A viruses that were subtyped. In addition, 591 viruses were seasonal influenza A(H1); 374 were influenza A(H3); 10 608 were influenza A not subtyped; and 235 were influenza B..

While over 400 specimens of pandemic H1N1 viruses have been characterized, none of the 1200 typed or subtyped seasonal influenza viruses were characterized in the period from week 40/2009 to week 49/2009 . For vaccine recommendation purposes, laboratories are encouraged to send seasonal influenza specimens (clinical samples or isolates) for characterization to the WHO Collaborating Centre for Reference and Research on Influenza in Mill Hill, London.

Seven countries have tested isolates of pandemic (H1N1) 2009 virus for oseltamivir resistance. Of the 944 cases tested, 19 were resistant to oseltamivir. All viruses tested for resistance to zanamivir (282) have been found to be zanamivir-sensitive and all viruses tested for resistance to adamantanes (64) have been found to be resistant.

In week 50 in the Netherlands, 11 patients were diagnosed with a mixture of oseltamivir resistant and wild-type pandemic A(H1N1) 2009 influenza viruses. In all cases this was found in a respiratory specimen following initiation of oseltamivir therapy, indicating that resistance emerged during therapy and not from infection with a resistant virus. Nine of the patients, four of whom died, were immunosuppressed due to chemotherapy/immunosuppressive therapy. Contact tracing identified no cases of onward transmission of the oseltamivir resistant viruses.

Comment

The pandemic is affecting most countries in the WHO European Region, with some indication that central and eastern countries are currently experiencing the greatest intensity of influenza activity. However, 10 countries also appear to have passed initial peaks in clinical activity, suggesting a heterogeneous picture of influenza intensity across the Region.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

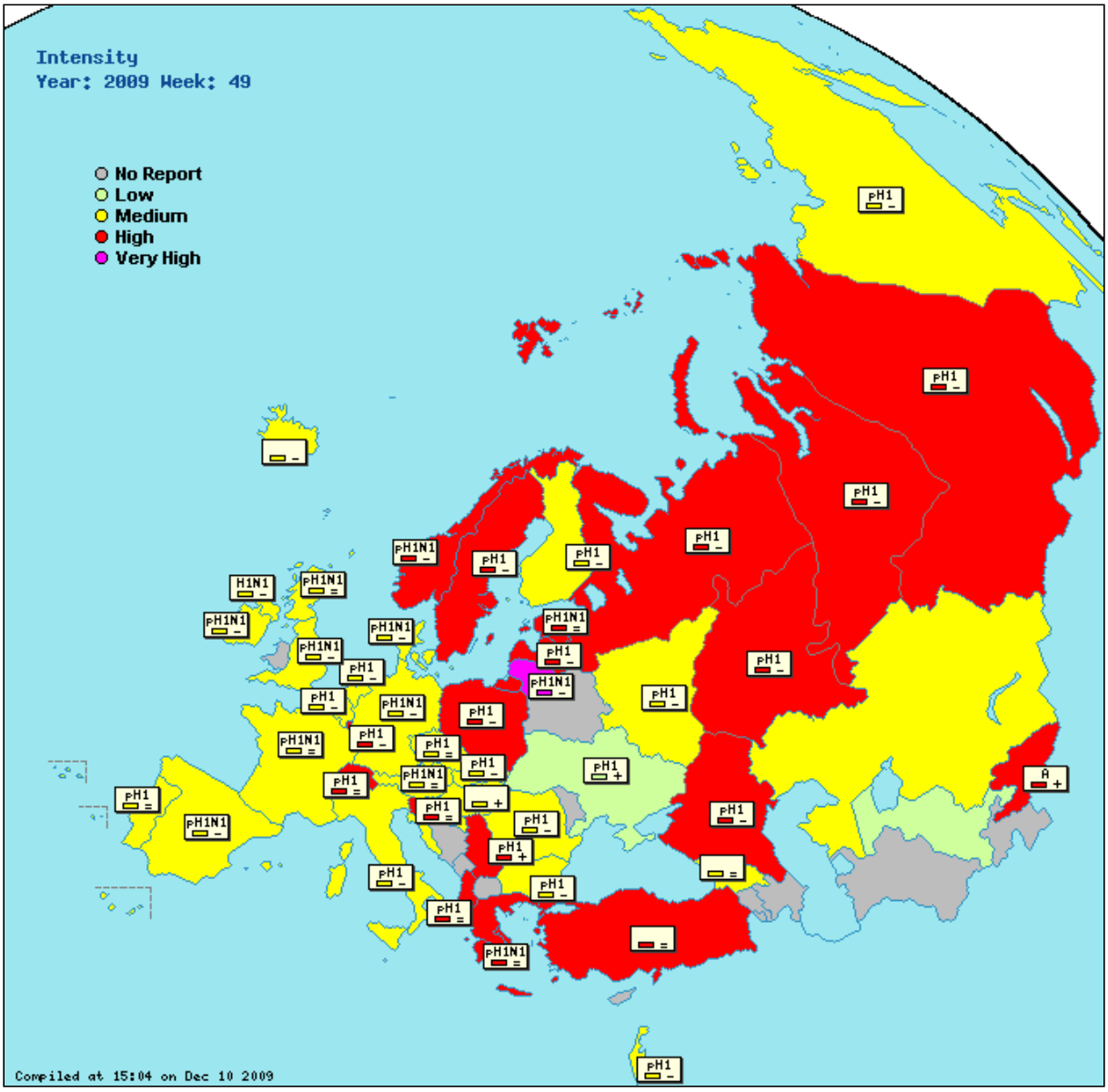
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no laboratory-confirmed case(s) of influenza, or evidence of increased or unusual respiratory disease activity.
Sporadic = isolated cases of laboratory confirmed influenza infection
Localized = limited to one administrative unit of the country (or reporting site) only.
Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites).

- : decreasing clinical activity **Widespread** = appearing in ≥50% of the administrative units of the country (or reporting sites).

Country comments (where available)

Netherlands
By week 50 in the Netherlands 11 patients were diagnosed with a mixture of oseltamivir resistant and wild-type pandemic A(H1N1) 2009 influenza viruses in one respiratory specimen during oseltamivir therapy, indicating resistance emerged during therapy and not by infection with a resistance virus. Nine of the patients were immunosuppressed due to chemotherapy/immunosuppressive therapy, of which four died. Contact tracing identified no cases of onward transmission of the oseltamivir resistant viruses.

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania	High	Local	Moderate	Stable	170	31.2%	Type A, Subtype pH1		503.0 (graphs)	Click here
Austria	Medium	Widespread	Low	Stable	42	64.3%	Type A, Subtype pH1N1	(graphs)		Click here
Belgium	Medium	Widespread	Low	Decreasing	64	35.9%	Type A, Subtype pH1	158.4 (graphs)	1327.0 (graphs)	Click here
Bulgaria	Medium	Local		Decreasing			Type A, Subtype pH1		830.1 (graphs)	Click here
Croatia	Medium	Widespread	Moderate	Decreasing				180.0 (graphs)		Click here
Czech Republic	Medium	Regional		Stable	42	71.4%	Type A, Subtype pH1	305.1 (graphs)	1548.7 (graphs)	Click here
Denmark	Medium	Widespread		Decreasing	7	0%	Type A, Subtype pH1N1	218.1 (graphs)		Click here
England	Medium	Regional		Decreasing	514	23.5%	Type A, Subtype pH1N1	33.1 (graphs)	464.0 (graphs)	Click here
Estonia	High	Widespread	Moderate	Stable	105	27.6%	Type A, Subtype pH1N1	66.5 (graphs)	806.8 (graphs)	Click here
Finland	Medium	Regional	Moderate	Decreasing	30	16.7%	Type A, Subtype pH1	(graphs)		Click here
France	Medium	Widespread	Moderate	Stable	168	47.6%	Type A, Subtype pH1N1		3117.1 (graphs)	Click here
Georgia	Medium	Regional	Moderate	Stable	69	53.6%	None	256.7 (graphs)		Click here
Germany	Medium	Widespread	Low	Decreasing	179	47.5%	Type A, Subtype pH1N1		1240.7 (graphs)	Click here
Greece	High	Widespread		Stable	62	71.0%	Type A, Subtype pH1N1	394.7 (graphs)		Click here
Hungary	Medium	Widespread	Moderate	Increasing	121	54.6%	None	429.5 (graphs)		Click here
Iceland	Medium	Local		Decreasing	23	4.4%	None	31.6 (graphs)		Click here
Ireland	Medium	Regional	Low	Decreasing	41	22.0%	Type A, Subtype pH1N1	60.4 (graphs)		Click here
Israel	Medium	Widespread	Low	Decreasing	219	61.6%	Type A, Subtype pH1	147.0 (graphs)		Click here
Italy	Medium	Widespread		Decreasing	47	19.2%	Type A, Subtype pH1 and H1	373.1 (graphs)		Click here
Kazakhstan	Medium	Sporadic	Moderate	Increasing					(graphs)	Click here
Kyrgyzstan	High	Widespread	Moderate	Increasing	9	0%	Type A		(graphs)	Click here
Latvia	High	Widespread		Decreasing			Type A, Subtype pH1	207.4 (graphs)	1508.4 (graphs)	Click here
Lithuania	Very High	Widespread	Moderate	Decreasing	37	48.7%	Type A, Subtype pH1N1	(graphs)		Click here
Luxembourg	High	Widespread			71	31.0%	Type A, Subtype pH1	(graphs)		Click here
Montenegro								287.4 (graphs)	759.2 (graphs)	Click here
Netherlands	Medium	Widespread	Low	Decreasing	30	23.3%	Type A, Subtype pH1	61.0 (graphs)		Click here
Northern Ireland	Medium	Sporadic		Decreasing	11	18.2%	Type A, Subtype H1N1	74.9 (graphs)		Click here
Norway	High	Widespread		Decreasing	22	40.9%	Type A, Subtype pH1N1	195.9 (graphs)		Click here
Poland	High	Widespread	Moderate	Decreasing	237	23.2%	Type A, Subtype pH1	290.3 (graphs)		Click here
Portugal	Medium	Widespread	Moderate	Stable	18	38.9%	Type A, Subtype pH1	68.1 (graphs)		Click here
Romania	Medium	Regional	Moderate	Decreasing	68	41.2%	Type A, Subtype pH1	7.1 (graphs)	1168.4 (graphs)	Click here
Russian Federation	High	Widespread		Decreasing			Type A, Subtype pH1		913.6 (graphs)	Click here
Scotland	Medium	Regional		Stable	342	21.4%	Type A, Subtype pH1N1	20.2 (graphs)		Click here
Serbia	High	Regional	Low	Increasing	0	0%	Type A, Subtype pH1	207.3 (graphs)		Click here
Slovakia	Medium	Local	Low	Decreasing	14	50.0%	Type A, Subtype pH1	440.6 (graphs)	2162.1 (graphs)	Click here
Slovenia	High	Widespread		Stable	52	65.4%	Type A, Subtype pH1	211.8 (graphs)	1488.7 (graphs)	Click here
Spain	Medium	Regional		Decreasing	416	29.1%	Type A, Subtype pH1N1	150.9 (graphs)		Click here
Sweden	High	Widespread	Moderate	Decreasing	55	14.6%	Type A, Subtype pH1	9.2 (graphs)		Click here
Switzerland	High	Widespread	Low	Stable	83	54.2%	Type A, Subtype pH1	445.0 (graphs)		Click here
Turkey	High	Regional	Moderate	Stable	69	0%	None	112.1 (graphs)		Click here
Ukraine	Low	Local	Moderate	Increasing			Type A, Subtype pH1		523.4 (graphs)	Click here
Uzbekistan	Low	None	Low	Decreasing					51.5 (graphs)	Click here
Europe					3437	34.6%				Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
*: the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Declining trends in pandemic H1N1 2009 influenza activity in Europe

Key points: week 50/2009

- This report is based on data received from 41 of the 53 Member States in the WHO European Region.
- 34% of specimens collected from sentinel sources in the European Region tested positive for influenza virus.
- Over the past 3 weeks, the incidence of clinical respiratory illness has increased in 2 countries and decreased in 18 others.
- Out of 27 countries that tested at least 20 samples, 10 reported that 30% or more of sentinel specimens had tested positive for influenza.
- 9 countries throughout the European Region reported high or very high intensity of influenza, with 5 of these reporting a moderate impact on health services.
- Pandemic (H1N1) 2009 was dominant in 32 countries and accounted for 100% of influenza A virus subtype detections in sentinel specimens and over 98% of detections in non-sentinel specimens.
- From 11 to 17 December, 23 countries reported a total of 380 deaths involving laboratory-confirmed cases of pandemic (H1N1) 2009 virus infection, bringing the total number of laboratory-confirmed deaths reported since April 2009 to 2045.

Current situation: week 50/2009

Two countries (Hungary and Montenegro) reported an increase in influenza-like illness (ILI) and/or acute respiratory infection (ARI) consultations (defined as countries with increases in each of the previous three weeks). Clinical respiratory disease activity has declined over the past 3 weeks in 18 countries; 12 of these countries tested over 20 sentinel specimens with an overall of 22% (median) positive specimens. In four countries (Georgia, Romania (ARI), Serbia, Ukraine), however, influenza activity has shown some signs of a resurgence following declining trends in previous weeks. This activity will continue to be monitored. In particular the eastern regions of Ukraine showed an increase in ARI rates in week 50.

Thirty-three countries provided data on trends in clinical consultations by age. Eighteen countries reported highest rates among the group aged 5–14 years while the others reported highest rates in the group aged 0–4.

The intensity of clinical activity was described as very high in Lithuania, and 6 countries reported high intensity; 17 reported ILI and/or ARI as geographically widespread. The impact on health services was described as moderate in 13 countries. None of the countries reported a severe impact.

From 11 to 17 December, 23 countries reported a total of 390 deaths involving laboratory-confirmed cases of pandemic (H1N1) 2009 virus infection. This raises the total number of such deaths reported since April 2009 from 1655 to 2045. Albania and Georgia reported their first deaths related to pandemic (H1N1) 2009 influenza during the week.

Virological update: week 50/2009

Sentinel physicians collected 3225 respiratory specimens this week, of which 1096 (34%) were positive for influenza virus. Of these virus detections, all were type A (1040 pandemic A(H1), 56 not subtyped. Of the 27 countries testing 20 or more sentinel specimens this week, influenza-positive rates ranged from 0% (Finland and Turkey) to 71% (Greece), with a mean of 35% (median 17).

In addition, 8850 (36%) of 24922 non-sentinel specimens were reported positive for influenza virus in week 50/2009: 8772 type A (8090 pandemic A(H1), 24 A(H3), 74 seasonal A(H1), 584 not subtyped) and 43 type B.

Based on the antigenic characterization of 545 influenza viruses reported from week 40/2009 to week 50/2009, 542 were pandemic A(H1N1), A/California/7/2009-like, 2 were A(H3) A/Brisbane/10/2007 (H3N2)-like, and 1 was B/Brisbane/60/2008-like. Genetic characterizations were available for 204 isolates; all belonged to the A/California/7/2009 A(H1N1) pandemic influenza lineage.

Of the total of 123 270 specimens that have tested positive for influenza virus since week 40/2009, 110 434 (90%) were pandemic influenza A(H1) and these accounted for 99% of all influenza A viruses that were subtyped. In addition, 665 viruses were seasonal influenza A(H1); 397 were influenza A(H3); 11 487 were influenza A not subtyped; and 287 were influenza B.

Seven countries have tested isolates of pandemic (H1N1) 2009 virus for oseltamivir resistance. Of the 944 cases tested, 19 were resistant to oseltamivir. All viruses tested for resistance to zanamivir (282) have been found to be zanamivir-sensitive and all viruses tested for resistance to adamantanes (64) have been found to be resistant.

Comment

While influenza activity is increasing in 2 countries, an overall decreasing trend has been observed for 18. In general, ILI/ARI consultations and influenza detections peaked early this influenza season, around week 47/2009, with an early peak reported for England around week 30/2009. In the previous influenza season the peak was around week 4 (range: week 52–12). Nevertheless, trends in clinical and virological data are being monitored to determine if additional waves of winter-time activity will occur, or the proportion of seasonal influenza viruses in circulation will change.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

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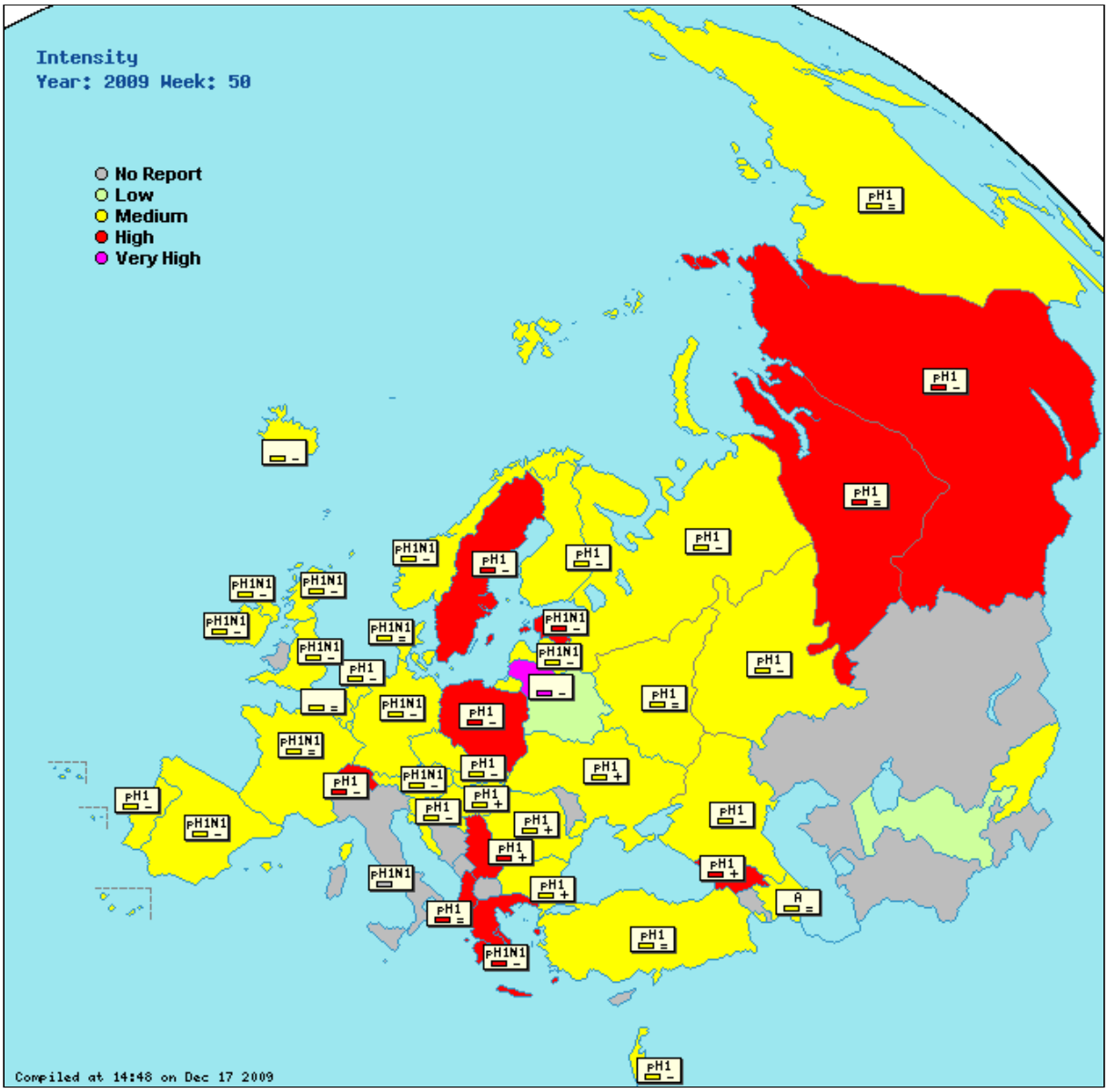
Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no laboratory-confirmed case(s) of influenza, or evidence of increased or unusual respiratory disease activity.
Sporadic = isolated cases of laboratory confirmed influenza infection
Localized = limited to one administrative unit of the country (or reporting site) only.
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Widespread = appearing in ≥50% of the administrative units of the country (or reporting sites).

Country comments (where available)

Netherlands
By week 51 in the Netherlands 13 patients were diagnosed with a mixture of oseltamivir resistant and wild-type pandemic A(H1N1) 2009 influenza viruses in one respiratory specimen during oseltamivir therapy, indicating resistance emerged during therapy and not by infection with a resistance virus. Ten of the patients were immunosuppressed due to cytostatic/immunosuppressive therapy, of which four died. Contact tracing identified no cases of onward transmission of the oseltamivir resistant viruses.

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania	High	Local	Moderate	Stable	181	27.6%	Type A, Subtype pH1		490.0 (graphs)	Click here
Austria	Medium	Widespread	Low	Decreasing	21	57.1%	Type A, Subtype pH1N1	1220.3 (graphs)		Click here
Azerbaijan	Medium	Local	Low	Stable	238	4.6%	Type A	(graphs)		Click here
Belarus	Low	Sporadic	Low	Decreasing					1074.9 (graphs)	Click here
Belgium	Medium	Widespread	Low	Stable	47	29.8%	None	143.2 (graphs)	1702.9 (graphs)	Click here
Bulgaria	Medium	Regional		Increasing			Type A, Subtype pH1		901.8 (graphs)	Click here
Croatia	Medium	Widespread	Moderate	Decreasing				118.1 (graphs)		Click here
Czech Republic	Medium	Regional		Stable				273.9 (graphs)	1463.9 (graphs)	Click here
Denmark	Medium	Widespread		Stable	7	57.1%	Type A, Subtype pH1N1	205.9 (graphs)		Click here
England	Medium	Regional		Decreasing	223	22.4%	Type A, Subtype pH1N1	29.7 (graphs)	494.9 (graphs)	Click here
Estonia	High	Widespread	Moderate	Decreasing	56	25.0%	Type A, Subtype pH1N1	56.0 (graphs)	638.7 (graphs)	Click here
Finland	Medium	Regional	Moderate	Decreasing	20	0%	Type A, Subtype pH1	158.8 (graphs)		Click here
France	Medium	Widespread	Moderate	Stable	618	51.3%	Type A, Subtype pH1N1		2798.7 (graphs)	Click here
Georgia	High	Widespread	Moderate	Increasing	99	63.6%	Type A, Subtype pH1	362.8 (graphs)		Click here
Germany	Medium	Regional	Low	Decreasing	175	45.7%	Type A, Subtype pH1N1		1168.6 (graphs)	Click here
Greece	High	Widespread		Decreasing	52	71.2%	Type A, Subtype pH1N1	354.4 (graphs)		Click here
Hungary	Medium	Widespread	Moderate	Increasing	58	31.0%	Type A, Subtype pH1	458.2 (graphs)		Click here
Iceland	Medium	Sporadic		Decreasing	20	10.0%	None	18.2 (graphs)		Click here
Ireland	Medium	Local	Low	Decreasing	49	12.2%	Type A, Subtype pH1N1	51.4 (graphs)		Click here
Israel	Medium	Widespread	Low	Decreasing	172	50.0%	Type A, Subtype pH1	104.9 (graphs)		Click here
Italy					23	26.1%	Type A, Subtype pH1N1	(graphs)		Click here
Kyrgyzstan	Medium	Local	Moderate	Decreasing					204.3 (graphs)	Click here
Latvia	Medium	Regional		Decreasing	0	0%	Type A, Subtype pH1N1	138.0 (graphs)	1196.9 (graphs)	Click here
Lithuania	Very High	Widespread	Moderate	Decreasing	14	28.6%	None	(graphs)		Click here
Luxembourg	Medium	Widespread	Low					(graphs)		Click here
Montenegro								399.8 (graphs)	919.5 (graphs)	Click here
Netherlands	Medium	Widespread	Low	Decreasing	25	20.0%	Type A, Subtype pH1	56.8 (graphs)		Click here
Northern Ireland	Medium	Sporadic		Decreasing	51	5.9%	Type A, Subtype pH1N1	60.3 (graphs)		Click here
Norway	Medium	Widespread		Decreasing	10	20.0%	Type A, Subtype pH1N1	128.8 (graphs)		Click here
Poland	High	Widespread	Moderate	Decreasing	317	26.8%	Type A, Subtype pH1	202.2 (graphs)		Click here
Portugal	Medium	Widespread		Decreasing	28	28.6%	Type A, Subtype pH1	61.7 (graphs)		Click here
Romania	Medium	Regional	Moderate	Increasing	137	46.7%	Type A, Subtype pH1	3.9 (graphs)	1309.2 (graphs)	Click here
Russian Federation	Medium	Widespread		Decreasing			Type A, Subtype pH1		758.1 (graphs)	Click here
Scotland	Medium	Regional		Decreasing	156	21.8%	Type A, Subtype pH1N1	21.2 (graphs)		Click here
Serbia	High	Regional		Increasing	5	100.0%	Type A, Subtype pH1	265.1 (graphs)		Click here
Slovakia	Medium	Local	Low	Decreasing	5	60.0%	Type A, Subtype pH1	377.7 (graphs)	2032.9 (graphs)	Click here
Slovenia	Medium	Widespread		Decreasing	47	48.9%	Type A, Subtype pH1	158.3 (graphs)	1124.9 (graphs)	Click here
Spain	Medium	Regional		Decreasing	200	25.0%	Type A, Subtype pH1N1	76.5 (graphs)		Click here
Sweden	High	Widespread	Low	Decreasing	35	8.6%	Type A, Subtype pH1	8.6 (graphs)		Click here
Switzerland	High	Widespread	Low	Decreasing	73	50.7%	Type A, Subtype pH1	436.8 (graphs)		Click here
Turkey	Medium	Regional	Moderate	Stable	63	0%	Type A, Subtype pH1	119.4 (graphs)		Click here
Ukraine	Medium	Regional	Moderate	Increasing			Type A, Subtype pH1		847.7 (graphs)	Click here
Uzbekistan	Low	None	Low	Decreasing					39.2 (graphs)	Click here
Wales								44.2 (graphs)		Click here
Europe					3225	34.0%				Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
***:** the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Ongoing influenza activity despite declining clinical trends in many countries

Key points: week 51/2009

- This report is based on data received from 41 of the 53 Member States in the WHO European Region.
- Thirty-five per cent of specimens collected from sentinel sources tested positive for influenza virus.
- Over the past three weeks, the incidence of clinical respiratory illness has decreased in 20 countries and increased in two others.
- Out of 21 countries that reported testing at least 20 sentinel specimens for influenza, 13 reported that 30% of specimens or more had tested positive for influenza.
- Five countries reported high or very high intensity of influenza activity, with six reporting moderate or severe impact on health services.
- Pandemic (H1N1) 2009 was dominant in 32 countries and accounted 100% of influenza A virus subtype detections in sentinel specimens and 99% of detections in non-sentinel specimens.
- 2397 laboratory confirmed pandemic (H1N1) 2009 deaths have been reported in the Region.

Current situation: week 51/2009

Clinical respiratory disease activity has declined over the past three weeks in 20 countries. However, nine of these countries also tested at least 20 sentinel specimens for influenza during week 51/2009 and the median influenza positivity rate was 39% (mean 34%), suggesting that influenza circulation is ongoing despite declining clinical trends. Two countries, Georgia and Montenegro, have reported recent and substantial increases in influenza-like illness (ILI) (defined as increases in each of the previous three weeks). In Georgia, 66% of sentinel specimens tested positive for influenza this week, reflecting the highest positivity rate of any country testing 20 or more sentinel specimens. Qualitative reporting also suggests that there are still parts of the WHO European Region where transmission remains intense. Bulgaria, Greece, Poland, the Russian Federation (Urals Region) and Serbia reported the intensity of influenza circulation as high, and Georgia reported the intensity as very high. France, Hungary, Kyrgyzstan, Romania and Turkey reported the impact of influenza on health care services to be moderate, and Georgia reported the impact to be severe.

Reports of respiratory hospitalizations and deaths submitted to EuroFlu also reflect mixed trends in severe respiratory disease activity. Reports of deaths due to acute respiratory infection (ARI) received from the Russian Federation have declined each week since week 48/2009, reflecting a pattern similar to observed trends in ARI consultations. The weekly count of hospitalizations due to severe acute respiratory illness (SARI) reported by Kyrgyzstan has also decreased from a peak that was observed in week 47. However, three SARI sentinel surveillance sites in Ukraine have reported notable increases in hospitalized SARI cases in week 51. Similarly, weekly reports of SARI hospitalizations in Uzbekistan rose steadily between weeks 45 and 49, declined in week 50, but have again increased in week 51/2009.

Virological update: week 51/2009

Sentinel physicians collected 2340 respiratory specimens this week, of which 817 (35%) were positive for influenza virus. Of these virus detections, 816 were type A (802 pandemic A(H1), 14 not subtyped) and 1 was type B. Of the 21 countries testing 20 or more sentinel specimens this week, influenza-positive rates ranged from 0% (Azerbaijan) to 66% (Georgia), with a median of 38% and a mean of 35%.

In addition, 6434 non-sentinel specimens were reported to be positive for influenza virus in week 51/2009: 6420 type A (6053 pandemic A(H1), 17 A(H3), 45 seasonal A(H1), 305 not subtyped) and 14 type B. Based on the antigenic characterization of 799 influenza viruses reported from week 40/2009 to week 51/2009, 792 were pandemic A(H1N1), A/California/7/2009-like, 3 were A/Perth/16/2009 (H3N2)-like, 2 were A(H3) A/Brisbane/10/2007 (H3N2)-like, 1 was A/Brisbane/59/2007 (H1N1)-like, and 1 was B/Brisbane/60/2008-like. Genetic characterizations were available for 204 isolates; all belonged to the A/California/7/2009 A(H1N1) pandemic influenza lineage.

Ten countries have tested isolates of pandemic (H1N1) 2009 virus for oseltamivir resistance. Of the 1312 cases tested, 26 were resistant to oseltamivir. All viruses tested for resistance to zanamivir (346/346) have been found to be zanamivir-sensitive and all viruses tested for resistance to adamantanes (64/64) have been found to be resistant.

Comment

Sentinel surveillance systems throughout the Region suggest that influenza activity remains ongoing despite declining trends in clinical activity in many countries. The percentage of sentinel specimens testing positive for influenza in the Region reached 45% during week 45/2009 but has since remained between 34 and 42%. While some countries now appear to be past their initial peaks in disease activity, other countries are currently experiencing high levels of winter season influenza transmission.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

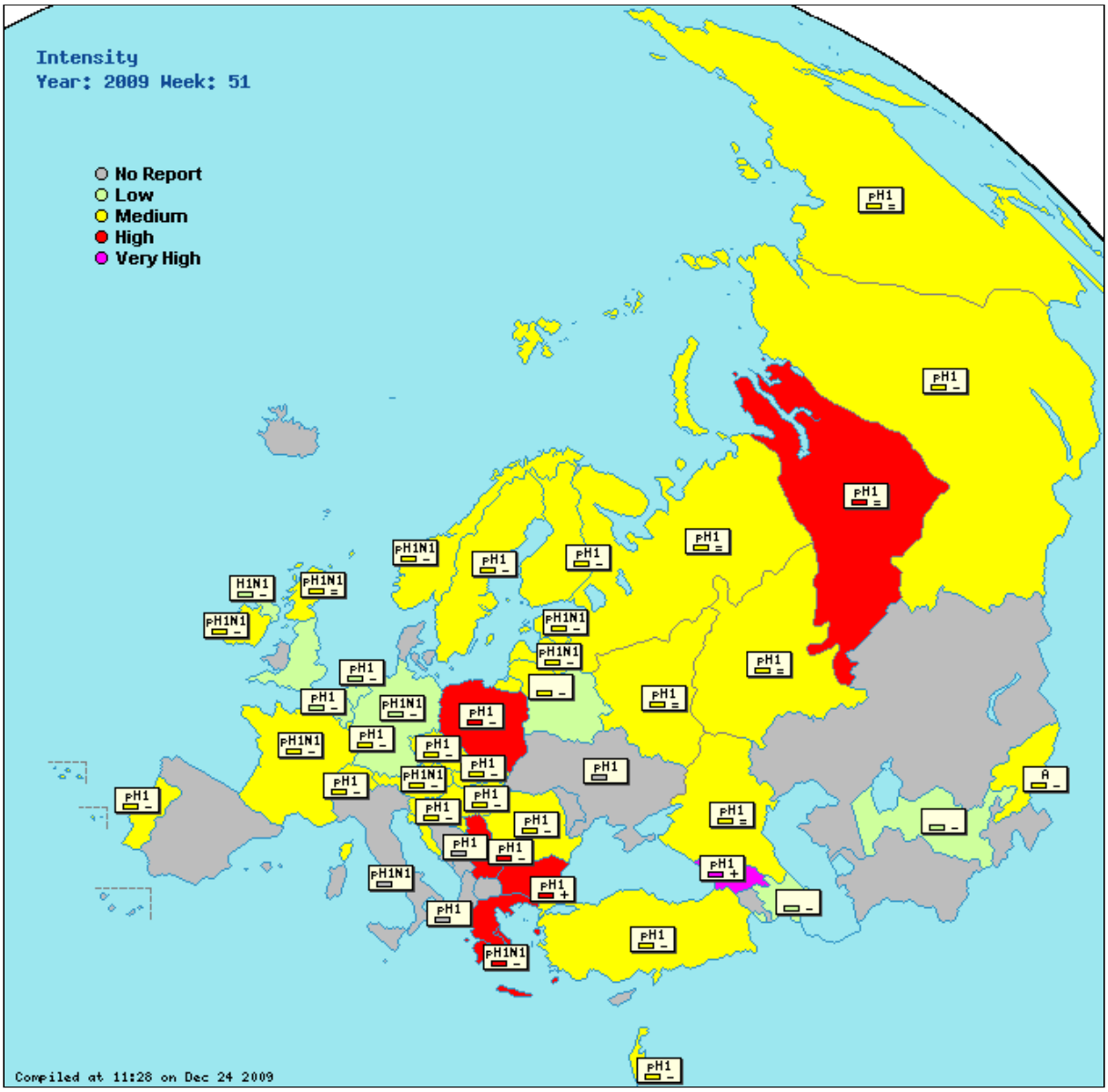
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no laboratory-confirmed case(s) of influenza, or evidence of increased or unusual respiratory disease activity.
Sporadic = isolated cases of laboratory confirmed influenza infection
Localized = limited to one administrative unit of the country (or reporting site) only.
Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites).
Widespread = appearing in ≥50% of the administrative units of the country (or reporting sites).

Country comments (where available)

The former Yugoslav Republic of Macedonia
Real-time RT-PCR
Netherlands
By week 52 in the Netherlands 14 patients were diagnosed with oseltamivir resistant pandemic A(H1N1) 2009 influenza virus. Compared to week 51, one additional patient was diagnosed with a monopopulation of H275Y oseltamivir resistant virus, following oseltamivir therapy. Eleven of the 14 patients were immunosuppressed due to cytostatic/immunosuppressive therapy, of which four died. Contact tracing identified no cases of onward transmission of the oseltamivir resistant viruses.

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania					46	37.0%	Type A, Subtype pH1		(graphs)	Click here
Austria	Medium	Regional	Low	Decreasing	37	56.8%	Type A, Subtype pH1N1	(graphs)		Click here
Azerbaijan	Low	None	Low	Decreasing	208	0%	None	(graphs)		Click here
Belarus	Low	Sporadic		Stable					1099.4 (graphs)	Click here
Belgium	Low	Sporadic	Low	Decreasing	49	26.5%	Type A, Subtype pH1	95.6 (graphs)	1455.7 (graphs)	Click here
Bosnia and Herzegovina							Type A, Subtype pH1	(graphs)		Click here
Bulgaria	High	Regional		Increasing			Type A, Subtype pH1		1019.3 (graphs)	Click here
Croatia	Medium	Widespread	Low	Decreasing				63.4 (graphs)		Click here
Czech Republic	Medium	Local		Decreasing	29	51.7%	Type A, Subtype pH1	193.2 (graphs)	1242.7 (graphs)	Click here
Denmark					0	0%	None	(graphs)		Click here
England	Low	Local		Decreasing				24.7 (graphs)	493.2 (graphs)	Click here
Estonia	Medium	Widespread		Decreasing	50	46.0%	Type A, Subtype pH1N1	36.7 (graphs)	486.1 (graphs)	Click here
Finland	Medium	Regional		Decreasing	17	17.7%	Type A, Subtype pH1	141.2 (graphs)		Click here
France	Medium	Widespread	Moderate	Decreasing	457	48.4%	Type A, Subtype pH1N1		2449.3 (graphs)	Click here
Georgia	Very High	Widespread	Severe	Increasing	114	65.8%	Type A, Subtype pH1	591.1 (graphs)		Click here
Germany	Low	Regional	Low	Decreasing	121	48.8%	Type A, Subtype pH1N1		1099.7 (graphs)	Click here
Greece	High	Widespread		Decreasing	47	61.7%	Type A, Subtype pH1N1	274.1 (graphs)		Click here
Hungary	Medium	Regional	Moderate	Decreasing	62	16.1%	Type A, Subtype pH1	366.0 (graphs)		Click here
Ireland	Medium	Local	Low	Decreasing	42	14.3%	Type A, Subtype pH1N1	42.4 (graphs)		Click here
Israel	Medium	Widespread	Low	Decreasing	122	45.1%	Type A, Subtype pH1	74.6 (graphs)		Click here
Italy					38	13.2%	Type A, Subtype pH1N1	(graphs)		Click here
Kyrgyzstan	Medium	None	Moderate	Decreasing	7	14.3%	Type A		131.1 (graphs)	Click here
Latvia	Medium	Regional		Decreasing	0	0%	Type A, Subtype pH1N1	64.9 (graphs)	893.5 (graphs)	Click here
Lithuania	Medium	Regional	Low	Decreasing	18	55.6%	None	(graphs)		Click here
Luxembourg	Medium	Widespread	Low		57	29.8%	Type A, Subtype pH1	(graphs)		Click here
The former Yugoslav Republic of Macedonia							None	(graphs)		Click here
Montenegro								440.1 (graphs)	719.5 (graphs)	Click here
Netherlands	Low	Widespread	Low	Decreasing	13	15.4%	Type A, Subtype pH1	44.2 (graphs)		Click here
Northern Ireland	Low	Sporadic		Decreasing	25	4.0%	Type A, Subtype H1N1	54.2 (graphs)		Click here
Norway	Medium	Widespread		Decreasing	12	0%	Type A, Subtype pH1N1	89.0 (graphs)		Click here
Poland	High	Regional	Low	Decreasing	187	24.1%	Type A, Subtype pH1	146.6 (graphs)		Click here
Portugal	Medium	Widespread		Decreasing	39	38.5%	Type A, Subtype pH1	47.4 (graphs)		Click here
Romania	Medium	Regional	Moderate	Decreasing	108	46.3%	Type A, Subtype pH1	6.9 (graphs)	1127.4 (graphs)	Click here
Russian Federation	Medium	Regional		Stable			Type A, Subtype pH1		724.1 (graphs)	Click here
Scotland	Medium	Regional		Stable	209	14.8%	Type A, Subtype pH1N1	14.1 (graphs)		Click here
Serbia	High	Regional	Low	Decreasing	8	87.5%	Type A, Subtype pH1	258.8 (graphs)		Click here
Slovakia	Medium	Local	Low	Decreasing	6	66.7%	Type A, Subtype pH1	331.9 (graphs)	1993.8 (graphs)	Click here
Slovenia	Medium	Widespread		Decreasing	15	40.0%	Type A, Subtype pH1	69.6 (graphs)	883.6 (graphs)	Click here
Sweden	Medium	Regional	Low	Decreasing	18	0%	Type A, Subtype pH1	3.2 (graphs)		Click here
Switzerland	Medium	Widespread	Low	Decreasing	81	54.3%	Type A, Subtype pH1	323.6 (graphs)		Click here
Turkey	Medium	Widespread	Moderate	Decreasing	98	32.7%	Type A, Subtype pH1	72.2 (graphs)		Click here
Ukraine							Type A, Subtype pH1		(graphs)	Click here
Uzbekistan	Low	None	Low	Decreasing			None		37.0 (graphs)	Click here
Wales								20.3 (graphs)		Click here
Europe					2340	34.9%				Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
*: the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Ongoing influenza activity with a high intensity in parts of central and southern Europe

Key points: week 52/2009

- This report is based on data received from 39 of the 53 Member States in the WHO European Region.
- Thirty-three per cent of specimens collected from sentinel sources tested positive for influenza virus.
- The incidence of clinical respiratory illness has decreased over the past three weeks in 16 reporting countries.
- Influenza transmission remains high in some areas, particularly in the central and southern part of the Region.
- Out of 12 countries that reported testing at least 20 sentinel specimens for influenza this week, five reported that 30% of specimens or more had tested positive for influenza.
- Four countries reported high intensity of influenza activity, with six reporting moderate impact on health services.
- Pandemic (H1N1) 2009 was dominant in 27 countries and accounted 100% of influenza A virus subtype detections in sentinel specimens and 97% of detections in non-sentinel specimens.
- 2555 laboratory confirmed pandemic (H1N1) 2009 deaths have been reported in the Region.

Current situation: week 52/2009

Clinical respiratory disease activity has declined over the past three weeks in 16 countries. In many of these countries, the clinical consultation rate in the 5-14 year age group has again dropped below rates observed in the 0-4 year age group. However four of these 16 countries (Poland, Portugal, Switzerland and the United Kingdom) also tested at least 20 sentinel specimens for influenza during week 52/2009 and the median influenza positivity rate was 37% (mean 33%), suggesting that influenza circulation is ongoing despite declining clinical trends. The intensity of influenza transmission also remains high in some areas, particularly in the central and southern parts of the Region. Although the increase in clinical consultation rates reported during week 51/2009 in Georgia and Montenegro have not continued, 54% of sentinel specimens collected in Georgia tested positive for influenza during week 52/2009. In addition, Greece has reported that 73% of sentinel specimens tested positive for influenza, reflecting the highest positivity rate of any country testing 20 or more sentinel specimens this week. Although clinical consultation rates for ARI appear to have reached a second peak in Ukraine, clinical consultation rates remain high, particularly in central and eastern Ukraine. Georgia, Poland, the Russian Federation (Urals Region), Ukraine and Serbia reported the intensity of influenza circulation as high. Estonia, France, Georgia, Romania, Turkey and Ukraine reported the impact of influenza on health care services to be moderate.

Reports of respiratory hospitalizations and deaths to EuroFlu indicate that deaths due to acute respiratory infection (ARI) have continued to decline in the Russian Federation during each week since week 48/2009. The weekly count of hospitalizations due to severe acute respiratory illness (SARI) reported by Slovakia has also decreased from a peak that was observed in week 50. However, sentinel SARI hospitalizations reported by Ukraine again increased during week 52/2009, largely due to increases reported at sentinel sites in Kyiv and Odessa. Weekly reports of SARI hospitalizations in Uzbekistan have remained stable at a level similar to a peak that was reached in week 49/2009.

Virological update: week 52/2009

Sentinel physicians collected 942 respiratory specimens this week, of which 312 (33%) were positive for influenza virus. Of these virus detections, 312 (100%) were type A (300 pandemic A(H1), 12 not subtyped). Of the 13 countries testing 20 or more sentinel specimens this week, influenza-positive rates ranged from 0% (Hungary) to 72% (Greece), with a median of 36% and a mean of 34%.

Based on the antigenic characterization of 799 influenza viruses reported from week 40/2009 to week 52/2009, 792 were pandemic A(H1N1), A/California/7/2009-like, 3 were A/Perth/16/2009 (H3N2)-like, 2 were A(H3) A/Brisbane/10/2007 (H3N2)-like, 1 was A/Brisbane/59/2007 (H1N1)-like, and 1 was B/Brisbane/60/2008-like. Genetic characterizations were available for 252 isolates; all belonged to the A/California/7/2009 A(H1N1) pandemic influenza lineage.

Ten countries have tested isolates of pandemic (H1N1) 2009 virus for oseltamivir resistance. Of the 1312 cases tested, 26 were resistant to oseltamivir. All viruses tested for resistance to zanamivir (346/346) have been found to be zanamivir-sensitive and all viruses tested for resistance to adamantanes (64/64) have been found to be resistant. This week the Netherlands reported that one additional patient was retrospectively diagnosed with a monopopulation of H275Y oseltamivir resistant virus. This patient did not receive oseltamivir therapy and the epidemiological investigation is ongoing.

Comment

Sentinel surveillance systems throughout the Region suggest that influenza activity remains ongoing, and a high intensity of activity continues in parts of central and southern Europe. The percentage of sentinel specimens testing positive for influenza in the Region was 33% during week 52/2009. While this is lower than the peak of 45% that was reached during week 45/2009, this should be interpreted with caution as clinical consultation rates and the testing of sentinel specimens may be impacted by the holiday season.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

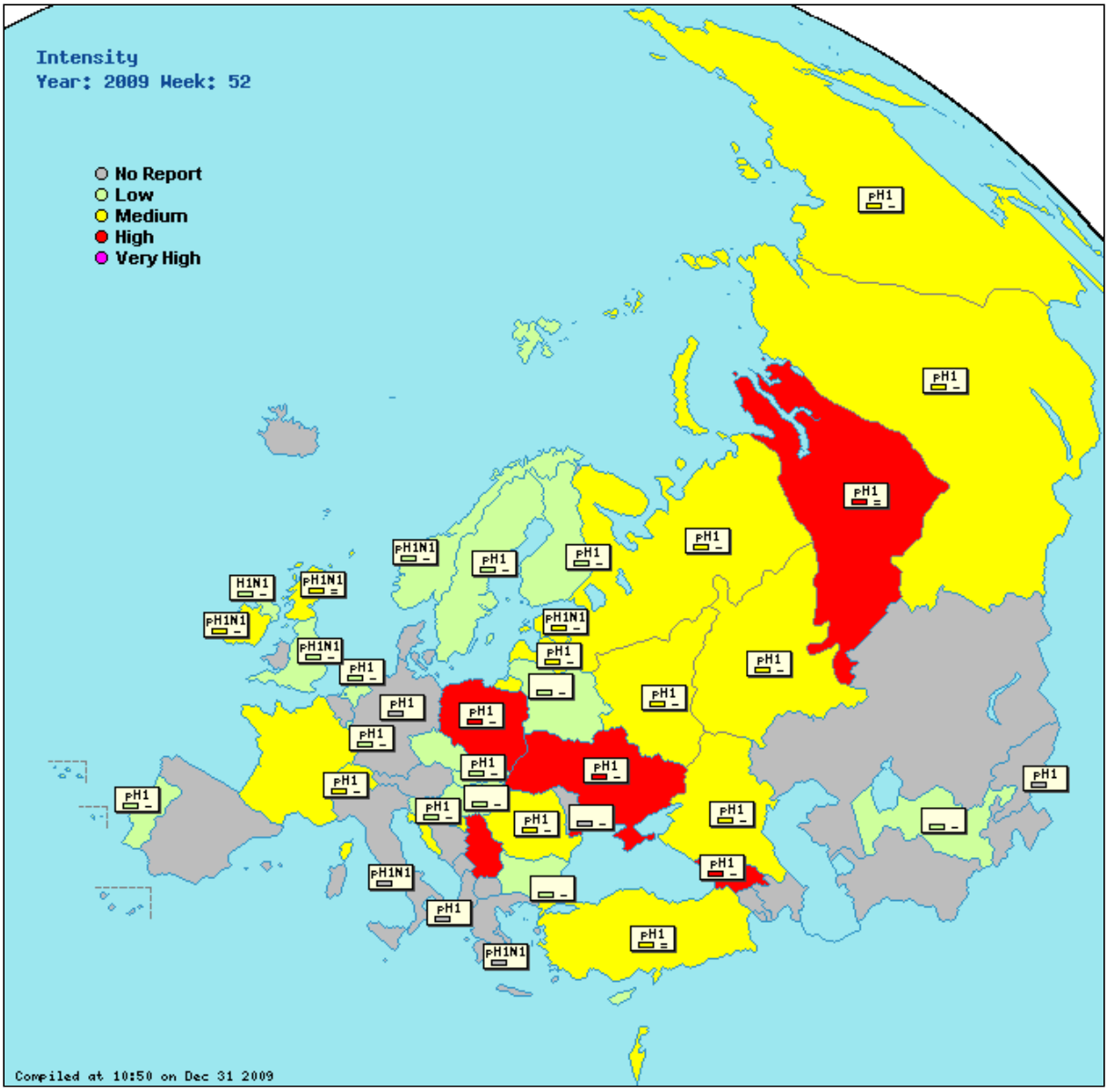
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
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High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no laboratory-confirmed case(s) of influenza, or evidence of increased or unusual respiratory disease activity.
Sporadic = isolated cases of laboratory confirmed influenza infection
Localized = limited to one administrative unit of the country (or reporting site) only.
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Widespread = appearing in ≥50% of the administrative units of the country (or reporting sites).

Country comments (where available)

Finland
due to the Christmas holidays, reports from the sentinel surveillance sites didn't arrive in time for this report
Netherlands
By week 53 in the Netherlands 15 patients were diagnosed with oseltamivir resistant pandemic A(H1N1) 2009 influenza virus. Compared to week 52, one additional patient was retrospectively diagnosed with a monopopulation of H275Y oseltamivir resistant virus. However, this patient did not receive oseltamivir therapy. Source and transmission investigation is ongoing. Eleven of the 15 patients were immunosuppressed due to cytostatic/immunosuppressive therapy, of which five died. Contact tracing identified no cases of onward transmission of the oseltamivir resistant viruses.

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania					168	22.6%	Type A, Subtype pH1		(graphs)	Click here
Belarus	Low	Sporadic		Decreasing					877.9 (graphs)	Click here
Bulgaria	Low	Sporadic		Decreasing			None		582.5 (graphs)	Click here
Croatia	Medium	Widespread	Low	Decreasing				24.1 (graphs)		Click here
Cyprus	Low	Sporadic		Stable				(graphs)		Click here
Czech Republic	Low	Local		Decreasing				84.9 (graphs)	725.9 (graphs)	Click here
England	Low	Local		Decreasing	132	9.1%	Type A, Subtype pH1N1	12.7 (graphs)	410.4 (graphs)	Click here
Estonia	Medium	Widespread	Moderate	Decreasing	15	26.7%	Type A, Subtype pH1N1	21.6 (graphs)	267.0 (graphs)	Click here
Finland	Low	Local	Low	Decreasing			Type A, Subtype pH1	(graphs)		Click here
France	Medium	Widespread	Moderate	Decreasing					1838.7 (graphs)	Click here
Georgia	High	Widespread	Moderate	Decreasing	56	53.6%	Type A, Subtype pH1	387.5 (graphs)		Click here
Germany					44	47.7%	Type A, Subtype pH1		(graphs)	Click here
Greece					29	72.4%	Type A, Subtype pH1N1	(graphs)		Click here
Hungary	Low	Local	Low	Decreasing	39	0%	None	152.3 (graphs)		Click here
Ireland	Medium	Local	Low	Decreasing	5	0%	Type A, Subtype pH1N1	21.2 (graphs)		Click here
Israel	Medium	Widespread	Low	Decreasing				65.6 (graphs)		Click here
Italy					6	16.7%	Type A, Subtype pH1N1	(graphs)		Click here
Kyrgyzstan					7	0%	Type A, Subtype pH1		(graphs)	Click here
Latvia	Medium	Regional		Decreasing	0	0%	Type A, Subtype pH1	19.8 (graphs)	505.2 (graphs)	Click here
Lithuania	Low	Sporadic	Low	Decreasing	6	33.3%	None	(graphs)		Click here
Luxembourg	Low	Regional	Low		20	40.0%	Type A, Subtype pH1	(graphs)		Click here
The former Yugoslav Republic of Macedonia							Type A, Subtype pH1	(graphs)		Click here
Montenegro								283.6 (graphs)	633.4 (graphs)	Click here
Netherlands	Low	Regional	Low	Decreasing	10	10.0%	Type A, Subtype pH1	36.6 (graphs)		Click here
Northern Ireland	Low	Sporadic		Decreasing	8	12.5%	Type A, Subtype H1N1	30.6 (graphs)		Click here
Norway	Low			Decreasing	5	0%	Type A, Subtype pH1N1	55.8 (graphs)		Click here
Poland	High	Regional	Low	Decreasing	28	25.0%	Type A, Subtype pH1	91.8 (graphs)		Click here
Portugal	Low	Sporadic		Decreasing	25	48.0%	Type A, Subtype pH1	26.4 (graphs)		Click here
Republic of Moldova		Widespread		Decreasing			None	155.8 (graphs)	158.7 (graphs)	Click here
Romania	Medium	Regional	Moderate	Decreasing	86	36.1%	Type A, Subtype pH1	2.5 (graphs)	697.4 (graphs)	Click here
Russian Federation	Medium	Local		Decreasing			Type A, Subtype pH1		630.2 (graphs)	Click here
Scotland	Medium	Regional		Stable	106	17.9%	Type A, Subtype pH1N1	8.8 (graphs)		Click here
Serbia	High	Regional	Low	Decreasing				173.0 (graphs)		Click here
Slovakia	Low	Local	Low	Decreasing	2	50.0%	Type A, Subtype pH1	210.2 (graphs)	1469.6 (graphs)	Click here
Slovenia	Low	Widespread		Decreasing	5	60.0%	Type A, Subtype pH1	23.7 (graphs)	647.0 (graphs)	Click here
Sweden	Low	Local	Low	Decreasing	14	0%	Type A, Subtype pH1	4.3 (graphs)		Click here
Switzerland	Medium	Widespread	Low	Decreasing	37	48.7%	Type A, Subtype pH1	240.9 (graphs)		Click here
Turkey	Medium	Widespread	Moderate	Stable	89	19.1%	Type A, Subtype pH1	63.1 (graphs)		Click here
Ukraine	High	Regional	Moderate	Decreasing			Type A, Subtype pH1		1301.2 (graphs)	Click here
Uzbekistan	Low	None	Low	Decreasing			None		31.9 (graphs)	Click here
Wales								7.5 (graphs)		Click here
Europe					942	33.1%				Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
*: the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Decreasing levels of pandemic influenza (H1N1) 2009 activity in Europe

Key points: week 53/2009

- This report is based on data received from 39 of the 53 Member States in the WHO European Region.
- The incidence of clinical respiratory illness has decreased over the past 3 weeks in 14 reporting countries and been stable in 14 others.
- 22% of specimens collected from sentinel sources tested positive for influenza virus.
- Out of 9 countries testing at least 20 sentinel specimens for influenza this week, 3 countries reported that 30% or more of specimens had tested positive for influenza.
- Pandemic (H1N1) 2009 was dominant in 29 countries and accounted for 99% of influenza A virus subtype detections in sentinel specimens and for 100% in non-sentinel specimens.
- 24 countries reported 234 deaths related to pandemic (H1N1) 2009 this week, bringing the cumulative total to 2789.

Current situation: week 53/2009

Quantitative data on influenza-like illness (ILI)/acute respiratory infection (ARI) consultations reported by 28 countries showed decreased rates in 14 countries over the past 3 weeks and stable rates in the others. For six out of eight countries with established baseline levels, the ILI/ARI consultation rate was below the baseline, and the remaining two countries (Ukraine and Switzerland) reported decreases in consultation rates approaching the baseline. Georgia reported a high intensity of influenza circulation (data not shown), but the consultation rate fell by about 40% over the last two weeks, and nine countries reported a medium intensity. Four countries reported a moderate impact on health care.

Virological update: week 53/2009

Sentinel physicians collected 863 respiratory specimens this week, of which 190 (22%) were positive for influenza virus. All were type A (180 pandemic A(H1), 1 influenza A(H3), 9 influenza A not subtyped). Of the 9 countries testing 20 or more sentinel specimens this week, influenza-positive rates ranged from 0% (Azerbaijan) to 48% (Georgia and Germany), with a median of 21% (mean: 23%). A total of 8436 specimens from non-sentinel sources were tested. Of these 1925 (23%) tested positive for influenza; 1922 were influenza A (1734 pandemic A(H1), 1 influenza A(H1), 187 A not subtyped), and 3 were influenza B.

From week 40 to week 53, a total of 146 106 influenza virus detections were reported. Of these, 145 764 were influenza A and 342 (<1%) were influenza B. Of the influenza A viruses, 132 221 (90%) were subtyped as pandemic influenza A(H1), 842 (<1%) were influenza A(H1), 459 (<1%) were influenza A(H3) and 12 242 (8%) were influenza A not subtyped.

Based on the antigenic characterization of 842 influenza viruses reported from week 40/2009 to week 53/2009, 839 were pandemic A(H1N1), A/California/7/2009-like, 2 were A(H3) A/Brisbane/10/2007 (H3N2)-like, and 1 was B/Brisbane/60/2008-like. Genetic characterizations were available for 255 viruses; 252 belonged to the A/California/7/2009 A(H1N1) pandemic influenza lineage and 3 to the A/Victoria /208/2009 (H3) lineage.

Eleven countries have tested isolates of pandemic (H1N1) 2009 virus for oseltamivir susceptibility. Of the 1974 cases tested so far, 40 were resistant. All viruses tested for zanamivir susceptibility (1251/1251) were found to be sensitive and all viruses tested for susceptibility to adamantanes (140/140) were found to be resistant.

Comment

Overall, decreasing levels of influenza activity were observed in the European Region, with most countries reporting low levels. The 22% influenza positivity of sentinel specimens in week 53/2009 is half the peak rate (45%) reported in week 45/2009. The data should be interpreted with caution, however, as the seasonal holidays may have affected clinical consultation rates and the testing of sentinel specimens. The pandemic (H1N1) 2009 virus remains the dominant virus in Europe. Only sporadic detections have been reported for seasonal influenza virus types and subtypes since week 40/2009, a period in which they would normally be detected.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

Note

The 2009–2010 season includes a week 53, which is unusual. The maps, text, tables and pie charts in the weekly electronic bulletin include data for week 53, but, for technical reasons, the graphs do not.

Map

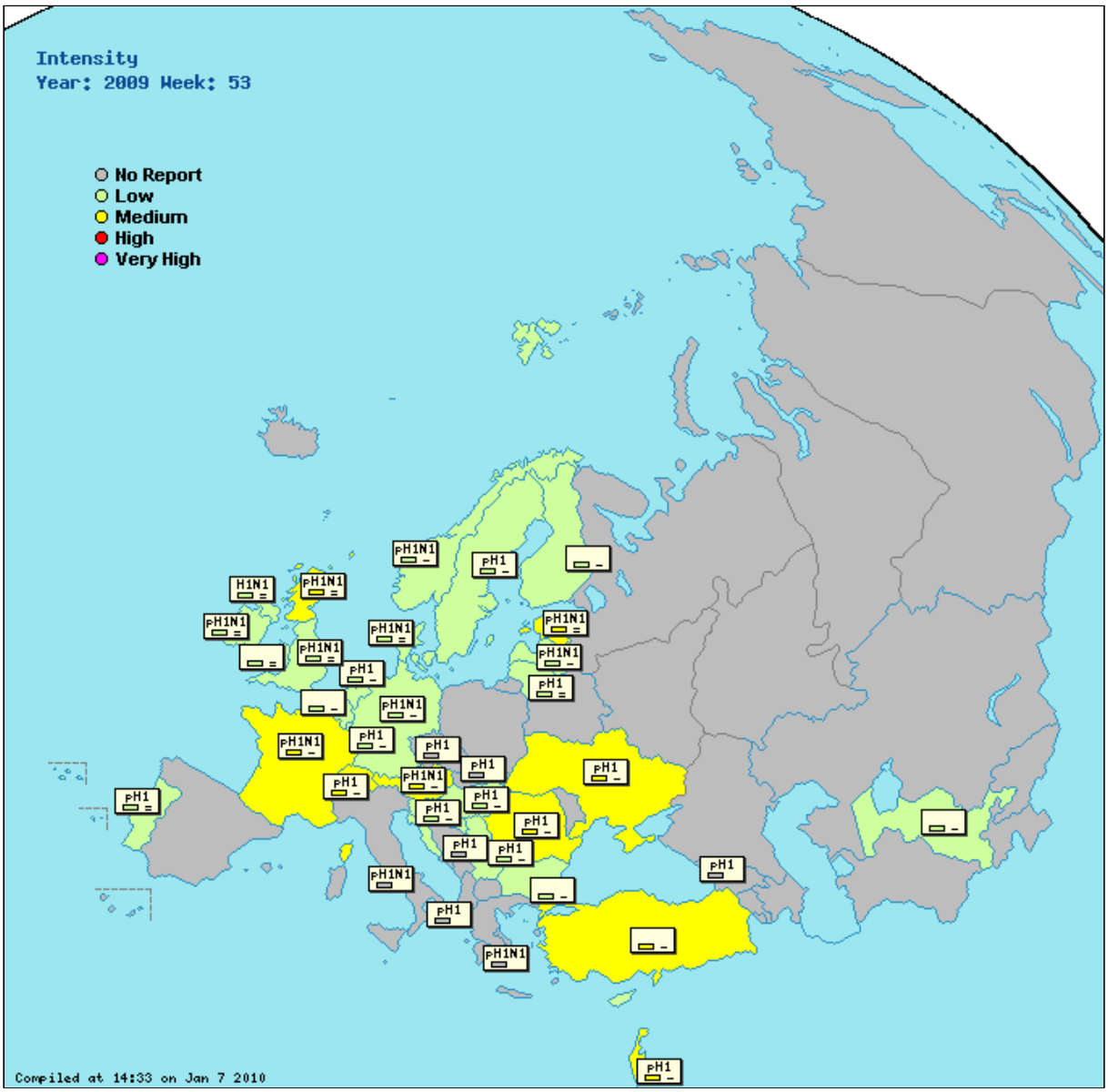
The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will

appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no laboratory-confirmed case(s) of influenza, or evidence of increased or unusual respiratory disease activity.
Sporadic = isolated cases of laboratory confirmed influenza infection
Localized = limited to one administrative unit of the country (or reporting site) only.
Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites).
Widespread = appearing in ≥50% of the administrative units of the country (or reporting sites).

Country comments (where available)

Netherlands

By week 1/2010 in the Netherlands 16 patients were diagnosed with oseltamivir resistant pandemic A(H1N1) 2009 influenza virus. Compared to week 53/2009, one additional patient was diagnosed with a mixed population of H275Y oseltamivir resistant and wild-type virus. Twelve of 15 patients receiving oseltamivir therapy were immunosuppressed due to cytostatic/immunosuppressive therapy, of which five died. One patient with 100% oseltamivir resistent virus population did not receive oseltamivir. Contact tracing identified no cases of onward transmission of the oseltamivir resistant viruses.

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania					140	14.3%	Type A, Subtype pH1		(graphs)	Click here

Austria	Medium	Regional	Low	Decreasing	5	40.0%	Type A, Subtype pH1N1	(graphs)			Click here
Azerbaijan					49	0%	None	(graphs)			Click here
Belgium	Low	Sporadic	Low	Decreasing	0	0%	None	42.3 (graphs)	1406.5 (graphs)		Click here
Bosnia and Herzegovina							Type A, Subtype pH1	(graphs)			Click here
Bulgaria	Low	Sporadic		Decreasing			None		492.8 (graphs)		Click here
Croatia	Low	Widespread	Low	Decreasing				20.9 (graphs)			Click here
Cyprus	Low	Sporadic		Stable				2163.1 (graphs)			Click here
Czech Republic							Type A, Subtype pH1		(graphs)		Click here
Denmark	Low	Sporadic		Stable	0	0%	Type A, Subtype pH1N1	58.4 (graphs)			Click here
England	Low	Local		Stable	47	23.4%	Type A, Subtype pH1N1	11.2 (graphs)	359.4 (graphs)		Click here
Estonia	Medium	Local	Moderate	Stable	13	15.4%	Type A, Subtype pH1N1	17.7 (graphs)	338.4 (graphs)		Click here
Finland	Low	Sporadic		Decreasing	0	0%	None	88.2 (graphs)			Click here
France	Medium	Widespread	Moderate	Decreasing	125	25.6%	Type A, Subtype pH1N1		1692.0 (graphs)		Click here
Georgia					39	48.7%	Type A, Subtype pH1	(graphs)			Click here
Germany	Low	Regional	Low	Decreasing	27	48.2%	Type A, Subtype pH1N1		623.9 (graphs)		Click here
Greece					8	50.0%	Type A, Subtype pH1N1	(graphs)			Click here
Hungary	Low	Sporadic	Low	Decreasing	42	7.1%	Type A, Subtype pH1	107.0 (graphs)			Click here
Ireland	Low	Sporadic	Low	Stable	9	33.3%	Type A, Subtype pH1N1	16.5 (graphs)			Click here
Israel	Medium	Widespread	Low	Decreasing	128	19.5%	Type A, Subtype pH1	55.7 (graphs)			Click here
Italy					11	9.1%	Type A, Subtype pH1N1	(graphs)			Click here
Kyrgyzstan					4	0%	None		(graphs)		Click here
Latvia	Low	Sporadic		Decreasing	0	0%	Type A, Subtype pH1N1	3.2 (graphs)	655.1 (graphs)		Click here
Lithuania	Low	Sporadic	Low	Stable	5	80.0%	Type A, Subtype pH1	(graphs)			Click here
Luxembourg	Low	Sporadic	Low		14	0%	Type A, Subtype pH1	(graphs)			Click here
Montenegro								103.2 (graphs)	380.4 (graphs)		Click here
Netherlands	Low	Regional	Low	Decreasing	12	16.7%	Type A, Subtype pH1	28.8 (graphs)			Click here
Northern Ireland	Low	Sporadic		Stable	13	7.7%	Type A, Subtype H1N1	57.2 (graphs)			Click here
Norway	Low	Regional		Decreasing	1	0%	Type A, Subtype pH1N1	20.3 (graphs)			Click here
Portugal	Low	Sporadic		Stable	13	38.5%	Type A, Subtype pH1	30.3 (graphs)			Click here
Romania	Medium	Regional	Moderate	Decreasing	43	34.9%	Type A, Subtype pH1	6.2 (graphs)	574.6 (graphs)		Click here
Scotland	Medium	Regional		Stable	77	15.6%	Type A, Subtype pH1N1	8.7 (graphs)			Click here
Serbia	Low	Regional	Low	Decreasing	4	75.0%	Type A, Subtype pH1	90.1 (graphs)			Click here
Slovakia					5	40.0%	Type A, Subtype pH1	(graphs)			Click here
Slovenia	Low	Widespread		Decreasing	4	50.0%	Type A, Subtype pH1	5.5 (graphs)	860.3 (graphs)		Click here
Sweden	Low	None	Low	Decreasing	0	0%	Type A, Subtype pH1	0.4 (graphs)			Click here
Switzerland	Medium	Local	Low	Decreasing	8	100.0%	Type A, Subtype pH1	123.4 (graphs)			Click here
Turkey	Medium	Widespread		Decreasing	17	5.9%	None	46.4 (graphs)			Click here
Ukraine	Medium	Regional	Moderate	Decreasing			Type A, Subtype pH1		726.6 (graphs)		Click here
Uzbekistan	Low	None	Low	Decreasing			None		21.1 (graphs)		Click here
Wales	Low	Sporadic	Low	Stable	0	0%	None	9.9 (graphs)			Click here
Europe					863	22.0%					Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
***:** the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Pandemic (H1N1) 2009 influenza activity in Europe continues to decrease

Key points: week 01/2010

- This report is based on data received from 42 of the 53 Member States in the WHO European Region.
- Twenty per cent of specimens collected from sentinel sources tested positive for influenza virus.
- The incidence of clinical respiratory illness has decreased over the past three weeks in 23 reporting countries, and most countries reported a low intensity of influenza activity.
- Pandemic (H1N1) 2009 was dominant in 32 countries and accounted for 98% of influenza A virus subtype detections in sentinel specimens and 99% of detections in non-sentinel specimens.
- 3100 deaths associated with laboratory-confirmed pandemic (H1N1) 2009 were reported in the Region.

Current situation: week 01/2010

Clinical respiratory disease activity has declined over the past three weeks in 23 countries. In most reporting countries, the dominant age group among clinical consultations was those aged 0–4 years. Six countries testing more than 20 specimens reported over 20% of specimens positive for influenza, and two of these continued to report positivity rates over 50% (Switzerland: 51%, and Romania: 52%), confirming continuing circulation of influenza viruses. Georgia, Kyrgyzstan and Romania reported the impact of influenza on health care services to be moderate, while 23 countries reported low impact.

Ongoing reporting of respiratory hospitalizations and deaths from Croatia, Kyrgyzstan, the Russian Federation and Slovakia indicates that the incidence of severe cases peaked in weeks 47–50/2009. Data from Romania and Ukraine show that hospitalizations due to severe acute respiratory infection (SARI) peaked in week 52, although sentinel surveillance suggests that influenza activity is continuing in Ukraine. SARI hospitalizations reported by Uzbekistan show that activity is higher than that observed in previous weeks. In the period 7 to 13 January, there were 311 deaths associated with laboratory-confirmed pandemic (H1N1) 2009 in 16 countries in Europe, raising the total from 2789 to 3100.

Virological update: week 01/2010

Sentinel physicians collected 896 respiratory specimens, of which 183 (20%) were positive for influenza virus. All were type A: 179 were subtyped as pandemic A(H1), one as H3N2 and three were not subtyped. Of the 14 countries testing 20 or more sentinel specimens this week, influenza-positivity rates ranged from 0% to 52% (median 22%, mean 29%). A total of 1492 specimens from non-sentinel sources were influenza positive: 1488 type A (1301 pandemic A(H1), seven A(H1) three A(H3), 177 not subtyped) and four influenza B.

From week 40/2009 to week 01/2010, a total of 149 383 influenza virus detections were reported: 149 024 were influenza A (99.8%) and 359 (0.2%) were influenza B. Of the influenza A viruses, 136 431 (91.3%) were subtyped, with 134 895 (98.9%) being pandemic A(H1), 989 (0.7%) A(H1) and 547 (0.4%) A(H3). Based on the antigenic characterization of 1048 influenza viruses reported from week 40/2009 to week 01/2010, 1044 were pandemic A(H1N1), A/California/7/2009-like, three were A(H3) A/Brisbane/10/2007 (H3N2)-like and one was B/Brisbane/60/2008-like. Genetic characterizations were available for 284 isolates; 278 belonged to the A/California/7/2009 A(H1N1) pandemic group, one belonged to the A/Perth/16/2009 (H3N2) group, four to the A/Victoria/208/2009 (H3N2) group and one to the B/England/393/2008 (Victoria lineage) group.

Eleven countries have tested isolates of pandemic (H1N1) 2009 virus for sensitivity to oseltamivir. Of the 1974 cases tested, 40 were resistant to oseltamivir: 1254 were also tested for zanamivir resistance and all were sensitive; the 140 tested for amantadane sensitivity were all resistant.

Comment

Surveillance throughout the Region suggests that influenza activity continues to decline. Nevertheless, the percentage of sentinel specimens testing positive for influenza in the Region was 20% during week 01/2010, suggesting that influenza circulation continues at a low level. Continued surveillance remains essential to detect other viruses, patterns of resistance and any possible further pandemic waves.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

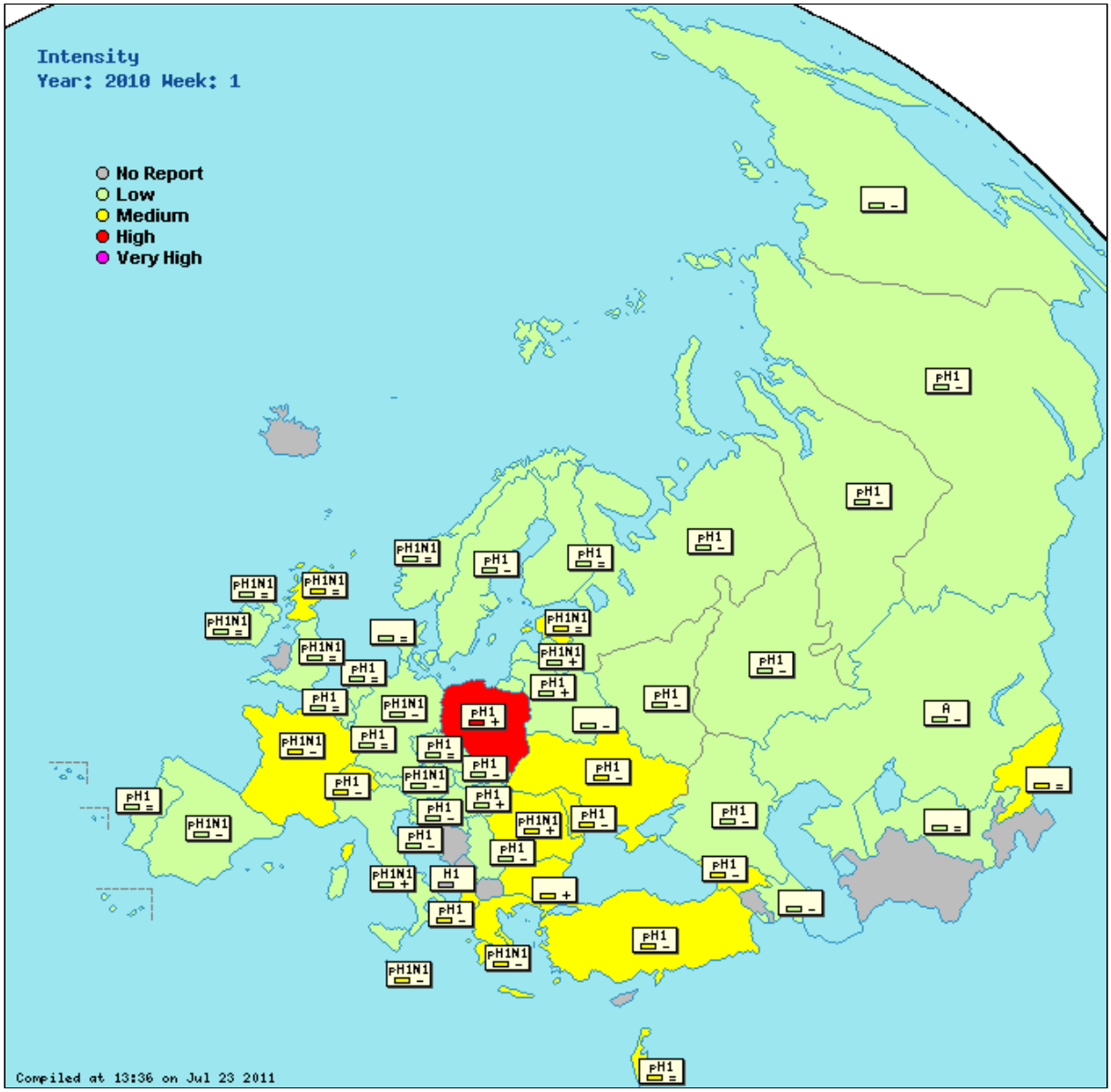
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no evidence of influenza virus activity (clinical activity remains at baseline levels)
Sporadic = isolated cases of laboratory confirmed influenza infection
Local outbreak = increased influenza activity in local areas (e.g. a city) within a region, or outbreaks in two or more institutions (e.g. schools) within a region. Laboratory confirmed.
Regional activity = influenza activity above baseline levels in one or more regions with a population comprising less than 50% of the country's total population. Laboratory confirmed.
Widespread = influenza activity above baseline levels in one or more regions with a population comprising 50% or more of the country's population. Laboratory confirmed.

Country comments (where available)

Ireland
Please note: 'non-sentinel' specimens recorded as 'A Not Sub-typed' are considered to be probable 'pandemic A (H1N1)' awaiting final confirmation.

Netherlands
By week 2/2010 in the Netherlands 17 patients were diagnosed with oseltamivir resistant pandemic A(H1N1) 2009 influenza virus. Compared to week 1/2010, one additional patient was diagnosed with a mixed population of H275Y oseltamivir resistant and wild-type virus. Thirteen of 15 patients receiving oseltamivir therapy were immunosuppressed due to cytostatic/immunosuppressive therapy, of which five died. One patient with 100% oseltamivir resistent virus population did not receive oseltamivir. Contact tracing identified no cases of onward transmission of the oseltamivir resistant viruses.

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Austria	Low	Local	Low	Decreasing	11	81.8%	Type A, Subtype pH1N1	802.6 (graphs)		Click here
Azerbaijan	Low	None	Low	Decreasing	58	0%	None	(graphs)		Click here
Belarus	Low	Sporadic		Decreasing					629.2 (graphs)	Click here
Belgium	Low	Sporadic	Low	Stable	24	8.3%	Type A, Subtype pH1	69.4 (graphs)	1644.2 (graphs)	Click here
Bulgaria	Medium	Local		Increasing			None		905.6 (graphs)	Click here
Croatia	Low	Widespread	Low	Decreasing				14.2 (graphs)		Click here
Czech Republic	Low	Local		Stable	11	27.3%	Type A, Subtype pH1	60.4 (graphs)	825.2 (graphs)	Click here
Denmark	Low	Local		Stable	2	0%	Type A, Subtype pH1N1	(graphs)		Click here
England	Low	Local		Stable	100	4.0%	Type A, Subtype pH1N1	19.9 (graphs)	510.8 (graphs)	Click here
Estonia	Medium	Local	Low	Stable	16	18.8%	Type A, Subtype pH1N1	15.9 (graphs)	244.6 (graphs)	Click here
Finland	Low	Sporadic	Low	Stable	6	16.7%	Type A, Subtype pH1	100.0 (graphs)		Click here
France	Medium	Regional	Low	Decreasing	82	0%	Type A, Subtype pH1N1		1631.6 (graphs)	Click here
Georgia	Medium	Widespread	Moderate	Decreasing	29	24.1%	Type A, Subtype pH1	157.6 (graphs)		Click here
Germany	Low	Local	Low	Decreasing	52	21.2%	Type A, Subtype pH1N1		1082.7 (graphs)	Click here
Greece	Medium	Widespread		Decreasing	5	80.0%	None	129.7 (graphs)		Click here
Hungary	Low	Sporadic	Low	Increasing	47	17.0%	Type A, Subtype pH1	156.5 (graphs)		Click here
Ireland	Low	Sporadic	Low	Stable	9	22.2%	Type A, Subtype pH1N1	21.0 (graphs)		Click here
Israel	Medium	Widespread	Low	Stable	102	20.6%	Type A, Subtype pH1	57.8 (graphs)		Click here
Italy	Low	Sporadic		Increasing	9	0%	Type A, Subtype pH1N1	129.9 (graphs)		Click here
Kyrgyzstan	Medium	Sporadic	Moderate	Stable	2	0%	None		48.0 (graphs)	Click here
Latvia	Low	Sporadic		Increasing	0	0%	Type A, Subtype pH1N1	8.2 (graphs)	776.6 (graphs)	Click here
Lithuania	Low	Sporadic	Low	Increasing	9	44.4%	None	(graphs)		Click here
Luxembourg	Low	Sporadic	Low		21	23.8%	Type A, Subtype pH1	(graphs)		Click here
The former Yugoslav Republic of Macedonia							None	(graphs)		Click here
Malta	Medium	Local		Decreasing				15439.7 (graphs)		Click here
Montenegro								64.3 (graphs)	331.2 (graphs)	Click here
Netherlands	Low	Regional	Low	Stable	10	20.0%	Type A, Subtype pH1	32.7 (graphs)		Click here
Northern Ireland	Low	Sporadic		Stable	5	0%	Type A, Subtype H1N1	48.8 (graphs)		Click here
Norway	Low	Sporadic	Low	Stable	3	0%	Type A, Subtype pH1N1	52.3 (graphs)		Click here
Poland	High	Local	Low	Increasing	25	0%	Type A, Subtype pH1	96.1 (graphs)		Click here
Portugal	Low	Sporadic	Low	Stable	22	13.6%	Type A, Subtype pH1	15.6 (graphs)		Click here
Republic of Moldova	High	Widespread		Decreasing			Type A, Subtype pH1	98.5 (graphs)	123.3 (graphs)	Click here
Romania	Medium	Regional	Moderate	Increasing	94	52.1%	Type A, Subtype pH1		(graphs)	Click here
Russian Federation	Low	Sporadic		Decreasing			Type A, Subtype pH1		285.1 (graphs)	Click here
Scotland	Medium	Regional		Stable	74	10.8%	Type A, Subtype pH1N1	10.6 (graphs)		Click here
Serbia	Low	Regional	Low	Decreasing	1	0%	Type A, Subtype pH1	69.8 (graphs)		Click here
Slovakia	Low	None	Low	Decreasing	1	0%	Type A, Subtype pH1	80.1 (graphs)	685.8 (graphs)	Click here
Slovenia	Low	Widespread		Decreasing	13	23.1%	Type A, Subtype pH1	21.5 (graphs)	999.3 (graphs)	Click here
Spain	Low	Sporadic		Decreasing				29.4 (graphs)		Click here
Sweden	Low	Local		Decreasing	8	0%	Type A, Subtype pH1	2.9 (graphs)		Click here
Switzerland	Medium	Local	Low	Decreasing	35	51.4%	Type A, Subtype pH1	92.3 (graphs)		Click here
Turkey	Medium	Regional	Low	Decreasing	10	0%	Type A, Subtype pH1	49.2 (graphs)		Click here
Ukraine	Medium	Local	Low	Decreasing			Type A, Subtype pH1		496.9 (graphs)	Click here
Uzbekistan	Low	None	Low	Stable			None		28.3 (graphs)	Click here
Europe					896	20.4%				Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
*: the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Pandemic (H1N1) 2009 in Europe: returning to low levels of influenza activity

- This report is based on data received from 43 of the 53 Member States in the WHO European Region.
- 16% of specimens collected from sentinel sources tested positive for influenza virus.
- The incidence of clinical respiratory illness has decreased over the past three weeks in 11 reporting countries, and most countries reported a low intensity of influenza activity.
- Pandemic (H1N1) 2009 was dominant in 32 countries and accounted for 100% of influenza A virus subtype detections in sentinel specimens and 98% of detections in non-sentinel specimens.
- 3430 deaths associated with laboratory-confirmed pandemic (H1N1) 2009 have been reported in the Region.

Current situation: week 02/2010

Clinical respiratory disease activity has declined over the past three weeks in 11 countries. For all six countries with established baseline levels, the influenza-like illness (ILI)/acute respiratory infection (ARI) consultation rate was below the baseline. Of 13 countries testing more than 20 specimens, only 3 (Germany, Romania and Switzerland) reported over 20% of specimens positive for influenza. The dominant type remains the pandemic (H1N1) 2009 virus in 32 countries. Five countries (Croatia, Georgia, Greece, Israel and the Republic of Moldova) reported widespread activity of the influenza virus, but low or medium influenza intensity. Albania, Kyrgyzstan, Malta, the Republic of Moldova and Romania reported the impact of influenza on health care services to be moderate, while 21 countries reported low impact.

Reports of respiratory hospitalizations and deaths to WHO/Europe influenza surveillance (EuroFlu) generally indicate a declining trend. The number of hospitalizations for severe acute respiratory infection (SARI) is decreasing in Albania, Kyrgyzstan, the Republic of Moldova, Slovakia and Ukraine. Romania and Uzbekistan reported more variable numbers of SARI hospitalizations , with a peak for Uzbekistan in the previous week. In the period 14–21 January, there were 330 deaths associated with laboratory-confirmed pandemic (H1N1) 2009 in 22 countries in Europe, raising the total from 3100 to 3430.

Virological update: week 02/2010

Sentinel physicians collected 1070 respiratory specimens, of which 174 (16%) were positive for influenza virus. A total of 173 were type A (167 were subtyped as pandemic A(H1), six were not subtyped) and 1 was influenza B. Of the 13 countries testing 20 or more sentinel specimens this week, influenza-positivity rates ranged from 5% in Albania to 32% Romania (median 15.5%, mean 15.7%). A total of 1425 specimens from non-sentinel sources were influenza positive: 1411 type A (1225 pandemic A(H1), 21 A(H1), 6 A(H3), 159 not subtyped) and 14 influenza B.

From week 40/2009 to week 02/2010, a total of 151 549 influenza virus detections were reported: 151 175 were influenza A (99.8%) and 374 (0.2%) were influenza B. Of the influenza A viruses, 138 430 (91.6%) were subtyped, with 137 078 (99%) being pandemic A(H1), 877 (0.6%) A(H1) and 475 (0.3%) A(H3).

Based on the antigenic characterization of 1137 influenza viruses reported from week 40/2009 to week 02/2010, 1133 were A(H1) pandemic A/California/7/2009 (H1N1)-like, 2 were A(H3) A/Brisbane/10/2007 (H3N2)-like, 1 was A(H3) A/Perth/16/2009 (H3N2)-like and 1 was B/Brisbane/60/2008-like. Genetic characterizations were available for 419 isolates; 413 belonged to the A/California/7/2009 A(H1N1) pandemic group, 1 belonged to the A/Perth/16/2009 (H3N2) group, 2 to the A/Victoria/208/2009 (H3N2) group and 1 to the B/England/393/2008 (Victoria lineage) group.

Eleven countries have tested isolates of pandemic (H1N1) 2009 virus for sensitivity to oseltamivir. Of the 1974 cases tested, 40 were resistant to oseltamivir: 1254 were also tested for zanamivir resistance and all were sensitive; the 140 tested for adamantane sensitivity were all resistant.

Comment

Surveillance throughout the Region suggests that influenza activity continues to decline. The percentage positive has decreased slightly to 16%, after being stable at about 20% in recent weeks. Nevertheless, with five countries reporting a moderate impact of influenza on the health services, influenza circulation continues in some countries. Continued surveillance remains essential to detect other viruses, patterns of resistance and any possible further pandemic waves.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

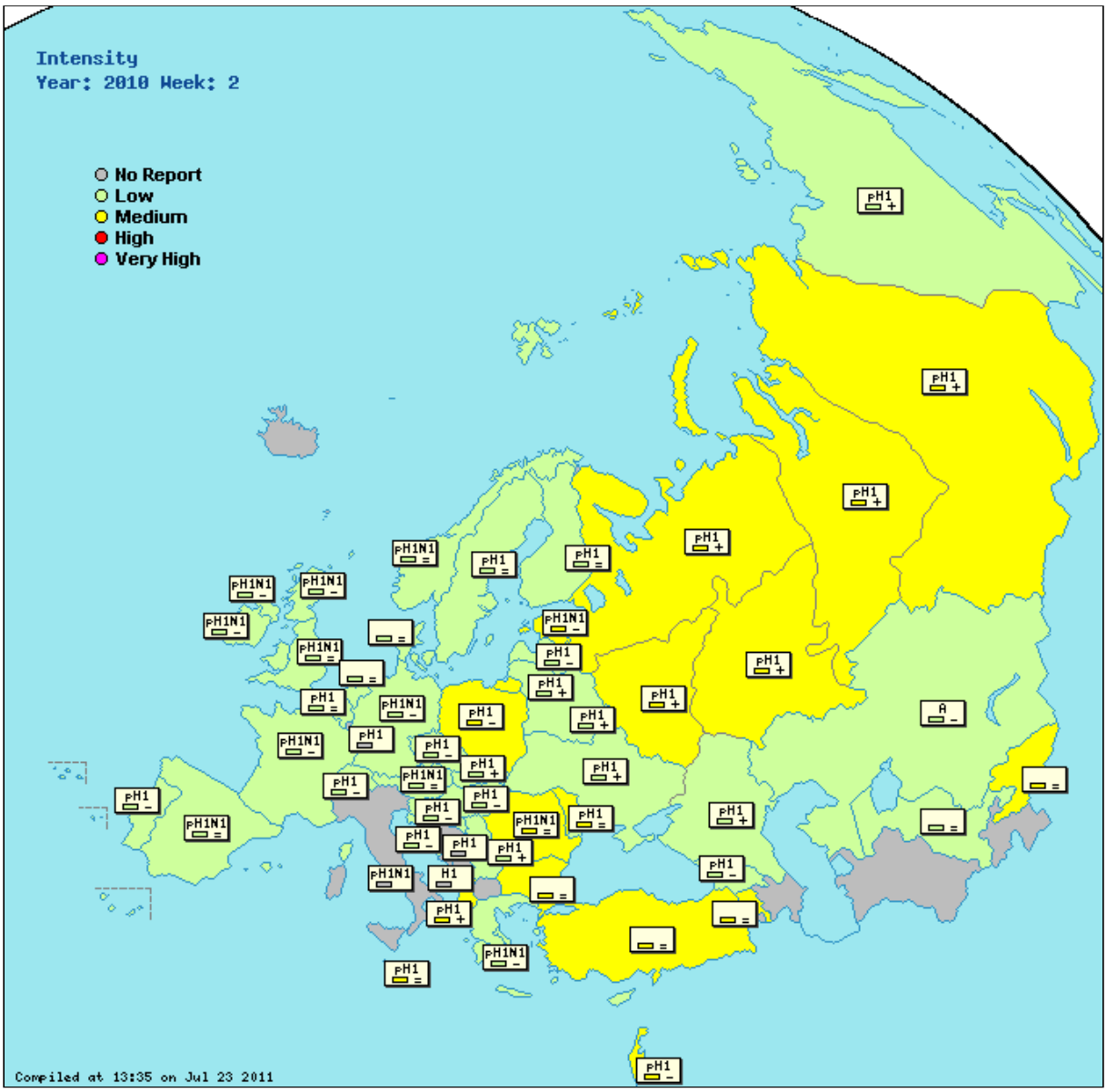
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no evidence of influenza virus activity (clinical activity remains at baseline levels)
Sporadic = isolated cases of laboratory confirmed influenza infection
Local outbreak = increased influenza activity in local areas (e.g. a city) within a region, or outbreaks in two or more institutions (e.g. schools) within a region. Laboratory confirmed.
Regional activity = influenza activity above baseline levels in one or more regions with a population comprising less than 50% of the country's total population. Laboratory confirmed.
Widespread = influenza activity above baseline levels in one or more regions with a population comprising 50% or more of the country's population. Laboratory confirmed.

Country comments (where available)

Latvia
0
Malta
situation stable
Montenegro
According to the law on protection of population against communicable diseases and Regulation on reporting communicable diseases and hospital infections, each doctor is obliged to report ARI and ILI and data are received electronically, so there is not possibility for subregistration.
Netherlands
By week 3/2010 in the Netherlands 17 patients were diagnosed with oseltamivir resistant pandemic A(H1N1) 2009 influenza virus. Compared to week 1/2010, one additional patient was diagnosed with a mixed population of H275Y oseltamivir resistant and wild-type virus. Thirteen of 15 patients receiving oseltamivir therapy were immunosuppressed

due to cytostatic/immunosuppressive therapy, of which five died. One patient with 100% oseltamivir resistent virus population did not receive oseltamivir. Contact tracing identified no cases of onward transmission of the oseltamivir resistant viruses.

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania	Medium	Sporadic	Moderate	Increasing	99	5.1%	Type A, Subtype pH1		413.2 (graphs)	Click here
Austria	Low	Regional		Increasing	14	21.4%	Type A, Subtype pH1N1	(graphs)	16.0 (graphs)	Click here
Belarus	Low	Sporadic		Increasing					933.2 (graphs)	Click here
Belgium	Low	Sporadic		Stable	23	17.4%	Type A, Subtype pH1	89.3 (graphs)	1403.8 (graphs)	Click here
Bulgaria	Medium	Regional		Stable	11	0%	None		917.2 (graphs)	Click here
Croatia	Low	Widespread	Low	Decreasing				13.0 (graphs)		Click here
Cyprus	Low	Sporadic	Low	Stable				(graphs)		Click here
Czech Republic	Low	Local		Decreasing				47.4 (graphs)	782.8 (graphs)	Click here
Denmark	Low	Sporadic		Stable	2	0%	None	48.1 (graphs)	(graphs)	Click here
England	Low	Local		Stable	103	6.8%	Type A, Subtype pH1N1	12.1 (graphs)	396.1 (graphs)	Click here
Estonia	Low	Local	Low	Decreasing	14	21.4%	Type A, Subtype pH1N1	10.4 (graphs)		Click here
Finland	Low	Sporadic	Low	Stable	9	11.1%	Type A, Subtype pH1	123.5 (graphs)		Click here
France	Low	Regional	Low	Decreasing	121	14.1%	Type A, Subtype pH1N1		1550.7 (graphs)	Click here
Georgia	Low	Widespread	Low	Decreasing	37	16.2%	Type A, Subtype pH1	118.1 (graphs)		Click here
Germany	Low	Local	Low	Decreasing	49	26.5%	Type A, Subtype pH1N1		973.7 (graphs)	Click here
Greece	Low	Widespread		Decreasing	11	63.6%	Type A, Subtype pH1N1	119.8 (graphs)		Click here
Hungary	Low	Sporadic	Low	Decreasing	79	13.9%	Type A, Subtype pH1	(graphs)		Click here
Ireland	Low	Sporadic	Low	Stable	14	28.6%	Type A, Subtype pH1N1	15.9 (graphs)		Click here
Israel	Medium	Widespread	Low	Decreasing	71	15.5%	Type A, Subtype pH1	48.0 (graphs)		Click here
Italy					28	7.1%	Type A, Subtype pH1N1	(graphs)		Click here
Kyrgyzstan	Medium	Sporadic	Moderate	Stable	6	0%	None		71.3 (graphs)	Click here
Latvia	Low	Sporadic		Decreasing	0	0%	Type A, Subtype pH1	(graphs)		Click here
Lithuania	Low	Sporadic	Low	Increasing	2	50.0%	Type A, Subtype pH1	(graphs)		Click here
Luxembourg					14	21.4%	Type A, Subtype pH1	(graphs)		Click here
The former Yugoslav Republic of Macedonia							Type A, Subtype pH1	(graphs)		Click here
Malta	Medium	Local	Moderate	Stable			None	(graphs)		Click here
Montenegro								60.6 (graphs)	421.7 (graphs)	Click here
Netherlands	Low	Local		Stable	13	0%	None	36.2 (graphs)		Click here
Northern Ireland	Low	Sporadic	Low	Decreasing	4	25.0%	None	36.1 (graphs)	431.2 (graphs)	Click here
Norway	Low	Sporadic		Stable	7	0%	Type A, Subtype pH1N1	49.7 (graphs)		Click here
Poland	Medium	Local	Low	Decreasing	23	17.4%	Type A, Subtype pH1	(graphs)		Click here
Portugal	Low	Sporadic		Decreasing	17	23.5%	Type A, Subtype pH1	8.2 (graphs)		Click here
Republic of Moldova	Medium	Widespread	Moderate	Stable			Type A, Subtype pH1	100.7 (graphs)	191.3 (graphs)	Click here
Romania	Medium	Regional	Moderate	Increasing	142	31.7%	Type A, Subtype pH1N1		(graphs)	Click here
Russian Federation	Medium	Sporadic		Increasing			Type A, Subtype pH1		532.3 (graphs)	Click here
Scotland	Low	Local	Low	Decreasing				(graphs)		Click here
Serbia	Low	Regional	Low	Increasing	4	25.0%	Type A, Subtype pH1	73.0 (graphs)		Click here
Slovakia	Low	Sporadic	Low	Increasing	0	0%	Type A, Subtype pH1	148.4 (graphs)	1255.2 (graphs)	Click here
Slovenia	Low	Local		Decreasing	10	40.0%	Type A, Subtype pH1	8.5 (graphs)	970.1 (graphs)	Click here
Spain	Low	Sporadic		Stable	103	9.7%	Type A, Subtype pH1N1	29.6 (graphs)		Click here
Sweden	Low	Local		Stable	10	0%	Type A, Subtype pH1	1.5 (graphs)		Click here
Switzerland	Low	Local	Low	Decreasing	30	23.3%	Type A, Subtype pH1	81.3 (graphs)		Click here
Turkey	Medium	Regional	Low	Stable			Type A, Subtype pH1	(graphs)		Click here
Ukraine	Low	Local	Low	Increasing			Type A, Subtype pH1		543.6 (graphs)	Click here
Uzbekistan	Low	None	Low	Stable			None		27.9 (graphs)	Click here
Wales	Low	Sporadic	Low	Decreasing				6.7 (graphs)		Click here
Europe					1070	16.3%				Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
*: the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Pandemic flu activity has declined to low levels in most of Europe

- This report is based on data received from 46 of the 53 Member States in the WHO European Region.
- 14% of specimens collected from sentinel sources tested positive for influenza virus.
- The incidence of clinical respiratory illness has decreased over the past three weeks in 8 reporting countries, and most countries reported a low intensity of influenza activity.
- Pandemic influenza A(H1N1) 2009 accounted for 95% of influenza virus detections in sentinel specimens, and influenza B, 5%.
- 3606 deaths associated with laboratory-confirmed pandemic (H1N1) 2009 have been reported in the Region.

Current situation: week 03/2010

Clinical respiratory disease activity has declined over the past three weeks in eight countries. Clinical consultation rates remain well below observed pandemic peaks in all countries and, in many cases, below typical seasonal influenza levels for this time of year. 17 countries tested at least 20 sentinel specimens; 7 still report 20% or more testing positive for influenza: Albania (43%), Bulgaria (26%), the Czech Republic (30%), Georgia (20%), Greece (40%), Luxembourg (32%) and Romania (26%). 27 countries reported that pandemic influenza A (H1N1) 2009 virus was the dominant virus in circulation; 7 also reported detections of influenza type B, and 6 (Armenia, Croatia, Georgia, Greece, Israel and the Republic of Moldova) reported widespread activity of the influenza virus, with low or medium influenza intensity. Kyrgyzstan, the Republic of Moldova and Romania reported the impact of influenza on health care services to be moderate, while 25 countries reported low impact on services.

Reports of respiratory hospitalizations and deaths to WHO/Europe influenza surveillance (EuroFlu.org) continue to decrease. Weekly reports of hospitalized severe acute respiratory infection (SARI) cases have declined in Kyrgyzstan, the Republic of Moldova, Slovakia and Ukraine following peaks in weeks 47–52/2009. Reports of SARI hospitalizations in Uzbekistan have also decreased slightly from a reported peak in week 1/2010. Deaths due to ARI in the Russian Federation have continued to decline since an observed peak in week 48/2009. During the period 18-24 January 2010, there were 176 deaths associated with laboratory-confirmed pandemic (H1N1) 2009, raising the total to 3606.

Virological update: week 03/2010

Sentinel physicians collected 1165 respiratory specimens, of which 165 (14%) were positive for influenza virus. A total of 158 were type A (148 were subtyped as pandemic A(H1), 10 were not subtyped) and 7 were influenza B. Of the 17 countries testing 20 or more sentinel specimens this week, influenza-positivity rates ranged from 0% in Poland to 43% in Albania (median 16.7%, mean 18.3%). A total of 1223 specimens from non-sentinel sources were influenza positive: 1173 type A (916 pandemic A(H1), 26 seasonal A(H1), 10 A(H3), 221 not subtyped) and 50 influenza B.

From week 40/2009 to week 03/2010, a total of 153 014 influenza virus detections were reported: 152 583 were influenza A (99.7%) and 431(0.3%) were influenza B. Of the influenza A viruses, 139 605 (91.5%) were subtyped, with 138 217 being pandemic A(H1), 901 A(H1) and 485 A(H3). Based on the antigenic characterization of 1166 influenza viruses reported from week 40/2009 to week 03/2010, 1162 were A(H1) pandemic A/California/7/2009 (H1N1)-like; 2 were A(H3) A/Brisbane/10/2007 (H3N2)-like; 1 was A(H3) A/Perth/16/2009 (H3N2)-like, and 1 was B/Brisbane/60/2008-like. Genetic characterizations were available for 530 isolates; 524 belonged to the A/California/7/2009 A(H1N1) pandemic group; 1 belonged to the A/Perth/16/2009 (H3N2) group; 4 to the A/Victoria/208/2009 (H3N2) group and 1 to the B/England/393/2008 (Victoria lineage) group.

Comment

The percentage of sentinel specimens testing positive for influenza – as well as the clinical consultation rates for influenza-like illness (ILI) and acute respiratory infections (ARI) – continue to decline in the European Region. Pandemic influenza activity is at low levels for the time being in most of the Region. This decline in influenza circulation has occurred earlier in the 2009/2010 winter season than in recent years. Continued surveillance is especially important to detect any resurgence in activity due to seasonal or pandemic influenza.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

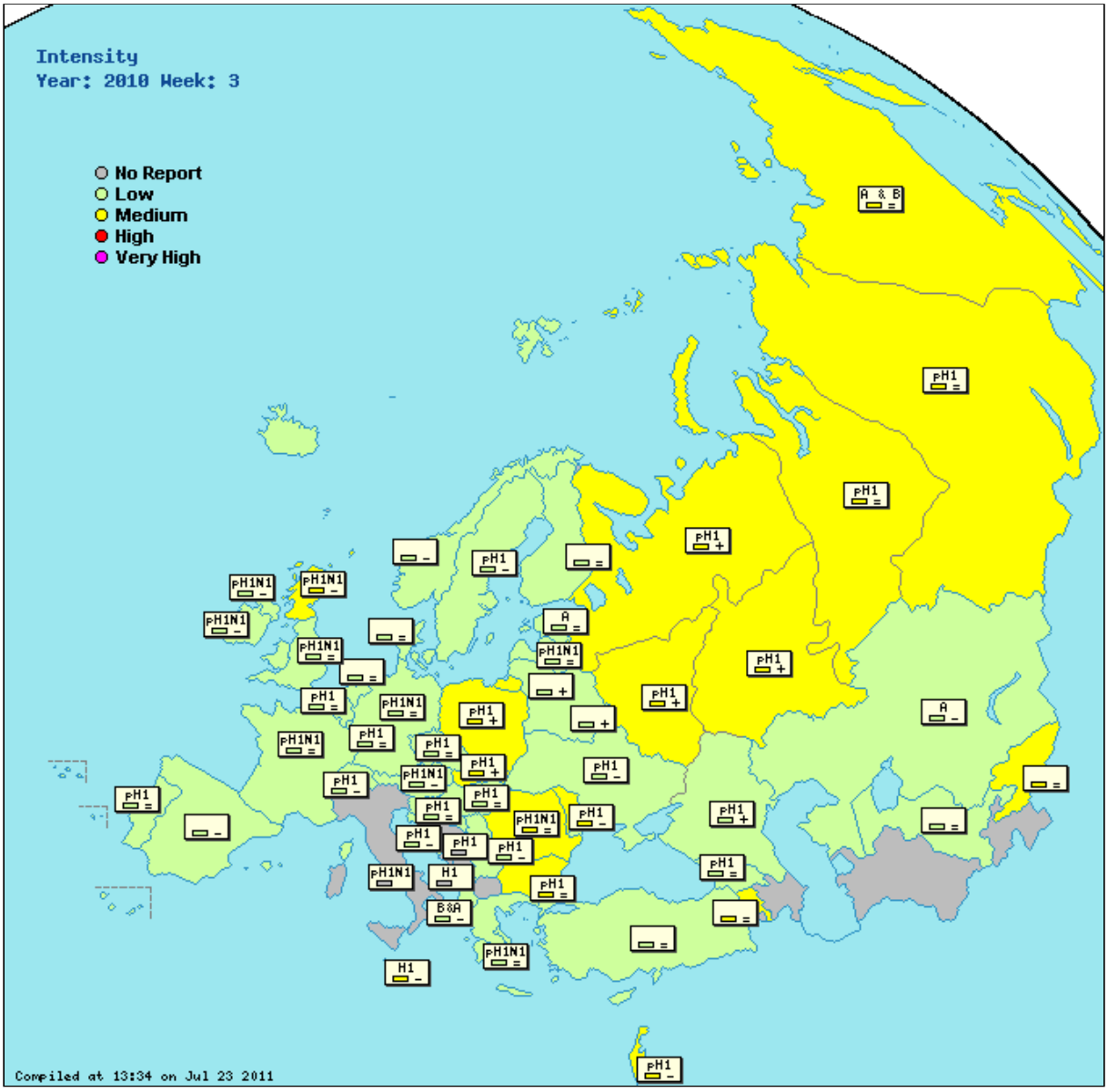
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no evidence of influenza virus activity (clinical activity remains at baseline levels)
Sporadic = isolated cases of laboratory confirmed influenza infection
Local outbreak = increased influenza activity in local areas (e.g. a city) within a region, or outbreaks in two or more institutions (e.g. schools) within a region. Laboratory confirmed.
Regional activity = influenza activity above baseline levels in one or more regions with a population comprising less than 50% of the country's total population. Laboratory confirmed.
Widespread = influenza activity above baseline levels in one or more regions with a population comprising 50% or more of the country's population. Laboratory confirmed.

Country comments (where available)

Armenia
Data presented below refers to routine influenza surveillance in the coumtry
Czech Republic
0
Kazakhstan
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Malta
situation stable
Netherlands
By week 4/2010 in the Netherlands, 17 patients were diagnosed with oseltamivir resistant pandemic A(H1N1) 2009 influenza virus. In all except one, oseltamivir resistance emerged during oseltamivir therapy. Thirteen patients receiving oseltamivir therapy w

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania	Low	Sporadic	Low	Stable	40	42.5%	Type B and Type A, Subtype pH1		421.9 (graphs)	Click here
Armenia	Medium	Widespread	Low	Stable					(graphs)	Click here
Austria	Low	Regional		Decreasing	12	25.0%	Type A, Subtype pH1N1	(graphs)	13.2 (graphs)	Click here
Belarus	Low	Sporadic		Increasing	0	0%	None		1144.6 (graphs)	Click here
Belgium	Low	Sporadic		Stable				74.2 (graphs)	1519.7 (graphs)	Click here
Bulgaria	Medium	Local		Stable	69	17.4%	Type A, Subtype pH1		932.4 (graphs)	Click here
Croatia	Low	Widespread	Low	Decreasing				10.8 (graphs)		Click here
Cyprus	Low	Sporadic	Low	Decreasing				(graphs)		Click here
Czech Republic	Low	Local		Stable	20	30.0%	Type A, Subtype pH1	46.0 (graphs)	808.7 (graphs)	Click here
Denmark	Low	Sporadic		Stable	13	15.4%	None	41.3 (graphs)	(graphs)	Click here
England	Low	Sporadic		Stable	135	11.1%	Type A, Subtype pH1N1	12.8 (graphs)	366.1 (graphs)	Click here
Estonia	Low	Local	Low	Stable	15	26.7%	Type A	10.7 (graphs)	244.7 (graphs)	Click here
Finland	Low	Sporadic	Low	Stable	1	0%	None	104.0 (graphs)		Click here
France	Low	Regional	Low	Stable	167	9.0%	Type A, Subtype pH1N1		1682.3 (graphs)	Click here
Georgia	Low	Widespread	Low	Stable	36	19.4%	None	127.4 (graphs)		Click here
Germany	Low	Local	Low	Stable	60	16.7%	Type A, Subtype pH1N1		1085.5 (graphs)	Click here
Greece	Low	Widespread		Stable	20	40.0%	Type A, Subtype pH1N1	100.7 (graphs)		Click here
Hungary	Low	Sporadic	Low	Stable	52	17.3%	Type A, Subtype pH1	143.0 (graphs)		Click here
Iceland	Low	None		Stable				2.8 (graphs)		Click here
Ireland	Low	Sporadic	Low	Decreasing	11	9.1%	Type A, Subtype pH1N1	12.2 (graphs)		Click here
Israel	Medium	Widespread	Low	Decreasing	93	8.6%	Type A, Subtype pH1	42.7 (graphs)		Click here
Italy					45	8.9%	Type A, Subtype pH1N1	(graphs)		Click here
Kazakhstan	Medium	Sporadic	Low	Stable	14	0%	None		(graphs)	Click here
Kyrgyzstan	Medium	Sporadic	Moderate	Stable	3	0%	None		44.5 (graphs)	Click here
Latvia	Low	Sporadic		Stable	0	0%	Type A, Subtype pH1N1	0.9 (graphs)	867.0 (graphs)	Click here
Lithuania	Low	Sporadic	Low	Increasing	1	0%	None	(graphs)		Click here
Luxembourg	Low	Sporadic	Low		22	31.8%	Type A, Subtype pH1	(graphs)		Click here
The former Yugoslav Republic of Macedonia							Type A, Subtype pH1	(graphs)		Click here
Malta	Medium	Local	Low	Decreasing				(graphs)		Click here
Montenegro								28.4 (graphs)	380.2 (graphs)	Click here
Netherlands	Low	Sporadic		Stable	12	8.3%	None	34.2 (graphs)		Click here
Northern Ireland	Low	Sporadic		Decreasing	0	0%	Type A, Subtype pH1N1	23.2 (graphs)	385.7 (graphs)	Click here
Norway	Low	Sporadic		Decreasing	3	0%	None	37.4 (graphs)		Click here
Poland	Medium	Sporadic	Low	Increasing	26	0%	Type A, Subtype pH1	(graphs)		Click here
Portugal	Low	None		Stable	4	0%	Type A, Subtype pH1	6.8 (graphs)		Click here
Republic of Moldova	Medium	Widespread	Moderate	Decreasing			Type A, Subtype pH1	73.4 (graphs)	160.9 (graphs)	Click here
Romania	Medium	Regional	Moderate	Stable	77	26.0%	Type A, Subtype pH1N1	3.8 (graphs)	820.8 (graphs)	Click here
Russian Federation	Medium	Sporadic		Increasing			Type A, Subtype pH1 and H1		595.8 (graphs)	Click here
Scotland	Low	Local	Low	Stable	73	12.3%	Type A, Subtype pH1N1	8.1 (graphs)	243.3 (graphs)	Click here
Serbia	Low	Regional	Low	Decreasing	5	0%	Type A, Subtype pH1	71.7 (graphs)		Click here
Slovakia	Medium	Local	Low	Increasing	2	0%	Type A, Subtype pH1	157.2 (graphs)	1314.1 (graphs)	Click here
Slovenia	Low	Sporadic		Stable	10	30.0%	Type A, Subtype pH1	8.2 (graphs)	996.0 (graphs)	Click here
Spain	Low	Sporadic		Decreasing	88	1.1%	None	21.4 (graphs)		Click here
Sweden	Low	Local	Low	Decreasing	8	0%	Type A, Subtype pH1	1.3 (graphs)		Click here
Switzerland	Low	Local	Low	Decreasing	28	10.7%	Type A, Subtype pH1	54.3 (graphs)		Click here
Turkey	Low	Regional	Low	Stable			Type A, Subtype pH1	50.5 (graphs)		Click here
Ukraine	Low	Sporadic	Low	Decreasing			Type A, Subtype pH1 and H1		542.3 (graphs)	Click here
Uzbekistan	Low	None	Low	Stable			None		27.9 (graphs)	Click here
Wales	Low	Widespread	Low	Decreasing				4.8 (graphs)		Click here
Europe					1165	14.2%				Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
***:** the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

commentary used in this bulletin do not imply any opinions whatsoever on the part of WHO or its partners about the legal status of the countries and territories shown or about their borders.

Initial pandemic wave of influenza coming to an end in Europe

- This report is based on data received from 44 of the 53 Member States in the WHO European Region.
- Nine per cent of specimens collected from sentinel sources tested positive for influenza virus.
- All countries reported a low or medium intensity of influenza activity.
- Pandemic influenza A(H1N1) 2009 accounted for 98% of influenza virus detections in sentinel specimens.
- Countries have reported 3649 deaths associated with laboratory-confirmed pandemic A(H1N1) 2009 in the Region.

Current situation: week 04/2010

Current levels of clinical respiratory disease are only above levels observed during week 4/2009 in five countries, and reported levels in most countries are well below recent pandemic peak levels. Fifteen countries tested at least twenty sentinel specimens. For the first week since week 25/2009, all of these countries reported less than 20% influenza positivity. Although Latvia, the Russian Federation, Slovakia and Slovenia reported slight increases in clinical consultation rates this week, these are not associated with increases in virological confirmations of influenza and may be due to other respiratory viruses. In addition, the number of respiratory syncytial virus (RSV) detections is increasing in the European Region. Twenty-seven countries reported that pandemic influenza A (H1N1) 2009 virus was the dominant virus in circulation. Five (Armenia, Croatia, Georgia, Greece and the Republic of Moldova) still reported widespread influenza activity but with low-to-medium intensity. Armenia, Kyrgyzstan, the Republic of Moldova, and Romania reported the impact of influenza on health care services to be moderate, while 22 countries reported low impact.

Reported numbers of severe acute respiratory infection (SARI) hospitalizations have declined from earlier peaks in Slovakia and Uzbekistan. Rates and proportions of hospitalizations due to SARI in Kyrgyzstan, the Republic of Moldova and Ukraine have also now declined to levels approximately half the peaks observed in weeks 47–52/2009. The single peak in sentinel SARI hospitalizations that was observed in Ukraine during week 52 can be contrasted with the two distinct peaks observed in Ukrainian ARI consultation rates in weeks 45 and 51. During the period 25–31 January 2010, 43 reported deaths associated with laboratory-confirmed pandemic A(H1N1) 2009 were reported from 22 countries in Europe, making the total 3649 since the beginning of the pandemic.

Virological update: week 04/2010

Sentinel physicians collected 1037 respiratory specimens, of which 96 (9.3%) were positive for influenza virus; 94 were type A (89 were subtyped as pandemic A(H1), 5 were not subtyped) and 2 were influenza B. Of the 15 countries testing 20 or more sentinel specimens this week, influenza-positivity rates ranged from 0% in Italy to 14.3% in Romania (median 9.1%, mean 8.5%). A total of 559 specimens from non-sentinel sources were influenza positive: 542 type A (422 pandemic A(H1), 14 seasonal A(H1), 9 seasonal A(H3), 97 not subtyped) and 17 influenza B.

From week 40/2009 to week 04/2010, a total of 153 697 influenza virus detections were reported: 153 247 were influenza A (99.7%) and 450 (0.3%) were influenza B. Of the influenza A viruses, 140 168 (91.8%) were subtyped, with 138 757 being pandemic A(H1), 917 A(H1) and 494 A(H3).

For technical reasons, antigenic and genetic characterization data are not reported this week.

Comment

Although WHO is still receiving reports of widespread activity from some Member States in central and southern Europe, trends in clinical and virological data suggest that this winter wave of pandemic influenza is coming to an end. The winter peak of influenza occurred earlier this season than during any season since 2003/2004 (when the Fujian A(H3) variant emerged).

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

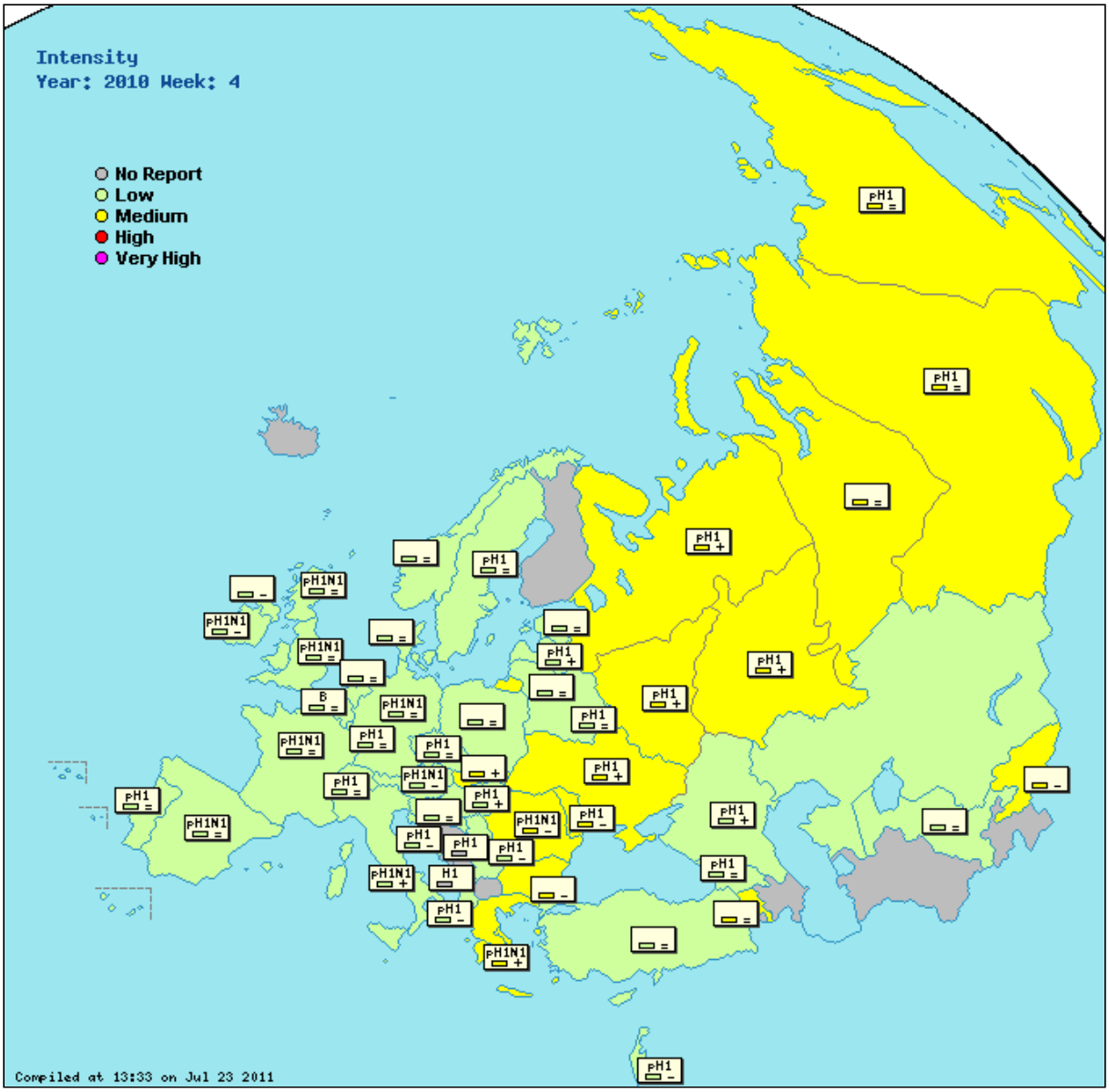
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no evidence of influenza virus activity (clinical activity remains at baseline levels)
Sporadic = isolated cases of laboratory confirmed influenza infection
Local outbreak = increased influenza activity in local areas (e.g. a city) within a region, or outbreaks in two or more institutions (e.g. schools) within a region. Laboratory confirmed.
Regional activity = influenza activity above baseline levels in one or more regions with a population comprising less than 50% of the country's total population. Laboratory confirmed.
Widespread = influenza activity above baseline levels in one or more regions with a population comprising 50% or more of the country's population. Laboratory confirmed.

Country comments (where available)

Malta
slight increase in cases seen though situation stable
Netherlands
By week 5/2010 in the Netherlands, 17 patients were diagnosed with oseltamivir resistant pandemic A(H1N1) 2009 influenza virus. In all except one, oseltamivir resistance emerged during oseltamivir therapy. Thirteen patients receiving oseltamivir therapy were immunosuppressed due to cytostatic/immunosuppressive therapy, of which five died. One patient with 100% oseltamivir resistent virus population did not receive oseltamivir. Contact tracing identified no cases of onward transmission of the oseltamivir resistant viruses.

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania	Low	Sporadic	Low	Decreasing	47	10.6%	Type A, Subtype pH1		436.8 (graphs)	Click here
Armenia	Medium	Widespread	Moderate	Stable			None		(graphs)	Click here
Austria	Low	Regional		Decreasing	13	23.1%	Type A, Subtype pH1N1	(graphs)	10.0 (graphs)	Click here

Belarus	Low	Sporadic		Stable	24	12.5%	Type A, Subtype pH1		1155.3 (graphs)	Click here
Belgium	Low	Sporadic		Stable	30	10.0%	None	76.5 (graphs)	1733.4 (graphs)	Click here
Bosnia and Herzegovina							Type A, Subtype pH1	(graphs)		Click here
Bulgaria	Medium	Local		Decreasing	16	56.3%	None		845.2 (graphs)	Click here
Croatia	Low	Widespread	Low	Decreasing				9.4 (graphs)		Click here
Cyprus	Low	Sporadic	Low	Stable				(graphs)		Click here
Czech Republic	Low	Local		Stable	19	10.5%	Type A, Subtype pH1	40.7 (graphs)	851.5 (graphs)	Click here
Denmark	Low	Sporadic		Stable	33	9.1%	None	45.0 (graphs)	(graphs)	Click here
England	Low	Sporadic		Stable	117	12.0%	Type A, Subtype pH1N1	12.5 (graphs)	387.8 (graphs)	Click here
Estonia	Low	Sporadic	Low	Stable	13	23.1%	None	10.3 (graphs)	264.0 (graphs)	Click here
France	Low	Regional	Low	Stable	172	7.6%	Type A, Subtype pH1N1		1879.3 (graphs)	Click here
Georgia	Low	Widespread	Low	Stable	51	5.9%	Type A, Subtype pH1	127.3 (graphs)		Click here
Germany	Low	Local	Low	Stable					1044.7 (graphs)	Click here
Greece	Medium	Widespread		Increasing	13	38.5%	Type A, Subtype pH1N1	132.8 (graphs)		Click here
Hungary	Low	Sporadic	Low	Increasing	88	4.6%	Type A, Subtype pH1	154.2 (graphs)		Click here
Ireland	Low	Sporadic	Low	Decreasing	7	0%	Type A, Subtype pH1N1	7.5 (graphs)		Click here
Israel	Medium	Regional	Low	Decreasing	60	8.3%	Type A, Subtype pH1	38.3 (graphs)		Click here
Italy	Low	Local	Low	Increasing	33	0%	Type A, Subtype pH1N1	184.5 (graphs)		Click here
Kyrgyzstan	Medium	Sporadic	Moderate	Decreasing	5	0%	None		63.5 (graphs)	Click here
Latvia	Low	Sporadic		Increasing	0	0%	Type A, Subtype pH1	0.9 (graphs)	1032.4 (graphs)	Click here
Lithuania	Low	Sporadic	Low	Stable	0	0%	None	3.3 (graphs)	499.7 (graphs)	Click here
Luxembourg					25	12.0%	Type A, Subtype pH1	(graphs)		Click here
The former Yugoslav Republic of Macedonia							Type A, Subtype pH1	(graphs)		Click here
Malta	Medium	Local	Low	Increasing				(graphs)		Click here
Montenegro								24.4 (graphs)	415.1 (graphs)	Click here
Netherlands	Low	Sporadic		Stable	20	5.0%	None	43.1 (graphs)		Click here
Northern Ireland	Low	None		Decreasing	7	0%	None	18.1 (graphs)	354.8 (graphs)	Click here
Norway	Low	Sporadic		Stable	2	0%	None	34.1 (graphs)		Click here
Poland	Low	Sporadic	Low	Stable	14	0%	None	87.8 (graphs)		Click here
Portugal	Low	Sporadic		Stable	6	0%	Type A, Subtype pH1	10.6 (graphs)		Click here
Republic of Moldova	Medium	Widespread	Moderate	Decreasing			Type A, Subtype pH1	63.2 (graphs)	190.9 (graphs)	Click here
Romania	Medium	Local	Moderate	Decreasing	28	14.3%	Type A, Subtype pH1N1	0.7 (graphs)	772.7 (graphs)	Click here
Russian Federation	Medium	Sporadic		Increasing	5	0%	Type A, Subtype pH1		681.5 (graphs)	Click here
Scotland	Low	Local	Low	Stable	52	9.6%	Type A, Subtype pH1N1	6.1 (graphs)	250.9 (graphs)	Click here
Serbia	Low	Regional	Low	Decreasing	3	33.3%	Type A, Subtype pH1	60.2 (graphs)		Click here
Slovakia	Medium	Local	Low	Increasing	3	0%	Type A, Subtype pH1	195.7 (graphs)	1525.5 (graphs)	Click here
Slovenia	Low	Sporadic		Stable	6	0%	None	4.3 (graphs)	1098.3 (graphs)	Click here
Spain	Low	Sporadic		Stable	90	4.4%	None	18.1 (graphs)		Click here
Sweden	Low	Local	Low	Stable	9	0%	Type A, Subtype pH1	0.7 (graphs)		Click here
Switzerland	Low	Local	Low	Stable	26	11.5%	Type A, Subtype pH1	60.4 (graphs)		Click here
Turkey	Low	Regional	Low	Stable			Type A, Subtype pH1	38.7 (graphs)		Click here
Ukraine	Medium	Local	Low	Increasing			Type A, Subtype pH1N1		565.9 (graphs)	Click here
Uzbekistan	Low	None	Low	Stable			None		28.3 (graphs)	Click here
Wales	Low	Sporadic	Low	Decreasing				3.5 (graphs)		Click here
Europe					1037	9.3%				Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
***:** the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Low levels of pandemic influenza activity in Europe

- This report is based on data received from 46 of the 53 Member States in the WHO European Region.
- Eight per cent of specimens collected from sentinel sources tested positive for influenza virus.
- All countries reported a low or medium intensity of influenza activity.
- Pandemic influenza (H1N1) 2009 accounted for 98% of influenza virus detections in sentinel specimens.
- Countries have reported 4057 deaths associated with laboratory-confirmed pandemic (H1N1) 2009 in the Region since April 2009.

Current situation: week 05/2010

Consultation rates have remained at low levels for most of the countries in Europe. Twelve countries tested at least twenty sentinel specimens, with only Hungary reporting over 20% influenza positivity. Although the Russian Federation and Slovakia reported slight increases in clinical consultation rates this week, these are not associated with increases in detection of influenza and may be due to other respiratory viruses. In addition, the number of respiratory syncytial virus (RSV) detections is increasing in the European Region; 22 countries reported that pandemic (H1N1) 2009 influenza virus was the dominant virus in circulation. Croatia and the Republic of Moldova continued to report widespread influenza activity, but with low-to-medium intensity. The Republic of Moldova reported the impact of influenza on health care services to be moderate, while 24 countries reported low impact.

Reported numbers of severe acute respiratory infection (SARI) hospitalizations have declined or stabilized from earlier peaks in Albania, Malta, the Republic of Moldova, Romania and Uzbekistan. In one of the sites in Ukraine, Kyiv city, SARI hospitalizations increased slightly from the previous week. A total of 4057 deaths associated with laboratory-confirmed pandemic (H1N1) 2009 have been reported in the Region since April 2009.

Virological update: week 05/2010

Sentinel physicians collected 996 respiratory specimens, of which 81 (8%) were positive for influenza virus; 79 were type A (70 were subtyped as pandemic A(H1), 9 were not subtyped) and 2 were influenza B. Of the 12 countries testing 20 or more sentinel specimens this week, influenza-positivity rates ranged from 0% to 23% (median 5.5%; mean 8.0%). A total of 504 specimens from non-sentinel sources were influenza positive: 487 type A (408 pandemic A(H1), 12 seasonal A(H1), 4 seasonal A(H3), 63 not subtyped) and 17 influenza B.

From week 40/2009 to week 05/2010, a total of 154 280 influenza virus detections were reported: 153 811 were influenza A (99.7%) and 469 (0.3%) were influenza B. Of the influenza A viruses, 140 660 (91.4%) were subtyped, with 139 233 being pandemic A(H1), 929 A(H1) and 498 A(H3).

Based on the antigenic characterization of 1715 influenza viruses reported from week 40/2009 to week 05/2010, 1704 were A(H1) pandemic A/California/7/2009 (H1N1)-like, 2 were A(H3) A/Brisbane/10/2007 (H3N2)-like; 7 were A(H3) A/Perth/16/2009 (H3N2)-like, 1 was A(H1) A/Brisbane/59/2007 (H1N1)-like and 1 was B/Brisbane/60/2008-like. Genetic characterizations were available for 11 323 isolates; 11 317 belonged to the A/California/7/2009 A(H1N1) pandemic group; 1 belonged to the A/Perth/16/2009 (H3N2) group; 4 to the A/Victoria/208/2009 (H3N2) group and 1 to the B/England/393/2008 (Victoria lineage) group.

Comment

Most countries continue to report fewer detections than in recent weeks, and influenza positivity rates for the Region have decreased from 20% in week 1/2010 to 8% in week 5/2010. Although a few countries in central and southern Europe report regional or widespread activity, trends in clinical and virological data suggest that this winter wave of pandemic influenza is coming to an end.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

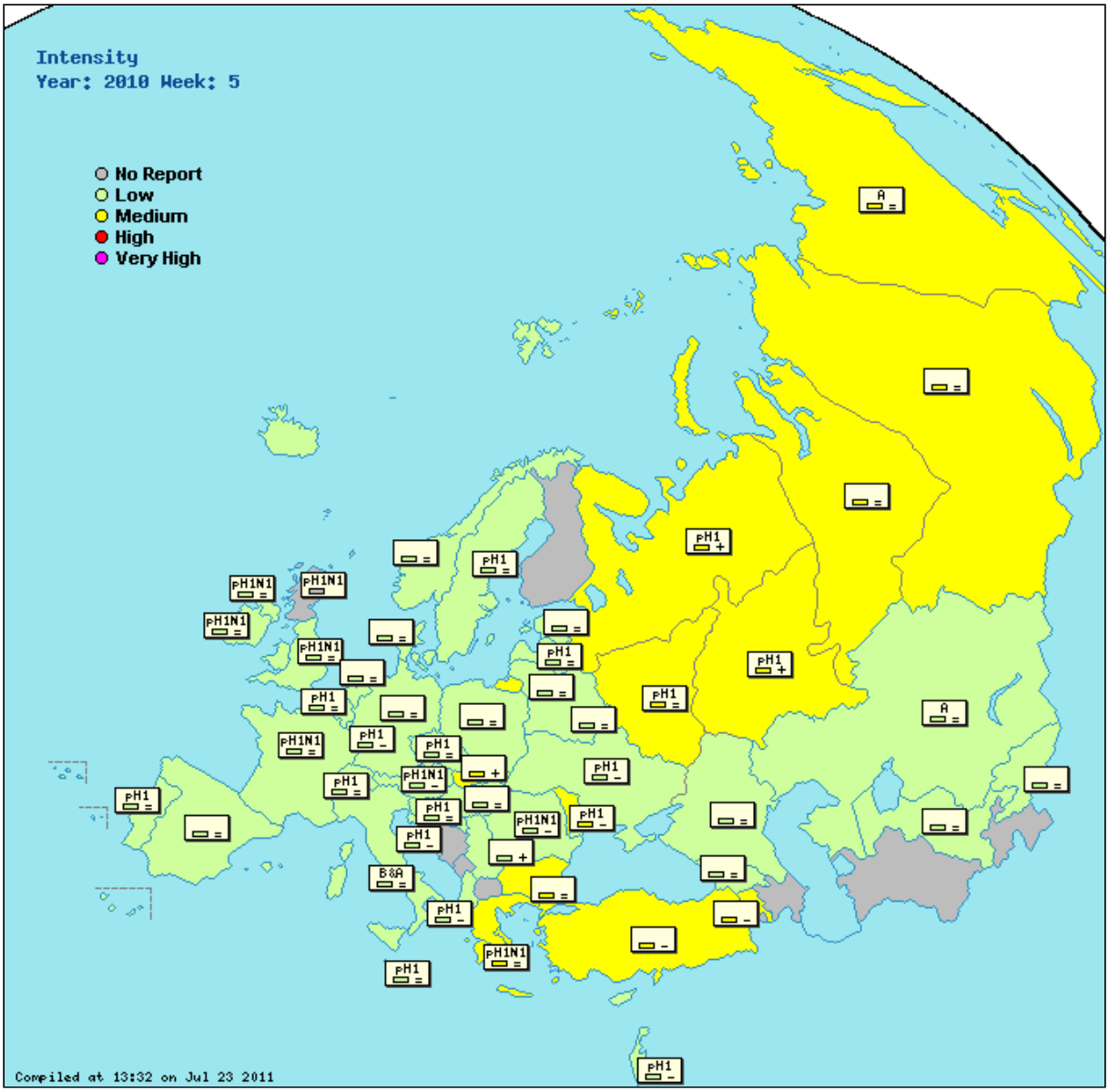
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no evidence of influenza virus activity (clinical activity remains at baseline levels)
Sporadic = isolated cases of laboratory confirmed influenza infection
Local outbreak = increased influenza activity in local areas (e.g. a city) within a region, or outbreaks in two or more institutions (e.g. schools) within a region. Laboratory confirmed.
Regional activity = influenza activity above baseline levels in one or more regions with a population comprising less than 50% of the country's total population. Laboratory confirmed.
Widespread = influenza activity above baseline levels in one or more regions with a population comprising 50% or more of the country's population. Laboratory confirmed.

Country comments (where available)

Latvia
0
Malta
situation stable

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania	Low	Sporadic	Low	Decreasing	33	6.1%	Type A, Subtype pH1		444.7 (graphs)	Click here
Armenia					2	0%	None		(graphs)	Click here
Austria	Low	Regional		Decreasing	8	75.0%	Type A, Subtype pH1N1	(graphs)	20.9 (graphs)	Click here
Azerbaijan					11	0%	None	(graphs)		Click here
Belarus	Low	Sporadic		Stable	15	0%	None		1192.6 (graphs)	Click here
Belgium	Low	Sporadic		Stable	27	14.8%	Type A	78.3 (graphs)	1525.0 (graphs)	Click here

Bosnia and Herzegovina							None		(graphs)		Click here
Bulgaria	Medium	Local		Stable	16	18.8%	None			613.8 (graphs)	Click here
Croatia	Low	Widespread	Low	Decreasing				6.0	(graphs)		Click here
Cyprus	Low	Sporadic	Low	Stable					(graphs)		Click here
Czech Republic	Low	Local		Stable	13	0%	Type A, Subtype pH1	45.6	(graphs)	911.7 (graphs)	Click here
Denmark	Low	Sporadic		Stable	33	12.1%	None	40.8	(graphs)	(graphs)	Click here
England	Low	Sporadic		Stable	186	4.8%	Type A, Subtype pH1N1	12.5	(graphs)	412.8 (graphs)	Click here
Estonia	Low	Sporadic	Low	Stable	14	7.1%	None	10.4	(graphs)	237.9 (graphs)	Click here
France	Low	Sporadic	Low	Stable	159	3.1%	Type A, Subtype pH1N1			1859.9 (graphs)	Click here
Georgia	Low	Regional	Low	Stable	42	0%	None	171.3	(graphs)		Click here
Germany	Low	Local	Low	Stable	51	17.7%	None			1126.6 (graphs)	Click here
Greece	Medium	Regional		Stable	16	43.8%	Type A, Subtype pH1N1	146.2	(graphs)		Click here
Hungary	Low	Sporadic	Low	Stable	78	23.1%	None	153.2	(graphs)		Click here
Iceland	Low	None		Stable				2.8	(graphs)		Click here
Ireland	Low	Sporadic	Low	Stable	5	0%	Type A, Subtype pH1N1	6.8	(graphs)		Click here
Israel	Low	Regional	Low	Decreasing	46	10.9%	Type A, Subtype pH1	32.7	(graphs)		Click here
Italy	Low	Local	Low	Stable	31	0%	Type A, Subtype pH1N1	189.8	(graphs)		Click here
Kyrgyzstan					1	0%	None			(graphs)	Click here
Latvia	Low	Sporadic		Stable	0	0%	Type A, Subtype pH1	0.0	(graphs)	979.4 (graphs)	Click here
Lithuania	Low	Sporadic	Low	Stable	3	0%	None	2.4	(graphs)	524.3 (graphs)	Click here
Luxembourg	Low	Sporadic	Low		17	11.8%	Type A, Subtype pH1		(graphs)		Click here
The former Yugoslav Republic of Macedonia							Type A, Subtype pH1		(graphs)		Click here
Malta	Low	Local	Low	Stable			None		(graphs)		Click here
Montenegro								17.1	(graphs)	462.8 (graphs)	Click here
Netherlands	Low	Sporadic		Stable	15	0%	None	36.7	(graphs)		Click here
Northern Ireland	Low	Sporadic		Stable	4	0%	Type A, Subtype pH1N1	38.7	(graphs)	416.6 (graphs)	Click here
Norway	Low	None	Low	Stable	2	0%	None	33.4	(graphs)		Click here
Poland	Low	Sporadic	Low	Stable	19	5.3%	None	78.5	(graphs)		Click here
Portugal	Low	Sporadic		Stable	8	0%	Type A, Subtype pH1	6.1	(graphs)		Click here
Republic of Moldova	Medium	Widespread	Moderate	Decreasing			Type A, Subtype pH1	42.8	(graphs)	176.4 (graphs)	Click here
Romania	Low	Sporadic	Low	Decreasing	13	15.4%	Type A, Subtype pH1N1	0.2	(graphs)	708.2 (graphs)	Click here
Russian Federation	Medium	Sporadic		Stable	5	0%	Type A, Subtype pH1			725.7 (graphs)	Click here
Scotland					64	3.1%	Type A, Subtype pH1N1		(graphs)		Click here
Serbia	Low	Regional	Low	Increasing	6	0%	None	66.9	(graphs)		Click here
Slovakia	Medium	Local	Low	Increasing	6	0%	None	229.8	(graphs)	1696.8 (graphs)	Click here
Slovenia	Low	Sporadic		Stable	8	12.5%	Type A, Subtype pH1	6.7	(graphs)	1073.6 (graphs)	Click here
Spain	Low	None		Stable				19.0	(graphs)		Click here
Sweden	Low	None	Low	Stable	10	0%	Type A, Subtype pH1	2.5	(graphs)		Click here
Switzerland					29	0%	Type A, Subtype pH1		(graphs)		Click here
Turkey	Medium	Sporadic	Low	Decreasing			Type A, Subtype pH1	38.4	(graphs)		Click here
Ukraine	Low	Sporadic	Low	Decreasing			Type A, Subtype pH1			546.2 (graphs)	Click here
Uzbekistan	Low	None	Low	Stable			None			28.8 (graphs)	Click here
Wales	Low	Sporadic	Low	Stable				5.8	(graphs)		Click here
Europe					996	8.1%					Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
***:** the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Little evidence of any remaining pandemic influenza activity in western Europe

- This report is based on data received from 42 of the 53 Member States in the WHO European Region.
- Five per cent of specimens collected from sentinel sources tested positive for influenza virus.
- All countries reported a low or medium intensity of influenza activity.
- Pandemic influenza (H1N1) 2009 accounted for 94% of influenza virus detections in sentinel specimens.
- Countries have reported 4267 deaths associated with laboratory-confirmed pandemic (H1N1) 2009 in the Region since April 2009.

Current situation: week 06/2010

Consultation rates have remained at low levels for most of the countries in Europe. Twelve countries tested at least twenty sentinel specimens, but none of these reported influenza positivity over 20%. Although Georgia, the Russian Federation (southern and northwestern regions) and Slovakia reported slight increases in clinical consultation rates, these are not associated with increases in detection of influenza and may be due to other respiratory viruses, such as respiratory syncytial virus (RSV). Sixteen countries reported that pandemic (H1N1) 2009 influenza virus was the dominant influenza virus in circulation. Armenia reported widespread influenza activity with medium intensity. Regional activity was reported in Austria, Georgia, Greece, the Republic of Moldova and Serbia. Twenty-six countries reported the impact of influenza on health care services to be low, while Armenia and the Republic of Moldova reported moderate impact.

Reported numbers of severe acute respiratory infection (SARI) hospitalizations continue to decline or level off from earlier peaks in Albania, Malta, the Republic of Moldova and Romania. In Uzbekistan and one of the sites in Ukraine, Kyiv city, SARI hospitalizations increased slightly from the previous week. A total of 4267 deaths associated with laboratory-confirmed pandemic (H1N1) 2009 have been reported in the Region since April 2009.

Virological update: week 06/2010

Sentinel physicians collected 1054 respiratory specimens, of which 57 (5%) were positive for influenza virus; 54 were type A (46 were subtyped as pandemic A(H1), 8 were not subtyped) and 3 were influenza B. Of the 12 countries testing 20 or more sentinel specimens this week, influenza-positivity rates ranged from 0% to 15% (median 3.4%; mean 5.3%). A total of 524 specimens from non-sentinel sources were influenza positive: 485 type A (380 pandemic A(H1), 33 seasonal A(H1), 15 seasonal A(H3), 57 not subtyped) and 39 influenza B.

From week 40/2009 to week 06/2010, a total of 155 231 influenza virus detections were reported: 154 720 were influenza A (99.7%) and 511 (0.3%) were influenza B. Of the influenza A viruses, 141 504 (91.5%) were subtyped, with 140 029 being pandemic A(H1), 962 A(H1) and 513 A(H3).

Based on the reported antigenic characterization of 1772 influenza viruses from week 40/2009 to week 06/2010: 1752 were A(H1) pandemic A/California/7/2009 (H1N1)-like, 17 were A(H3) A/Perth/16/2009 (H3N2)-like, 1 was A(H1) A/Brisbane/59/2007 (H1N1)-like and 2 were B/Brisbane/60/2008-like. Genetic characterizations were available for 957 isolates; 938 belonged to the A/California/7/2009 A(H1N1) pandemic group; 1 belonged to the A/Brisbane/10/2007 (H3) group, 10 to the A/Perth/16/2009 (H3N2) group; 5 to the A/Victoria/208/2009 (H3N2) group and 3 to the B/England/393/2008 (Victoria lineage) group.

Comment

Most countries continue to report fewer detections than in recent weeks, and influenza positivity rates for the Region continue to decrease from 45% in week 45/2009 to 5% in week 06/2010. Pandemic influenza remains the dominant circulating influenza virus but trends in clinical and virological data suggest that pandemic influenza activity is coming to an end.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

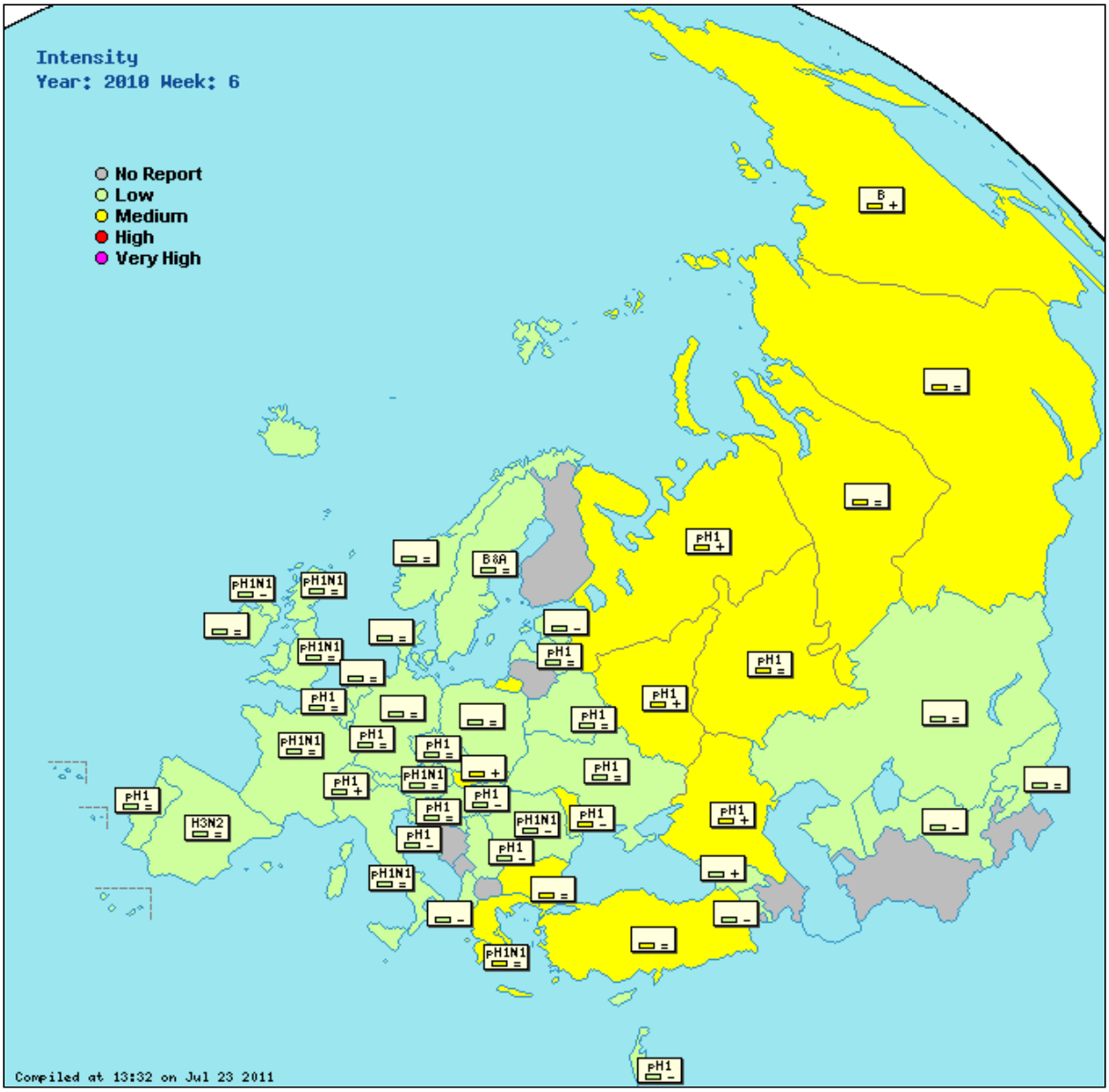
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no evidence of influenza virus activity (clinical activity remains at baseline levels)
Sporadic = isolated cases of laboratory confirmed influenza infection
Local outbreak = increased influenza activity in local areas (e.g. a city) within a region, or outbreaks in two or more institutions (e.g. schools) within a region. Laboratory confirmed.
Regional activity = influenza activity above baseline levels in one or more regions with a population comprising less than 50% of the country's total population. Laboratory confirmed.
Widespread = influenza activity above baseline levels in one or more regions with a population comprising 50% or more of the country's population. Laboratory confirmed.

Country comments (where available)

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania	Low	Sporadic	Low	Decreasing	12	0%	None		447.6 (graphs)	Click here
Armenia	Medium	Widespread	Moderate	Stable	2	0%	None	(graphs)	(graphs)	Click here
Austria	Low	Regional		Stable	10	0%	Type A, Subtype pH1N1	2.1 (graphs)	15.8 (graphs)	Click here
Azerbaijan					14	0%	None	(graphs)		Click here
Belarus	Low	Sporadic		Stable	33	15.2%	Type A, Subtype pH1		1224.0 (graphs)	Click here
Belgium	Low	Sporadic		Stable	27	14.8%	Type A, Subtype pH1	54.1 (graphs)	1412.0 (graphs)	Click here
Bosnia and Herzegovina							None	(graphs)		Click here
Bulgaria	Medium	Local		Stable	1	100.0%	None		862.3 (graphs)	Click here
Croatia	Low	Local	Low	Decreasing				4.7 (graphs)		Click here

Czech Republic	Low	Sporadic		Stable	15	46.7%	Type A, Subtype pH1	48.2 (graphs)	965.4 (graphs)	Click here
Denmark	Low	Sporadic		Stable	9	11.1%	None	31.6 (graphs)	(graphs)	Click here
England	Low	Sporadic		Stable	90	4.4%	Type A, Subtype pH1N1	12.0 (graphs)	411.3 (graphs)	Click here
Estonia	Low	Sporadic	Low	Decreasing	17	5.9%	None	9.2 (graphs)	230.1 (graphs)	Click here
France	Low	Sporadic	Low	Stable	118	2.5%	Type A, Subtype pH1N1		(graphs)	Click here
Georgia	Low	Regional	Low	Increasing	55	1.8%	None	201.5 (graphs)		Click here
Germany	Low	Local	Low	Stable	48	4.2%	None		1127.4 (graphs)	Click here
Greece	Medium	Regional		Stable	19	36.8%	Type A, Subtype pH1N1	108.5 (graphs)		Click here
Hungary	Low	Sporadic	Low	Decreasing	89	7.9%	Type A, Subtype pH1	143.2 (graphs)		Click here
Ireland	Low	Sporadic	Low	Stable	8	0%	Type A, Subtype pH1N1	6.2 (graphs)		Click here
Israel	Low	Sporadic	Low	Decreasing				29.8 (graphs)		Click here
Italy	Low	Local	Low	Stable	29	0%	Type A, Subtype pH1N1	203.8 (graphs)		Click here
Kazakhstan	Low	Sporadic	Low	Stable	204	0%	None		(graphs)	Click here
Kyrgyzstan	Low	None	Low	Stable	3	0%	None		60.2 (graphs)	Click here
Latvia	Low	Sporadic		Stable				0.0 (graphs)	1000.4 (graphs)	Click here
Luxembourg	Low	Sporadic	Low					(graphs)		Click here
Malta	Low	Local	Low	Decreasing				(graphs)		Click here
Netherlands	Low	Sporadic		Stable				44.6 (graphs)		Click here
Northern Ireland	Low	Sporadic		Decreasing				20.9 (graphs)	348.5 (graphs)	Click here
Norway	Low	None	Low	Stable				26.9 (graphs)		Click here
Poland	Low	Sporadic	Low	Stable				78.9 (graphs)		Click here
Portugal	Low	Sporadic		Stable				5.7 (graphs)		Click here
Republic of Moldova	Medium	Regional	Moderate	Decreasing			Type A, Subtype pH1	38.9 (graphs)	200.8 (graphs)	Click here
Romania	Low	Sporadic	Low	Decreasing				0.2 (graphs)	667.6 (graphs)	Click here
Russian Federation	Medium	Sporadic		Increasing	141	0%	Type A, Subtype pH1		771.4 (graphs)	Click here
Scotland	Low	Sporadic	Low	Stable				3.0 (graphs)	227.8 (graphs)	Click here
Serbia	Low	Regional	Low	Decreasing	7	28.6%	Type A, Subtype pH1	58.1 (graphs)		Click here
Slovakia	Medium	Local	Low	Increasing				251.2 (graphs)	1805.1 (graphs)	Click here
Slovenia	Low	Sporadic		Stable				1.6 (graphs)	1031.6 (graphs)	Click here
Spain	Low	None		Stable	78	1.3%	None	15.7 (graphs)		Click here
Sweden	Low	None	Low	Stable				1.5 (graphs)		Click here
Switzerland	Low	Sporadic	Low	Increasing	25	12.0%	Type A, Subtype pH1	74.6 (graphs)		Click here
Turkey	Medium	Sporadic	Low	Stable			Type A, Subtype pH1	32.0 (graphs)		Click here
Ukraine	Low	Local	Low	Stable			Type A, Subtype pH1		581.4 (graphs)	Click here
Uzbekistan	Low	None	Low	Stable			None		30.3 (graphs)	Click here
Wales	Low	Sporadic	Low	Decreasing				3.7 (graphs)		Click here
Europe					1054	4.7%				Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
*: the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Pandemic influenza activity has ended in most parts of Europe

- This report is based on data received from 45 of the 53 Member States in the WHO European Region.
- 3.3% of specimens collected from sentinel sources tested positive for influenza virus.
- Most countries reported a low intensity of influenza activity.
- Only 21 influenza virus detections in sentinel specimens were reported, of which 18 were pandemic (H1N1) 2009 influenza.
- Countries have reported 4389 deaths associated with laboratory-confirmed pandemic (H1N1) 2009 in the Region since April 2009.

Current situation: week 07/2010

Consultation rates have remained at low levels for most of the countries in Europe. Eight countries tested at least twenty sentinel specimens, but none of these reported influenza positivity over 20%. Although parts of the Russian Federation (southern, Urals and far eastern regions) reported slight increases in clinical consultation rates, these were not associated with increases in detection of influenza, and may be due to other respiratory viruses, such as respiratory syncytial virus (RSV). Eighteen countries reported that pandemic (H1N1) 2009 was the dominant influenza virus in circulation. Regional activity was reported in Armenia, Austria and the Republic of Moldova. Twenty-five countries reported the impact of influenza on health care services to be low, while Armenia and the Republic of Moldova reported moderate impact.

Reported numbers of severe acute respiratory infection (SARI) hospitalizations continued to decline or level off from earlier peaks in Armenia, Malta, Romania, Ukraine and Uzbekistan. The Republic of Moldova reported a slight increase in hospitalizations. A total of 4389 deaths associated with laboratory-confirmed pandemic (H1N1) 2009 has been reported in the Region since April 2009.

Virological update: week 07/2010

Sentinel physicians collected 635 respiratory specimens, of which 21 (3.3%) were positive for influenza virus; 19 were type A (18 were subtyped as pandemic A(H1); 1 was not subtyped) and 2 were influenza B. Of the 8 countries testing 20 or more sentinel specimens this week, influenza-positivity rates ranged from 0% to 10% (median 2.9%; mean 3.0%); 445 specimens from non-sentinel sources were influenza positive: 419 type A (326 pandemic A(H1), 33 seasonal A(H1), 5 seasonal A(H3), 55 not subtyped) and 26 influenza B.

From week 40/2009 to week 07/2010, a total of 156 039 influenza virus detections were reported: 155 500 were influenza A (99.7%) and 539 (0.3%) were influenza B. Of the influenza A viruses, 142 197(91.5%) were subtyped, with 140 684 being pandemic A(H1), 995 A(H1) and 518 A(H3).

Based on the reported antigenic characterization of 1777 influenza viruses from week 40/2009 to week 07/2010: 1758 were A(H1) pandemic A/California/7/2009 (H1N1)-like; 17 were A(H3) A/Perth/16/2009 (H3N2)-like; 1 was A(H1) A/Brisbane/59/2007 (H1N1)-like and 1 was B/Brisbane/60/2008-like (B/Victoria/2/87 lineage). Genetic characterizations were available for 995 isolates; 976 belonged to the A/California/7/2009 A(H1N1) pandemic group; 1 belonged to the A/Brisbane/10/2007 (H3) group; 10 to the A/Perth/16/2009 (H3N2) group; 5 to the A/Victoria/208/2009 (H3N2) group and 3 to the B/England/393/2008 (Victoria lineage) group.

Comment

Most countries have continued to report declining numbers of detections in recent weeks, and influenza positivity rates for the Region have continued to decrease, from 45% in week 45/2009 to 3.3% in week 07/2010. The viruses characterized to date correspond with the recommended viruses for influenza vaccines for use in the 2010–2011 northern hemisphere influenza season (click here). Pandemic influenza remains the dominant circulating influenza virus but trends in clinical and virological data suggest that pandemic influenza activity is coming to an end in the European Region. At the global level, however, the pandemic is not considered to have entered a post-peak phase (click here). WHO recommends that countries continue surveillance of influenza on a year-round basis.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

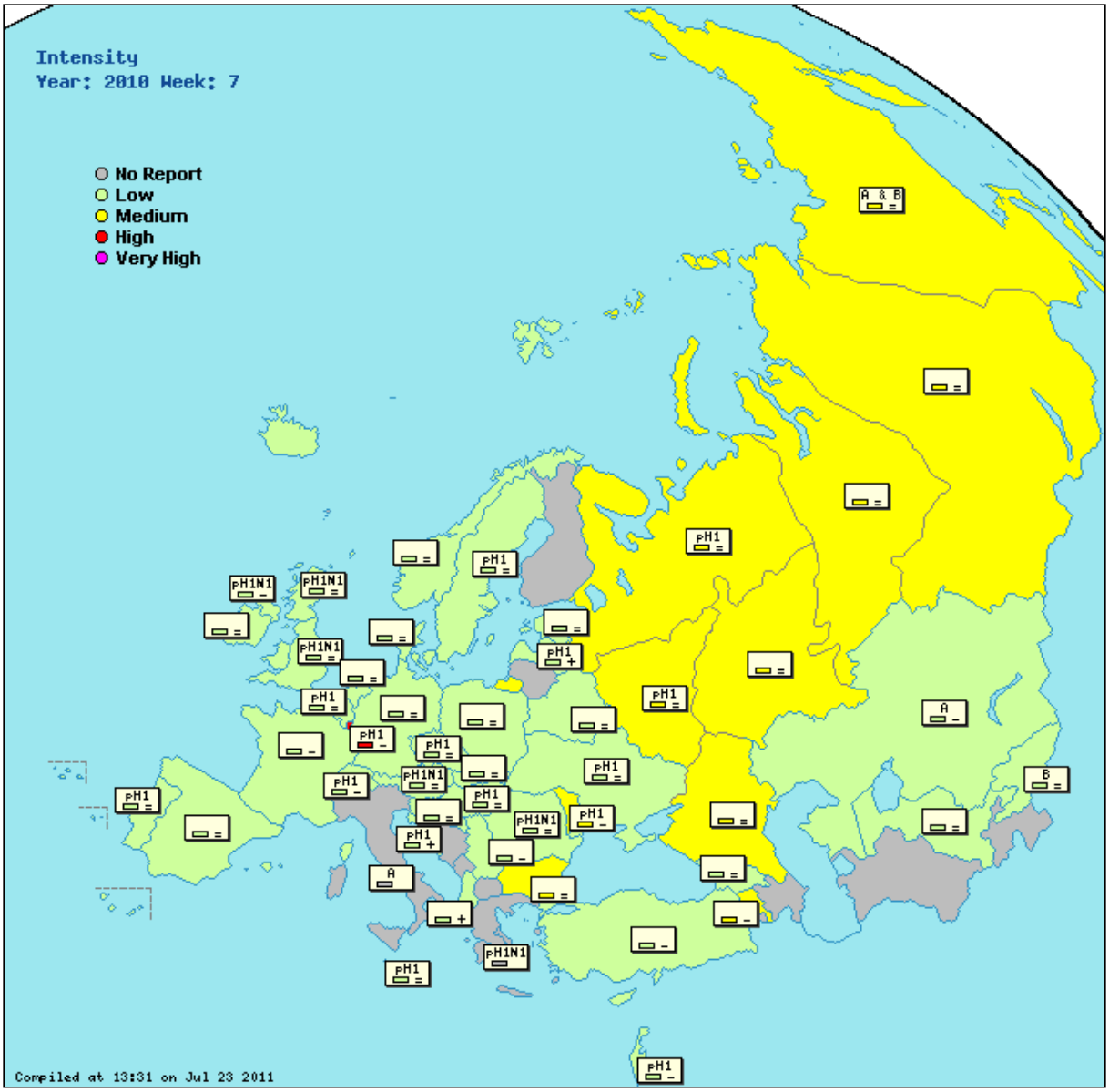
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no evidence of influenza virus activity (clinical activity remains at baseline levels)
Sporadic = isolated cases of laboratory confirmed influenza infection
Local outbreak = increased influenza activity in local areas (e.g. a city) within a region, or outbreaks in two or more institutions (e.g. schools) within a region. Laboratory confirmed.
Regional activity = influenza activity above baseline levels in one or more regions with a population comprising less than 50% of the country's total population. Laboratory confirmed.
Widespread = influenza activity above baseline levels in one or more regions with a population comprising 50% or more of the country's population. Laboratory confirmed.

Country comments (where available)

Malta
situation stable

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania	Low	Sporadic	Low	Increasing	10	0%	None		438.4 (graphs)	Click here
Armenia	Medium	Regional	Moderate	Decreasing			None		(graphs)	Click here
Austria	Low	Regional		Stable	1	0%	Type A, Subtype pH1N1	0.0 (graphs)	22.7 (graphs)	Click here
Azerbaijan					14	0%	None	(graphs)		Click here
Belarus	Low	Sporadic		Stable	17	5.9%	None		1229.3 (graphs)	Click here
Belgium	Low	Sporadic		Increasing	20	10.0%	Type A, Subtype pH1	76.1 (graphs)	1406.2 (graphs)	Click here
Bosnia and Herzegovina							None	(graphs)		Click here
Bulgaria	Medium	Local		Stable	1	0%	None		811.3 (graphs)	Click here

Croatia	Low	Local	Low	Increasing			Type A, Subtype pH1	5.3 (graphs)			Click here
Czech Republic	Low	Sporadic		Stable	17	5.9%	Type A, Subtype pH1	41.9 (graphs)	959.4 (graphs)		Click here
Denmark	Low	Sporadic		Stable	15	6.7%	None	35.7 (graphs)	(graphs)		Click here
England	Low	Sporadic		Stable	54	3.7%	Type A, Subtype pH1N1	8.0 (graphs)	358.3 (graphs)		Click here
Estonia	Low	Sporadic	Low	Stable	14	0%	None	9.0 (graphs)	264.1 (graphs)		Click here
France	Low	Sporadic	Low	Decreasing					1521.9 (graphs)		Click here
Georgia	Low	Local	Low	Stable	63	0%	None	210.6 (graphs)			Click here
Germany	Low	Sporadic	Low	Stable	46	4.4%	None		1151.9 (graphs)		Click here
Greece					9	22.2%	Type A, Subtype pH1N1	(graphs)			Click here
Hungary	Low	Sporadic	Low	Stable	79	2.5%	Type A, Subtype pH1	141.7 (graphs)			Click here
Ireland	Low	Sporadic	Low	Stable	3	0%	Type A, Subtype pH1N1	6.1 (graphs)			Click here
Israel	Low	Sporadic	Low	Decreasing	34	2.9%	Type A, Subtype pH1	21.6 (graphs)			Click here
Italy					26	0%	Type A	(graphs)			Click here
Kazakhstan	Low	Sporadic	Low	Decreasing			None		(graphs)		Click here
Kyrgyzstan	Low	None	Low	Stable	3	0%	None		73.3 (graphs)		Click here
Latvia	Low	Sporadic		Increasing	0	0%	Type A, Subtype pH1	0.0 (graphs)	1047.0 (graphs)		Click here
Lithuania					1	0%	None	(graphs)			Click here
Luxembourg	Low	Sporadic	Low		6	33.3%	Type A, Subtype pH1	0.0 (graphs)			Click here
The former Yugoslav Republic of Macedonia							None	(graphs)			Click here
Malta	Low	Local	Low	Stable			None	(graphs)			Click here
Montenegro					0	0%	None	13.4 (graphs)	573.1 (graphs)		Click here
Netherlands	Low	Sporadic		Stable	14	0%	None	37.5 (graphs)			Click here
Northern Ireland	Low	Sporadic		Decreasing	6	0%	Type A, Subtype pH1N1	17.2 (graphs)	363.4 (graphs)		Click here
Norway	Low	None	Low	Stable	2	0%	None	28.3 (graphs)			Click here
Poland	Low	Sporadic	Low	Stable	10	0%	None	82.5 (graphs)			Click here
Portugal	Low	Sporadic		Stable				12.9 (graphs)			Click here
Republic of Moldova	Medium	Regional	Moderate	Decreasing			Type A, Subtype pH1	28.8 (graphs)	176.1 (graphs)		Click here
Romania	Low	Sporadic	Low	Stable	17	17.7%	Type A, Subtype pH1N1	0.8 (graphs)	677.1 (graphs)		Click here
Russian Federation	Medium	Sporadic		Stable	11	0%	Type A, Subtype pH1		766.8 (graphs)		Click here
Scotland	Low	Sporadic	Low	Stable	30	3.3%	Type A, Subtype pH1N1	3.7 (graphs)	208.0 (graphs)		Click here
Serbia	Low	Sporadic	Low	Decreasing	2	0%	None	47.0 (graphs)			Click here
Slovakia	Low	Local	Low	Stable	11	0%	None	238.0 (graphs)	1786.2 (graphs)		Click here
Slovenia	Low	None		Stable	7	0%	None	6.1 (graphs)	1162.2 (graphs)		Click here
Spain	Low	None		Stable	64	0%	None	14.4 (graphs)			Click here
Sweden	Low	None	Low	Stable	13	7.7%	Type A, Subtype pH1	3.0 (graphs)			Click here
Switzerland	Low	None	Low	Decreasing	15	0%	Type A, Subtype pH1	54.8 (graphs)			Click here
Turkey	Low	Sporadic	Low	Decreasing			Type A, Subtype pH1	30.6 (graphs)			Click here
Ukraine	Low	Sporadic	Low	Stable			Type A, Subtype pH1		593.3 (graphs)		Click here
Uzbekistan	Low	None	Low	Stable			None		29.6 (graphs)		Click here
Wales	Low	Sporadic	Low	Stable				3.4 (graphs)			Click here
Europe					635	3.3%					Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
*: the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Influenza activity low in most parts of Europe

- This report is based on data received from 44 of the 53 Member States in the WHO European Region.
- 6.8% of specimens collected from sentinel sources tested positive for influenza.
- Most countries reported a low intensity of influenza activity.
- Pandemic (H1N1) 2009 is the dominant virus in 12 countries in Europe.
- Countries have reported 4572 deaths associated with laboratory-confirmed pandemic (H1N1) 2009 influenza in the Region since April 2009.

Current situation: week 08/2010

Consultation rates have remained at low levels for most of the countries in Europe; 11 countries tested at least 20 sentinel specimens, but none reported influenza positivity over 20%. Most countries (N = 28) reported no dominant type of virus, indicating limited influenza activity. Twelve countries reported that pandemic (H1N1) 2009 was the dominant influenza virus in circulation. In two countries, the Russian Federation and Sweden, influenza B was reported as co-dominant or dominant. Regional activity was reported in Armenia, Austria, Greece and Italy. Twenty-seven countries reported the impact of influenza on health care services to be low, while Armenia and Kyrgyzstan reported moderate impact.

Reported numbers of severe acute respiratory infection (SARI) hospitalizations continued to decline or level off from earlier peaks in Armenia, Malta, Romania, the Republic of Moldova, Ukraine and Uzbekistan. A total of 4572 deaths associated with laboratory-confirmed pandemic (H1N1) 2009 has been reported in the Region since April 2009.

Virological update: week 08/2010

Sentinel physicians collected 652 respiratory specimens, of which 44 (6.8%) were positive for influenza virus; 36 were type A (26 were subtyped as pandemic A(H1); 9 were not subtyped; 1 was subtyped as H1) and 8 were influenza B. Of the 11 countries testing 20 or more sentinel specimens this week, influenza-positivity rates ranged from 0% to 19.2% (median. 4.4%; mean: 5.6%); 316 specimens from non-sentinel sources were influenza positive: 265 type A (194 pandemic A(H1), 15 seasonal A(H1), 11 seasonal A(H3), 45 not subtyped) and 51 influenza B.

From week 40/2009 to week 08/2010, 156 459 influenza virus detections were reported: 155 867 were influenza A (99.6%) and 592 (0.4%) were influenza B. Of the influenza A viruses, 142 466 (91.4%) were subtyped, with 140 926 being pandemic A(H1); 1011 A(H1), and 529 A(H3).

Based on the reported antigenic characterization of 1794 influenza viruses from week 40/2009 to week 08/2010: 1773 were A(H1) pandemic A/California/7/2009 (H1N1)-like; 17 were A(H3) A/Perth/16/2009 (H3N2)-like; 1 was A(H1) A/Brisbane/59/2007 (H1N1)-like and 3 were B/Brisbane/60/2008-like (B/Victoria/2/87 lineage). Genetic characterizations were available for 1045 isolates; 1026 belonged to the A/California/7/2009 A(H1N1) pandemic group; 1 belonged to the A/Brisbane/10/2007 (H3) group; 10 to the A/Perth/16/2009 (H3N2) group; 5 to the A/Victoria/208/2009 (H3N2) group and 3 to the B/England/393/2008 (Victoria lineage) group.

Comment

Pandemic influenza activity has shown a decreasing or stable trend in recent weeks. Most countries have continued to report declining numbers of influenza detections. The current influenza positivity rate for the Region is low: 6.8%. The overall pattern indicates that pandemic influenza activity is over, particularly in the western part of Europe. The percentage of positive sentinel specimens is lower in European Union (EU)/ European Economic Area (EEA) countries (median: 0%; mean: 4.2%) than other countries (median: 6.5%; mean: 10.8%) in the Region.

The viruses characterized to date correspond with those recommended for influenza vaccines for use in the 2010–2011 northern hemisphere influenza season (see WHO headquarters web site). WHO recommends that countries continue surveillance of influenza on a year-round basis.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

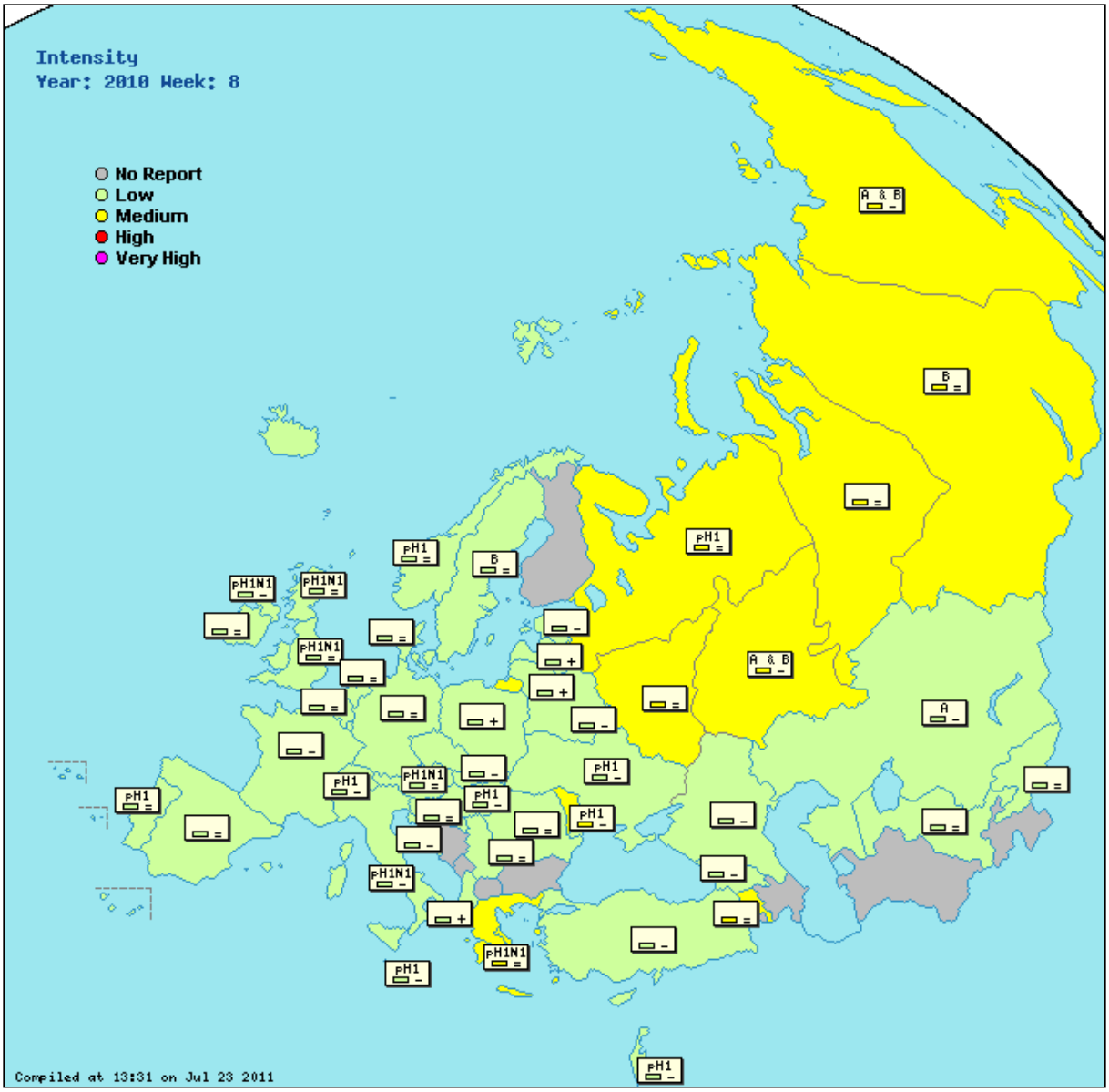
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no evidence of influenza virus activity (clinical activity remains at baseline levels)
Sporadic = isolated cases of laboratory confirmed influenza infection
Local outbreak = increased influenza activity in local areas (e.g. a city) within a region, or outbreaks in two or more institutions (e.g. schools) within a region. Laboratory confirmed.
Regional activity = influenza activity above baseline levels in one or more regions with a population comprising less than 50% of the country's total population. Laboratory confirmed.
Widespread = influenza activity above baseline levels in one or more regions with a population comprising 50% or more of the country's population. Laboratory confirmed.

Country comments (where available)

Malta
situation stable

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania	Low	Sporadic	Low	Increasing	4	0%	None		422.1 (graphs)	Click here
Armenia	Medium	Regional	Moderate	Stable			None		(graphs)	Click here
Austria	Low	Regional		Stable	5	0%	Type A, Subtype pH1N1	(graphs)	19.9 (graphs)	Click here
Belarus	Low	Sporadic	Low	Decreasing	26	19.2%	None		1094.5 (graphs)	Click here
Belgium	Low	Sporadic		Stable	19	5.3%	None	78.3 (graphs)	1447.7 (graphs)	Click here
Bosnia and Herzegovina							None	(graphs)		Click here
Bulgaria					0	0%	None		(graphs)	Click here
Croatia							None	(graphs)		Click here

Czech Republic	Low	Sporadic		Stable				40.0 (graphs)	920.2 (graphs)	Click here
Denmark	Low	Sporadic		Stable	16	6.3%	None	46.5 (graphs)	(graphs)	Click here
England	Low	Sporadic		Stable	69	4.4%	Type A, Subtype pH1N1	9.0 (graphs)	388.2 (graphs)	Click here
Estonia	Low	Sporadic	Low	Decreasing	5	0%	None	6.3 (graphs)	272.7 (graphs)	Click here
France	Low	Sporadic	Low	Decreasing	79	10.1%	None		1321.5 (graphs)	Click here
Georgia	Low	Local	Low	Decreasing	45	0%	None	196.5 (graphs)		Click here
Germany	Low	Sporadic	Low	Stable	40	7.5%	None		1261.2 (graphs)	Click here
Greece	Medium	Regional		Stable	9	55.6%	Type A, Subtype pH1N1	161.3 (graphs)		Click here
Hungary	Low	Sporadic	Low	Decreasing	51	5.9%	Type A, Subtype pH1	124.9 (graphs)		Click here
Ireland	Low	Sporadic	Low	Stable	4	0%	Type A, Subtype pH1N1	7.5 (graphs)		Click here
Israel	Low	Sporadic	Low	Decreasing	30	0%	Type A, Subtype pH1	15.7 (graphs)		Click here
Italy	Low	Regional	Low	Decreasing				182.8 (graphs)		Click here
Kazakhstan	Low	Sporadic	Low	Decreasing	17	0%	None	(graphs)	(graphs)	Click here
Kyrgyzstan	Medium	Sporadic	Moderate	Decreasing	0	0%	None		51.5 (graphs)	Click here
Latvia	Low	Sporadic		Increasing	0	0%	None	0.0 (graphs)	1221.5 (graphs)	Click here
Lithuania	Low	Sporadic	Low	Increasing	3	0%	None	1.2 (graphs)	477.3 (graphs)	Click here
Luxembourg	Low	Sporadic	Low					(graphs)		Click here
The former Yugoslav Republic of Macedonia							None	(graphs)		Click here
Malta	Low	Local	Low	Decreasing			None	(graphs)		Click here
Montenegro								6.8 (graphs)	510.4 (graphs)	Click here
Netherlands	Low	Sporadic		Stable	10	0%	None	22.6 (graphs)		Click here
Northern Ireland	Low	Sporadic		Decreasing	5	0%	Type A, Subtype pH1N1	14.3 (graphs)	381.7 (graphs)	Click here
Norway	Low	Sporadic	Low	Stable	1	0%	Type A, Subtype pH1	29.9 (graphs)		Click here
Poland	Low	Sporadic	Low	Increasing	11	9.1%	None	95.5 (graphs)		Click here
Portugal	Low	Sporadic		Stable	7	0%	Type A, Subtype pH1	8.4 (graphs)		Click here
Republic of Moldova	Medium	Local	Low	Decreasing			Type A, Subtype pH1	18.0 (graphs)	153.1 (graphs)	Click here
Romania	Low	None	Low	Stable	21	0%	None	0.3 (graphs)	752.1 (graphs)	Click here
Russian Federation	Medium	Sporadic		Decreasing	15	53.3%	Type B and Type A, Subtype pH1		670.9 (graphs)	Click here
Scotland	Low	Sporadic	Low	Stable	16	0%	Type A, Subtype pH1N1	3.0 (graphs)	212.0 (graphs)	Click here
Serbia	Low	None	Low	Stable	8	12.5%	None	47.4 (graphs)		Click here
Slovakia	Low	Local	Low	Decreasing	15	0%	None	195.5 (graphs)	1580.2 (graphs)	Click here
Slovenia	Low	None		Stable	5	0%	None	12.3 (graphs)	1226.6 (graphs)	Click here
Spain	Low	None		Stable	49	2.0%	None	11.2 (graphs)		Click here
Sweden	Low	None	Low	Stable	9	0%	Type B	0.8 (graphs)		Click here
Switzerland	Low	Sporadic	Low	Decreasing	26	3.9%	Type A, Subtype pH1	48.8 (graphs)		Click here
Turkey	Low	None	Low	Decreasing	10	10.0%	None	26.2 (graphs)		Click here
Ukraine	Low	Sporadic	Low	Decreasing	22	9.1%	Type A, Subtype pH1		544.9 (graphs)	Click here
Uzbekistan	Low	None	Low	Stable			None		26.7 (graphs)	Click here
Wales	Low	Sporadic	Low	Decreasing				2.5 (graphs)		Click here
Europe					652	6.8%				Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
*: the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Influenza activity is low in most parts of the WHO European Region

- This report is based on data received from 46 of the 53 Member States in the WHO European Region.
- 5.1% of specimens collected from sentinel sources tested positive for influenza.
- Most countries reported a low intensity of influenza activity.
- Pandemic (H1N1) 2009 is the dominant virus in 11 countries in Europe.
- Countries in the Region have reported 4597 deaths associated with laboratory-confirmed pandemic (H1N1) 2009 since April 2009.

Current situation: week 09/2010

Consultation rates have remained at low levels for most of the countries in Europe; 11 countries tested at least 20 sentinel specimens, but none reported influenza positivity rates over 20%. Most countries (N = 27) reported no dominant type of virus, indicating limited influenza activity. Eleven countries reported that pandemic (H1N1) 2009 was the dominant influenza virus in circulation. Influenza B was reported as dominant in Sweden, and as co-dominant with influenza A in the Russian Federation. Regional activity was reported in Armenia, Austria and Greece. The impact of influenza on health care services was low in 28 countries, while Armenia reported moderate impact.

Low numbers of severe acute respiratory infection (SARI) hospitalizations were reported in Armenia, Kazakhstan, Malta, the Republic of Moldova, Romania, Ukraine and Uzbekistan. A total of 4597 deaths associated with laboratory-confirmed pandemic (H1N1) 2009 has been reported in the Region since April 2009.

Virological update: week 09/2010

Sentinel physicians collected 552 respiratory specimens, of which 28 (5.1%) were positive for influenza virus; 17 were type A (15 were subtyped as pandemic A(H1); 2 were not subtyped) and 11 were influenza B. Of the 11 countries testing 20 or more sentinel specimens this week, influenza-positivity rates ranged from 0% to 10.7% (median: 3.9%; mean: 4.4%); 283 specimens from non-sentinel sources were influenza positive: 185 type A (119 pandemic A(H1), 10 seasonal A(H1), 9 seasonal A(H3), 47 not subtyped) and 98 influenza B.

From week 40/2009 to week 09/2010, 160 053 influenza virus detections were reported: 159 326 were influenza A (99.5%) and 727 (0.5%) were influenza B. Of the influenza A viruses, 146 219 (91.8%) were subtyped, with 144 637 being pandemic A(H1); 1023 A(H1), and 559 A(H3).

Based on the reported antigenic characterization of 1836 influenza viruses from week 40/2009 to week 09/2010: 1815 were A(H1) pandemic A/California/7/2009 (H1N1)-like; 17 were A(H3) A/Perth/16/2009 (H3N2)-like; 1 was A(H1) A/Brisbane/59/2007 (H1N1)-like and 3 were B/Brisbane/60/2008-like (B/Victoria/2/87 lineage). Genetic characterizations were available for 1145 isolates; 1124 belonged to the A/California/7/2009 A(H1N1) pandemic group; 1 belonged to the A/Brisbane/10/2007 (H3) group; 12 to the A/Perth/16/2009 (H3N2) group; 5 to the A/Victoria/208/2009 (H3N2) group; and 3 to the B/England/393/2008 (Victoria lineage) group.

Comment

Pandemic influenza activity has shown a decreasing or stable trend in recent weeks. Most countries have continued to report declining numbers of influenza detections. The current influenza positivity rate for the Region is low at 5.1%. The overall pattern indicates that pandemic influenza activity is over, particularly in the western part of Europe. The viruses characterized to date correspond with those recommended for influenza vaccines for use in the 2010–2011 northern hemisphere influenza season (see WHO headquarters web site). WHO recommends that countries continue surveillance of influenza on a year-round basis.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

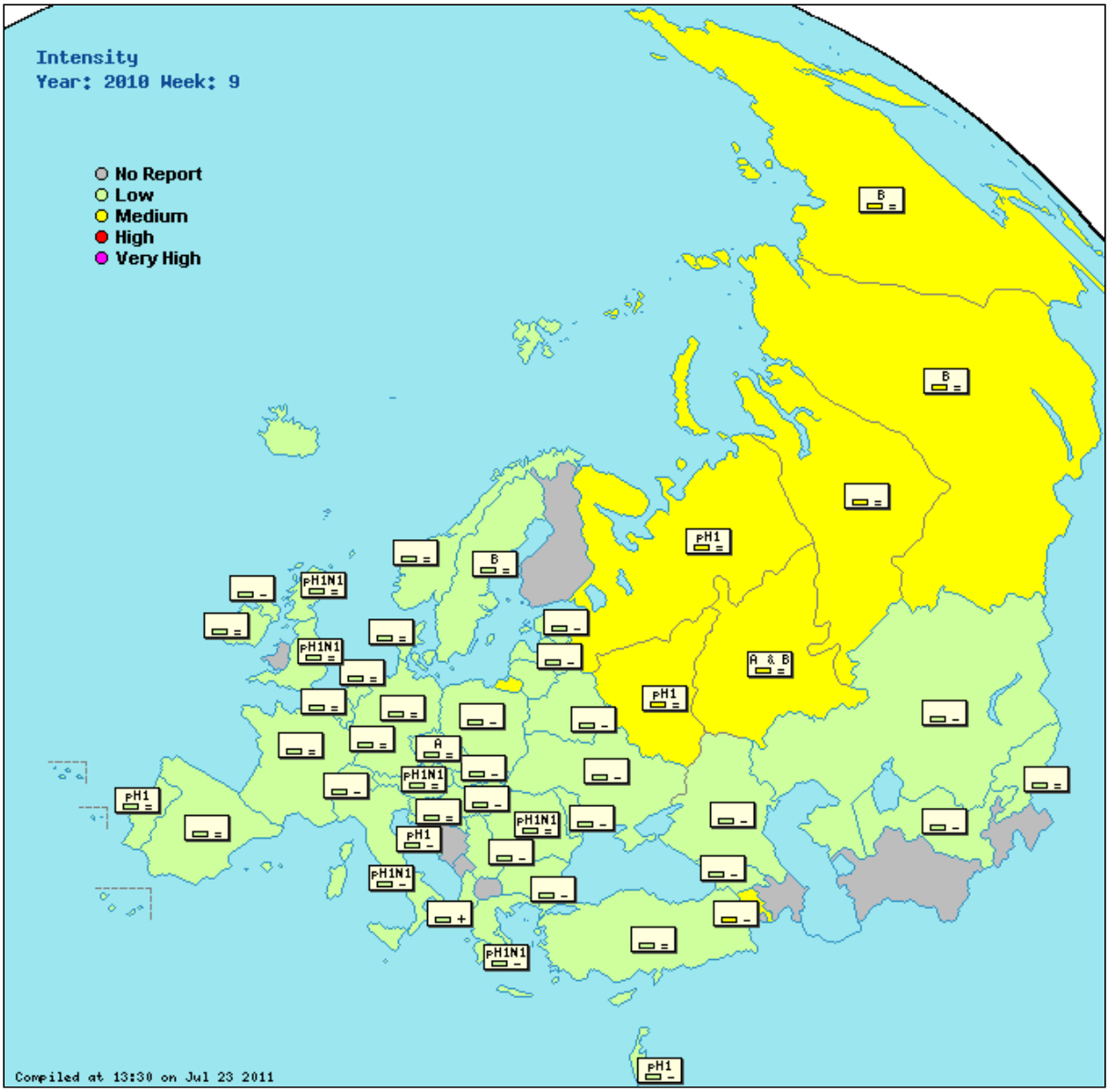
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no evidence of influenza virus activity (clinical activity remains at baseline levels)
Sporadic = isolated cases of laboratory confirmed influenza infection
Local outbreak = increased influenza activity in local areas (e.g. a city) within a region, or outbreaks in two or more institutions (e.g. schools) within a region. Laboratory confirmed.
Regional activity = influenza activity above baseline levels in one or more regions with a population comprising less than 50% of the country's total population. Laboratory confirmed.
Widespread = influenza activity above baseline levels in one or more regions with a population comprising 50% or more of the country's population. Laboratory confirmed.

Country comments (where available)

Malta
situation stable

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania	Low	Sporadic	Low	Increasing	3	0%	None		412.8 (graphs)	Click here
Armenia	Medium	Regional	Moderate	Decreasing			None		(graphs)	Click here
Austria	Low	Regional		Stable	6	0%	Type A, Subtype pH1N1	(graphs)	20.2 (graphs)	Click here
Belarus	Low	Sporadic	Low	Decreasing	20	0%	None		923.1 (graphs)	Click here
Belgium	Low	Sporadic		Stable				65.5 (graphs)	1411.2 (graphs)	Click here
Bosnia and Herzegovina							Type A, Subtype pH1	(graphs)		Click here
Bulgaria	Low	None		Decreasing	0	0%	None	(graphs)	741.2 (graphs)	Click here
Croatia	Low	Local	Low	Decreasing			Type A, Subtype pH1	(graphs)		Click here

Cyprus	Low	Sporadic	Low					(graphs)			Click here
Czech Republic	Low	Sporadic		Stable	17	11.8%	Type A	33.4 (graphs)	884.8	(graphs)	Click here
Denmark	Low	None		Stable	13	0%	None	49.9 (graphs)		(graphs)	Click here
England	Low	Sporadic		Stable	47	2.1%	Type A, Subtype pH1N1	6.3 (graphs)	379.7	(graphs)	Click here
Estonia	Low	Sporadic	Low	Decreasing	14	0%	None	5.8 (graphs)	247.6	(graphs)	Click here
France	Low	Sporadic	Low	Stable	35	0%	None	(graphs)	1197.2	(graphs)	Click here
Georgia	Low	Local	Low	Decreasing	33	0%	Type A, Subtype pH1	135.5 (graphs)			Click here
Germany	Low	Sporadic	Low	Stable	28	10.7%	None	(graphs)	1081.3	(graphs)	Click here
Greece	Low	Regional		Decreasing	3	33.3%	Type A, Subtype pH1N1	124.6 (graphs)		(graphs)	Click here
Hungary	Low	Sporadic	Low	Decreasing	56	7.1%	None	110.0 (graphs)		(graphs)	Click here
Iceland	Low	None		Stable				0.6 (graphs)		(graphs)	Click here
Ireland	Low	Sporadic	Low	Stable	8	0%	Type A, Subtype pH1N1	8.8 (graphs)		(graphs)	Click here
Israel	Low	Sporadic	Low	Decreasing				13.4 (graphs)			Click here
Italy	Low	Local	Low	Decreasing	34	8.8%	Type A, Subtype pH1N1	171.6 (graphs)		(graphs)	Click here
Kazakhstan	Low	Sporadic	Low	Decreasing	26	3.9%	None			(graphs)	Click here
Kyrgyzstan	Low	None	Low	Stable	3	0%	None		47.5	(graphs)	Click here
Latvia	Low	Sporadic		Decreasing	0	0%	None	0.9 (graphs)	1144.8	(graphs)	Click here
Lithuania	Low	Sporadic	Low	Increasing				2.3 (graphs)	566.3	(graphs)	Click here
Luxembourg					16	0%	None	(graphs)			Click here
The former Yugoslav Republic of Macedonia							None	(graphs)			Click here
Malta	Low	Local	Low	Stable				(graphs)		(graphs)	Click here
Montenegro								7.6 (graphs)	526.5	(graphs)	Click here
Netherlands	Low	Sporadic		Stable	8	0%	None	31.7 (graphs)		(graphs)	Click here
Northern Ireland	Low	None		Decreasing	4	0%	None	18.5 (graphs)	398.3	(graphs)	Click here
Norway					0	0%	None	(graphs)			Click here
Poland	Low	Sporadic	Low	Decreasing	8	0%	None	79.4 (graphs)		(graphs)	Click here
Portugal	Low	Sporadic	Low	Stable	4	0%	Type A, Subtype pH1	9.9 (graphs)		(graphs)	Click here
Republic of Moldova	Low	Sporadic	Low	Decreasing			None	11.2 (graphs)	105.3	(graphs)	Click here
Romania	Low	None	Low	Stable	14	14.3%	Type A, Subtype pH1N1	0.5 (graphs)	793.7	(graphs)	Click here
Russian Federation	Medium	Sporadic		Stable	17	29.4%	Type A and B		623.6	(graphs)	Click here
Scotland	Low	Sporadic	Low	Stable	21	4.8%	Type A, Subtype pH1N1	3.0 (graphs)	209.0	(graphs)	Click here
Serbia	Low	Sporadic	Low	Decreasing	6	33.3%	None	44.3 (graphs)			Click here
Slovakia	Low	Sporadic	Low	Decreasing	3	0%	None	159.3 (graphs)	1383.5	(graphs)	Click here
Slovenia	Low	None		Stable	6	0%	None	0.0 (graphs)	1050.0	(graphs)	Click here
Spain	Low	None		Stable	58	1.7%	None	10.4 (graphs)		(graphs)	Click here
Sweden	Low	None	Low	Stable	22	9.1%	Type B	3.3 (graphs)		(graphs)	Click here
Switzerland	Low	None	Low	Decreasing	19	0%	None	28.3 (graphs)			Click here
Turkey	Low	None	Low	Stable			None	30.9 (graphs)			Click here
Ukraine	Low	Sporadic	Low	Decreasing			None		509.7	(graphs)	Click here
Uzbekistan	Low	None	Low	Decreasing			None		24.9	(graphs)	Click here
Europe					552	5.1%					Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
*: the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Low levels of influenza activity continue to be reported in the WHO European Region

- This report is based on data received from 45 of the 53 Member States in the WHO European Region.
- 6.5% of specimens collected from sentinel sources tested positive for influenza.
- Most countries reported a low intensity of influenza activity.
- Over 20% of sentinel specimens in Germany, Italy and the Russian Federation tested positive for influenza.
- Countries in the Region have reported 4638 deaths associated with laboratory-confirmed pandemic (H1N1) 2009 since April 2009.

Current situation: week 10/2010

Clinical consultation rates for influenza-like illness (ILI) and acute respiratory infections (ARI) remain at low levels throughout the Region. While Romania has reported a recent increase in ARI consultations, this was not associated with an increase in influenza detections. Nine countries tested at least 20 sentinel specimens. Of these countries, Germany, Italy, and the Russian Federation reported influenza positivity rates of over 20%. The six influenza detections from sentinel sites in Germany were all positive for pandemic (H1N1) 2009 viruses, and the 15 influenza detections from sentinel sites in Italy and the Russian Federation were all positive for influenza B viruses. Portugal also reported 64 laboratory-confirmed cases of pandemic A(H1N1) 2009 (non-sentinel influenza detections) from the Azores during week 10/2010. Most countries (N = 30) reported no dominant type of virus, indicating limited influenza activity overall.

The majority of countries reporting severe acute respiratory infection (SARI) hospitalizations reported lower numbers of such hospitalizations in week 10/2010 than in week 9/2010 (Albania, Kazakhstan, the Republic of Moldova, Ukraine and Uzbekistan). Only Malta reported a slight increase in the number of SARI hospitalizations, albeit still at low levels relative to their observed peak during week 1/2010. A total of 4638 deaths associated with laboratory-confirmed pandemic (H1N1) 2009 has been reported in the Region since April 2009.

Virological update: week 10/2010

Sentinel physicians collected 573 respiratory specimens, of which 37 (6.5%) were positive for influenza virus; 17 were type A (15 were subtyped as pandemic A(H1); two were not subtyped) and 20 were influenza B. Of the nine countries testing 20 or more sentinel specimens this week, influenza-positivity rates ranged from 0% to 26.1% (median 5.3%; mean 10.1%); 276 specimens from non-sentinel sources were influenza positive: 188 type A (117 pandemic A(H1), 13 seasonal A(H1), 20 seasonal A(H3), 38 A not subtyped) and 88 influenza B.

From week 40/2009 to week 10/2010, 162 018 influenza virus detections were reported: 161 103 were influenza A (99.4%) and 915 (0.6%) were influenza B. Of the influenza A viruses, 147 972 (91.8%) were subtyped, with 146 345 being pandemic A(H1); 1036 A(H1), and 591 A(H3).

Based on the reported antigenic characterization of 2001 influenza viruses from week 40/2009 to week 10/2010: 1980 were A(H1) pandemic A/California/7/2009 (H1N1)-like; 17 were A(H3) A/Perth/16/2009 (H3N2)-like; 1 was A(H1) A/Brisbane/59/2007 (H1N1)-like and 3 were B/Brisbane/60/2008-like (B/Victoria/2/87 lineage). Genetic characterizations were available for 1155 isolates; 1134 belonged to the A/California/7/2009 A(H1N1) pandemic group; 1 belonged to the A/Brisbane/10/2007 (H3) group; 12 to the A/Perth/16/2009 (H3N2) group; 5 to the A/Victoria/208/2009 (H3N2) group; and 3 to the B/England/393/2008 (Victoria lineage) group.

Comment

Pandemic influenza activity has shown a decreasing or stable trend in recent weeks. Although influenza B detections continue to be reported, there is not a strong indication of any absolute increase in influenza B circulation. The current influenza positivity rate for the Region is low at 6.5%. The viruses characterized to date correspond with those recommended for influenza vaccines for use in the 2010–2011 northern hemisphere influenza season (see WHO headquarters web site). WHO recommends that countries continue surveillance of influenza on a year-round basis.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

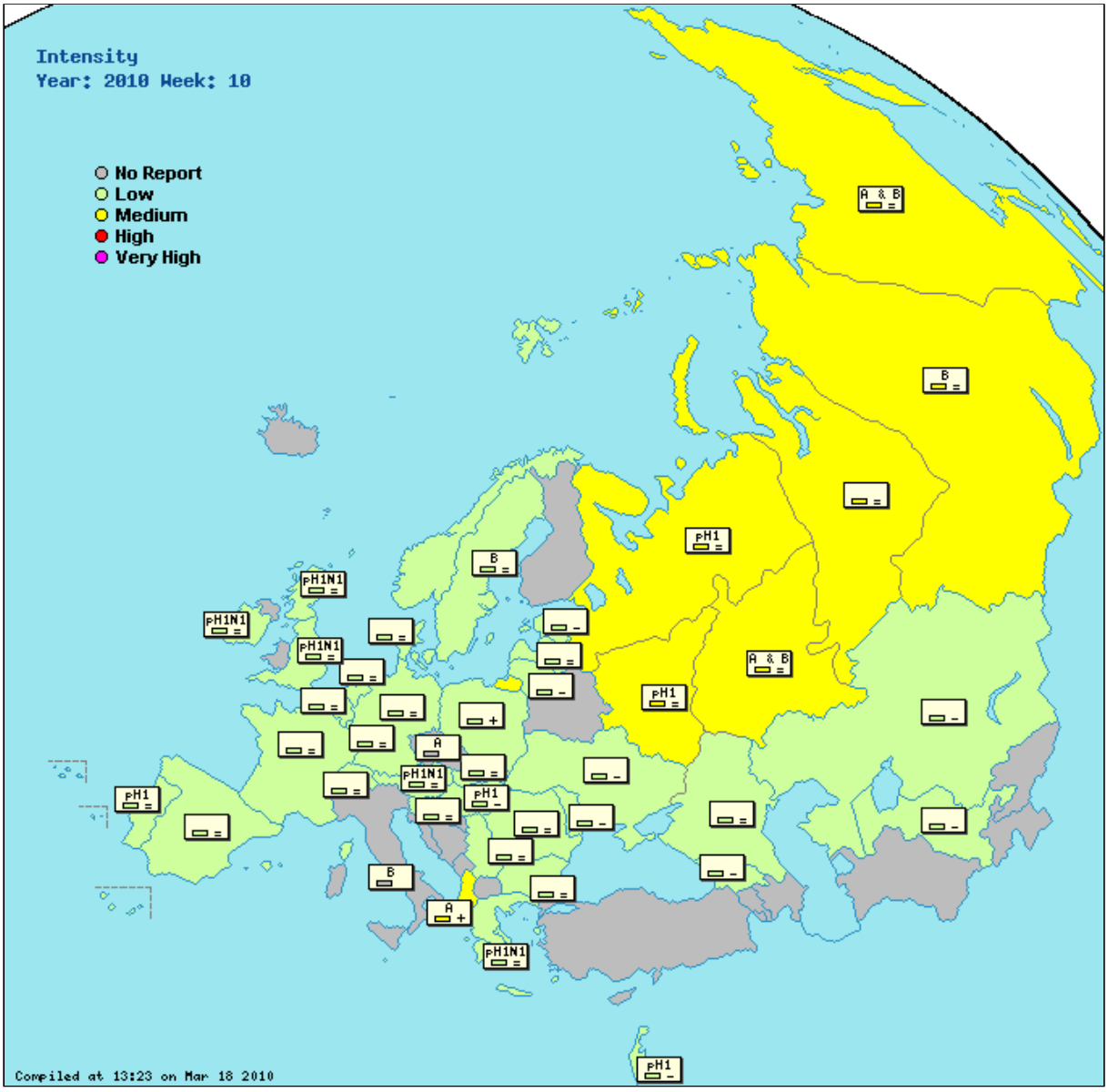
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no evidence of influenza virus activity (clinical activity remains at baseline levels)
Sporadic = isolated cases of laboratory confirmed influenza infection
Local outbreak = increased influenza activity in local areas (e.g. a city) within a region, or outbreaks in two or more institutions (e.g. schools) within a region. Laboratory confirmed.
Regional activity = influenza activity above baseline levels in one or more regions with a population comprising less than 50% of the country's total population. Laboratory confirmed.
Widespread = influenza activity above baseline levels in one or more regions with a population comprising 50% or more of the country's population. Laboratory confirmed.

Country comments (where available)

Malta
situation stable

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania	Medium	Sporadic	Moderate	Increasing	5	20.0%	Type A		401.3 (graphs)	Click here
Armenia					0	0%	None		(graphs)	Click here
Austria	Low	Regional		Stable	1	0%	Type A, Subtype pH1N1	0.0 (graphs)		Click here
Azerbaijan					12	0%	None	(graphs)		Click here
Belarus					43	0%	None		(graphs)	Click here
Belgium	Low	None		Stable	12	0%	None	85.0 (graphs)	1333.6 (graphs)	Click here

Bosnia and Herzegovina							None		(graphs)			Click here
Bulgaria	Low	None		Stable	0	0%	None		(graphs)	738.9	(graphs)	Click here
Croatia							None		(graphs)			Click here
Czech Republic					8	12.5%	Type A				(graphs)	Click here
Denmark	Low	None		Stable	10	0%	None	49.8	(graphs)		(graphs)	Click here
England	Low	Sporadic		Stable	37	8.1%	Type A, Subtype pH1N1	6.2	(graphs)	391.6	(graphs)	Click here
Estonia	Low	Sporadic	Low	Decreasing	15	0%	None	4.5	(graphs)	235.7	(graphs)	Click here
France	Low	Sporadic	Low	Stable	78	1.3%	None		(graphs)	1168.5	(graphs)	Click here
Georgia	Low	Widespread	Low	Decreasing	25	0%	None	126.9	(graphs)			Click here
Germany	Low	Sporadic	Low	Stable	23	26.1%	None		(graphs)	1039.3	(graphs)	Click here
Greece	Low	Regional		Stable	2	0%	Type A, Subtype pH1N1	109.9	(graphs)		(graphs)	Click here
Hungary	Low	Sporadic	Low	Decreasing	35	8.6%	Type A, Subtype pH1	80.9	(graphs)		(graphs)	Click here
Ireland	Low	Sporadic	Low	Stable	8	0%	Type A, Subtype pH1N1	6.7	(graphs)		(graphs)	Click here
Israel	Low	Sporadic	Low	Decreasing	15	6.7%	Type A, Subtype pH1	11.5	(graphs)			Click here
Italy					34	23.5%	Type B		(graphs)			Click here
Kazakhstan	Low	Sporadic	Low	Decreasing	18	16.7%	None		(graphs)		(graphs)	Click here
Kyrgyzstan					0	0%	None				(graphs)	Click here
Latvia	Low	Sporadic		Stable	0	0%	None	0.9	(graphs)	1151.2	(graphs)	Click here
Lithuania	Low	Sporadic	Low	Decreasing	1	0%	None	1.7	(graphs)	378.1	(graphs)	Click here
Luxembourg	Low	Sporadic	Low		18	5.6%	None		(graphs)			Click here
The former Yugoslav Republic of Macedonia							None		(graphs)			Click here
Malta	Low	Local	Low	Stable					(graphs)		(graphs)	Click here
Montenegro								5.0	(graphs)	565.7	(graphs)	Click here
Netherlands	Low	Sporadic		Stable	11	0%	None	24.7	(graphs)		(graphs)	Click here
Norway	Low	None	Low	Stable				22.7	(graphs)		(graphs)	Click here
Poland	Low	Sporadic	Low	Increasing	8	0%	None	151.8	(graphs)		(graphs)	Click here
Portugal	Low	Sporadic	Low	Stable	7	0%	Type A, Subtype pH1	4.5	(graphs)		(graphs)	Click here
Republic of Moldova	Low	Sporadic	Low	Decreasing			None	8.0	(graphs)	107.8	(graphs)	Click here
Romania	Low	None	Low	Stable	7	0%	None	0.0	(graphs)	867.9	(graphs)	Click here
Russian Federation	Medium	Sporadic		Stable	29	24.1%	Type A and B			599.2	(graphs)	Click here
Scotland	Low	Local	Low	Stable	39	2.6%	Type A, Subtype pH1N1	2.5	(graphs)	218.6	(graphs)	Click here
Serbia	Low	None	Low	Stable	5	0%	None	45.5	(graphs)			Click here
Slovakia	Low	Sporadic	Low	Stable	2	0%	None		(graphs)			Click here
Slovenia	Low	None		Stable	5	0%	None	0.0	(graphs)	983.7	(graphs)	Click here
Spain	Low	None		Stable	37	2.7%	None	10.1	(graphs)		(graphs)	Click here
Sweden	Low	None	Low	Stable	8	0%	Type B	1.5	(graphs)		(graphs)	Click here
Switzerland	Low	None	Low	Stable	9	0%	None	21.9	(graphs)			Click here
Turkey					6	0%	None		(graphs)			Click here
Ukraine	Low	Sporadic	Low	Decreasing			None			444.5	(graphs)	Click here
Uzbekistan	Low	None	Low	Decreasing			None				(graphs)	Click here
Europe					573	6.5%						Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
*: the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Low levels of influenza A and B activity in the WHO European Region

- This report is based on data received from 45 of the 53 Member States in the WHO European Region.
- 4.1% of specimens collected from sentinel sources tested positive for influenza.
- No country testing 20 or more sentinel specimens reported an influenza positivity rate of over 20%.
- A total of 4670 deaths associated with laboratory-confirmed pandemic (H1N1) 2009 has been reported in the Region since April 2009.

Current situation: week 11/2010

Clinical consultation rates for influenza-like illness (ILI) and acute respiratory infection (ARI) remain at low levels throughout the Region. No country testing 20 or more sentinel specimens reported an influenza positivity rate of over 20%. Portugal reported 10 non-sentinel detections of pandemic (H1N1) 2009 viruses, reflecting some continued influenza activity in the Azores. Influenza B detections continue to be reported, particularly by the Siberian and Far Eastern regions of the Russian Federation.

Reported hospitalizations for severe acute respiratory infection (SARI) remain relatively stable and at levels considerably below those observed during the peak of the winter pandemic wave. A total of 4670 deaths associated with laboratory-confirmed pandemic (H1N1) 2009 virus infection have been reported in the Region since April 2009.

Virological update: week 11/2010

Sentinel physicians collected 519 respiratory specimens, of which 21 (4.1%) were positive for influenza virus; 11 were type A (10 were subtyped as pandemic A(H1); 1 was not subtyped) and 10 were influenza B. Of the 8 countries testing 20 or more sentinel specimens this week, influenza-positivity rates ranged from 0% to 6.7% (median: 2.9%; mean: 3.0%). Specimens from non-sentinel sources yielded 207 influenza detections: 85 type A (49 pandemic A(H1), 1 seasonal A(H1), 14 seasonal A(H3), 21 not subtyped) and 122 influenza B.

From week 40/2009 to week 11/2010, 162 258 influenza virus detections were reported: 161 207 were influenza A (99.4%) and 1051 (0.6%) were influenza B. Of the influenza A viruses, 148 053 (91.8%) were subtyped, with 146 411 being pandemic A(H1), 1037 A(H1), and 605 A(H3).

Based on the reported antigenic characterization of 2042 influenza viruses from week 40/2009 to week 11/2010: 2020 were A(H1) pandemic A/California/7/2009 (H1N1)-like; 17 were A(H3) A/Perth/16/2009 (H3N2)-like; 1 was A(H1) A/Brisbane/59/2007 (H1N1)-like and 4 were B/Brisbane/60/2008-like (B/Victoria/2/87 lineage). Genetic characterizations were available for 1184 isolates; 1159 belonged to the A/California/7/2009 A(H1N1) pandemic group; 1 belonged to the A/Brisbane/10/2007 (H3) group; 12 to the A/Perth/16/2009 (H3N2) group; 5 to the A/Victoria/208/2009 (H3N2) group; 1 to the B/Bangladesh/3333/2007 (Yamagata lineage) and 6 to the B/England/393/2008 (Victoria lineage) group.

Comment

Pandemic influenza activity has shown a decreasing or stable trend in recent weeks and the winter wave is effectively over in western Europe. The current influenza positivity rate for the Region is low (4.1%), and in week 11/2010 the total number of influenza B detections exceeded that of influenza A. The viruses characterized to date correspond to those recommended for influenza vaccines for use in the 2010–2011 northern hemisphere influenza season (see the WHO headquarters web site).

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

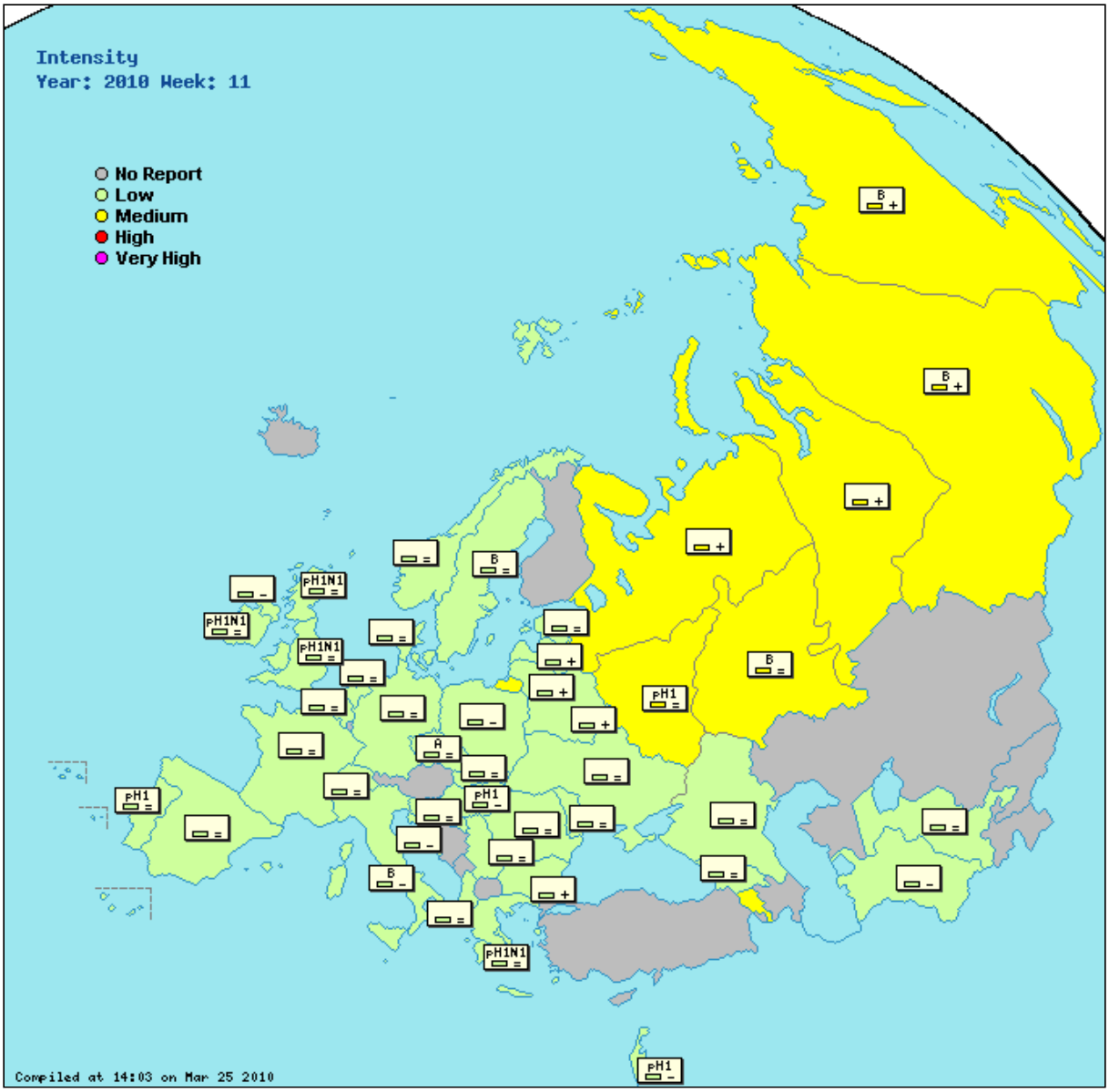
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no evidence of influenza virus activity (clinical activity remains at baseline levels)
Sporadic = isolated cases of laboratory confirmed influenza infection
Local outbreak = increased influenza activity in local areas (e.g. a city) within a region, or outbreaks in two or more institutions (e.g. schools) within a region. Laboratory confirmed.
Regional activity = influenza activity above baseline levels in one or more regions with a population comprising less than 50% of the country's total population. Laboratory confirmed.
Widespread = influenza activity above baseline levels in one or more regions with a population comprising 50% or more of the country's population. Laboratory confirmed.

Country comments (where available)

Malta
situation stable
Netherlands
By retrospective analysis of respiratory specimens from the enhanced surveillance of influenza the 18th case of oseltamivir resistant pandemic H1N1 in the Netherlands was diagnosed. The case was a girl of 6 years of age with Wilms tumor of a kidney and metastases in the lungs who was treated by chemotherapy. The resistant virus emerged after one course of oseltamivir therapy.

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania	Low	None	Low	Stable	2	0%	None		386.5 (graphs)	Click here
Armenia	Medium	Regional	Moderate	Stable				(graphs)	(graphs)	Click here
Azerbaijan					8	0%	None	(graphs)		Click here
Belarus	Low	Sporadic	Low	Increasing	31	6.5%	None		887.7 (graphs)	Click here

Belgium	Low	Sporadic		Stable	17	23.5%	None	71.8	(graphs)	1433.3	(graphs)	Click here
Bosnia and Herzegovina							None		(graphs)			Click here
Bulgaria	Low	None		Increasing	0	0%	None		(graphs)	795.8	(graphs)	Click here
Croatia	Low	Sporadic	Low	Decreasing			None	0.7	(graphs)			Click here
Czech Republic	Low	Sporadic		Stable	16	6.3%	Type A	25.3	(graphs)	798.5	(graphs)	Click here
Denmark	Low	None		Stable	5	0%	None	40.3	(graphs)		(graphs)	Click here
England	Low	Sporadic		Stable	45	2.2%	Type A, Subtype pH1N1	8.2	(graphs)	397.8	(graphs)	Click here
Estonia	Low	Sporadic	Low	Stable	20	0%	None	4.5	(graphs)	259.3	(graphs)	Click here
France	Low	Sporadic	Low	Stable	35	2.9%	None		(graphs)	1272.5	(graphs)	Click here
Georgia	Low	Widespread	Low	Stable	45	0%	None	135.8	(graphs)			Click here
Germany	Low	Sporadic	Low	Stable	30	6.7%	None		(graphs)	947.3	(graphs)	Click here
Greece	Low	Regional		Stable	0	0%	Type A, Subtype pH1N1	111.2	(graphs)		(graphs)	Click here
Hungary	Low	Sporadic	Low	Decreasing	35	2.9%	Type A, Subtype pH1	64.8	(graphs)		(graphs)	Click here
Ireland	Low	Sporadic	Low	Stable	10	0%	Type A, Subtype pH1N1	6.7	(graphs)		(graphs)	Click here
Israel	Low	Sporadic	Low	Decreasing	14	0%	Type A, Subtype pH1	9.2	(graphs)			Click here
Italy	Low	Local	Low	Decreasing	19	26.3%	Type B	131.6	(graphs)		(graphs)	Click here
Kyrgyzstan					1	0%	None				(graphs)	Click here
Latvia	Low	Sporadic		Increasing	0	0%	None	1.8	(graphs)	1194.1	(graphs)	Click here
Lithuania	Low	Sporadic	Low	Increasing	1	0%	None	3.2	(graphs)	571.5	(graphs)	Click here
Luxembourg					9	11.1%	None		(graphs)			Click here
The former Yugoslav Republic of Macedonia							None		(graphs)			Click here
Malta	Low	None	Low	Decreasing					(graphs)		(graphs)	Click here
Montenegro								5.8	(graphs)	563.4	(graphs)	Click here
Netherlands	Low	Sporadic		Stable	4	0%	None	26.3	(graphs)		(graphs)	Click here
Northern Ireland	Low	None		Decreasing	3	0%	None	14.0	(graphs)	355.1	(graphs)	Click here
Norway	Low	None	Low	Stable	0	0%	None	25.7	(graphs)		(graphs)	Click here
Poland	Low	None	Low	Decreasing	6	0%	None	82.1	(graphs)		(graphs)	Click here
Portugal	Low	Sporadic	Low	Stable	4	0%	Type A, Subtype pH1	9.4	(graphs)		(graphs)	Click here
Republic of Moldova	Low	Sporadic	Low	Stable			None	7.3	(graphs)	114.5	(graphs)	Click here
Romania	Low	None	Low	Stable	9	0%	None	0.8	(graphs)	820.2	(graphs)	Click here
Russian Federation	Medium	Sporadic		Stable			Type B			656.1	(graphs)	Click here
Scotland	Low	Local	Low	Stable	22	0%	Type A, Subtype pH1N1	2.7	(graphs)	246.8	(graphs)	Click here
Serbia	Low	None	Low	Stable	5	0%	None	45.5	(graphs)			Click here
Slovakia	Low	Sporadic	Low	Stable	2	0%	None		(graphs)			Click here
Slovenia	Low	None		Stable	7	0%	None	0.0	(graphs)	982.3	(graphs)	Click here
Spain	Low	None		Stable	54	3.7%	None	10.9	(graphs)		(graphs)	Click here
Sweden	Low	None	Low	Stable	16	0%	Type B	2.0	(graphs)		(graphs)	Click here
Switzerland	Low	Sporadic	Low	Stable	13	7.7%	None	19.8	(graphs)			Click here
Turkey					8	0%	None		(graphs)			Click here
Turkmenistan	Low	None	Low	Decreasing	6	0%	None		(graphs)			Click here
Ukraine	Low	Sporadic	Low	Stable	17	0%	None			484.7	(graphs)	Click here
Uzbekistan	Low	None	Low	Stable			None			22.3	(graphs)	Click here
Wales	Low	Sporadic	Low	Stable				3.3	(graphs)		(graphs)	Click here
Europe					519	4.1%						Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
***:** the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Low to moderate influenza activity and normal increases in respiratory illness in some European countries

Key Points Week 40/2009:

1) This week marks the start of the 2009-2010 influenza season. Graphs and cumulative summaries of virological data have been reset for the new season but historical data can still be accessed on the EuroFlu web site.

2) Thirty-nine of 53 countries in the region have reported this week.

3) Eleven countries reported consistent increases in ILI and/or ARI since week 37. Of these, only six reported consultation rates above those observed in 2008. This is consistent with a pattern of influenza and respiratory illness activity that is normally observed at this time of the year.

4) The percentage of influenza positive respiratory specimens collected from sentinel surveillance systems in the European Region was 17.5% (range 0% to 49.2% in countries testing 20 or more sentinel swabs this week). Over 25% of sentinel specimens tested positive for influenza this week in 6 countries: Belgium, Ireland, Israel, Slovenia, Spain and UK (Northern Ireland).

5) As of October 5, 49 of the 53 countries in the WHO European Region have reported to WHO over 59,000 laboratory confirmed cases of pandemic (H1N1) 2009 virus infection, 193 of these were laboratory confirmed deaths.

Current situation - week 40/2009: The geographic spread of ILI was reported as widespread in seven countries (Belgium, Ireland, Israel, Luxembourg, Netherlands and UK (England and Wales)), regional in Spain, and local or sporadic in 17 countries. Twelve countries reported no activity. The impact of influenza on health services was reported as moderate in Ireland and low in 25 countries. Of the 16 countries reporting a dominant subtype, pandemic (H1N1) 2009 was dominant.

Eleven countries have reported increasing trends in ILI and/or ARI consultation rates since week 37, but of these, only Belgium (31%), Hungary (20%), Ireland (37%), Spain (31%) and UK (Northern Ireland) (28%) are reporting rates of influenza positive sentinel specimens at or above 20 percent. Despite flat or declining outpatient consultation rates in recent weeks, high influenza positive rates in Israel (43%) and Slovenia (30%) also indicate the circulation of influenza. Among these seven countries, ILI consultation rates are higher than those observed during week 40, 2008 in Belgium, Ireland, Israel, Spain and UK (Northern Ireland). In countries performing sentinel surveillance for ILI, consultation rates were highest in the 5-14 year age group in Belgium, Israel, Ireland, Portugal, Spain, and the UK (England, Northern Ireland and Scotland).

Virological update- week 40/2009: The total number of respiratory specimens collected by sentinel physicians in week 40/2009 was 1691 of which 296 (17.5%) were positive for influenza virus: 295 were type A (282 were identified as pandemic A(H1), one seasonal A(H1) and 12 not subtyped) and 1 type B. In addition, 1191 non-sentinel source specimens (e.g. specimens collected for routine diagnostic purposes in the community, hospitals or as part of enhanced surveillance for pandemic (H1N1) 2009) were reported to be positive for influenza virus: 1175 were influenza type A (977 pandemic A(H1), 10 A(H3), 11 seasonal A(H1) and 177 not subtyped) and 16 type B.

Worldwide, through the WHO Global Influenza Surveillance Network, more than 10,000 pandemic H1N1 viruses have been analysed for susceptibility to oseltamivir. To date, only 28 resistant viruses have been detected in sporadic incidents mostly related to oseltamivir-treatment/prophylaxis regimens. A few patients that have not been exposed to oseltamivir have also been found. In all cases a H275Y mutation was present in the neuraminidase gene. For more information on antiviral use and the risk of drug resistance click here.

Comment: Due to circulation of pandemic H1N1 viruses, the percent of sentinel specimens testing positive for influenza in week 40/2009 is considerably elevated compared to week 40/2008 (17.5% vs. 1%) but influenza activity is generally low in the region. However, sentinel surveillance suggests active circulation of influenza virus in the United Kingdom, Ireland, and four additional countries. Clinical surveillance data in several of these countries also show increasing incidence rates in the 5-14 years age range which may be indicative of increasing influenza activity. It is essential that countries maintain sentinel surveillance to monitor the relative proportions of seasonal, pandemic, and other respiratory viruses in circulation; to detect the presence of any antigenically drifted A/Perth/16/2009 (H3N2)-like viruses; to monitor for any changes in pandemic H1N1 (2009) or other influenza viruses; and to track the geographic spread of the current influenza season, which in several recent years has followed a west to east progression across the European Region.

Background: The EuroFlu Bulletin presents and comments on influenza activity in the 53 countries of the WHO European Region. Epidemiological, virological or qualitative data is presented for 39 countries in week 40/2009. The spread of influenza viruses and their epidemiological impact in Europe is being monitored by WHO Regional Office for Europe in Copenhagen (Denmark), in collaboration with the WHO Collaborating Centre for Reference and Research on Influenza in London (UK).

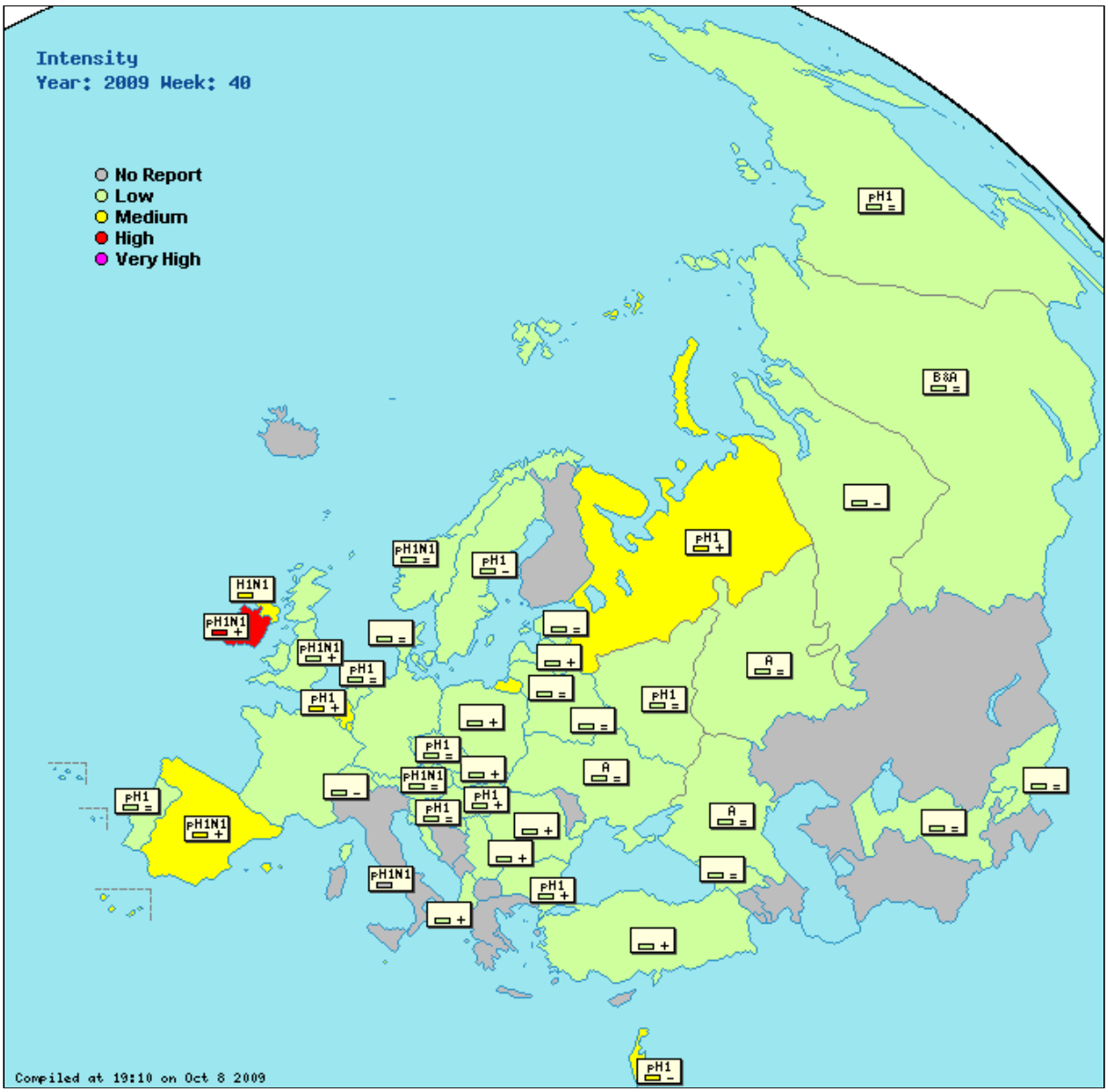
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no laboratory-confirmed case(s) of influenza, or evidence of increased or unusual respiratory disease activity.
Sporadic = isolated cases of laboratory confirmed influenza infection
Localized = limited to one administrative unit of the country (or reporting site) only.
Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites).
Widespread = appearing in ≥50% of the administrative units of the country (or reporting sites).

Country comments (where available)

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania	Low	Sporadic	Low	Increasing	49	0%	None		290.1 (graphs)	Click here
Austria	Low	Local	Low	Stable	11	0%	Type A, Subtype pH1N1	604.9 (graphs)		Click here
Belarus	Low	None	Low	Stable	159	0%	None		957.9 (graphs)	Click here
Belgium	Medium	Widespread	Low	Increasing	119	31.1%	Type A, Subtype pH1	176.7 (graphs)	1764.0 (graphs)	Click here
Bulgaria	Low	None		Increasing			Type A, Subtype pH1		578.5 (graphs)	Click here
Croatia	Low	Sporadic	Low	Decreasing				1.1 (graphs)		Click here
Czech Republic	Low	Sporadic		Stable	41	2.4%	Type A, Subtype pH1		769.3 (graphs)	Click here
Denmark	Low	Sporadic		Stable	2	0%	None	72.4 (graphs)		Click here
England	Low	Widespread		Increasing	171	2.9%	Type A, Subtype pH1N1	26.3 (graphs)	400.6 (graphs)	Click here
Estonia	Low	None	Low	Stable	0	0%	None	1.6 (graphs)	258.7 (graphs)	Click here
France	Low	Sporadic	Low	Stable					1822.3 (graphs)	Click here
Georgia	Low	None	Low	Stable	31	0%	None	(graphs)		Click here

Germany	Low	Sporadic	Low		13	7.7%	None		907.3	(graphs)	Click here
Greece					1	0%	None	(graphs)			Click here
Hungary	Low	Sporadic		Increasing	81	19.8%	Type A, Subtype pH1	139.2 (graphs)			Click here
Ireland	High	Widespread	Moderate	Increasing	93	36.6%	Type A, Subtype pH1N1	88.5 (graphs)			Click here
Israel	Medium	Widespread	Low	Decreasing	42	42.9%	Type A, Subtype pH1	54.1 (graphs)			Click here
Italy							Type A, Subtype pH1N1	(graphs)			Click here
Kazakhstan					0	0%	None			(graphs)	Click here
Kyrgyzstan	Low	None	Low	Stable	19	0%	None	(graphs)	28.2	(graphs)	Click here
Latvia	Low	None		Increasing	1	0%	None	(graphs)	662.6	(graphs)	Click here
Lithuania	Low	None	Low	Stable	0	0%	None	(graphs)			Click here
Luxembourg	Medium	Widespread	Low					(graphs)			Click here
Malta	Medium	None		Decreasing				(graphs)			Click here
Netherlands	Low	Widespread	Low	Stable	20	10.0%	Type A, Subtype pH1	41.3 (graphs)			Click here
Northern Ireland	Medium	Sporadic			29	27.6%	Type A, Subtype H1N1	166.3 (graphs)			Click here
Norway	Low	Sporadic	Low	Stable	7	14.3%	Type A, Subtype pH1N1	91.5 (graphs)			Click here
Poland	Low	Sporadic	Low	Increasing	6	0%	None	44.1 (graphs)			Click here
Portugal	Low	Sporadic	Low	Stable	1	0%	Type A, Subtype pH1	18.3 (graphs)			Click here
Romania	Low	None	Low	Increasing	12	0%	None	0.0 (graphs)	2559.8	(graphs)	Click here
Russian Federation	Low	Sporadic		Stable			Type A, Subtype pH1		606.0	(graphs)	Click here
Scotland	Low	Local		Stable				29.0 (graphs)			Click here
Serbia	Low	None	Low	Increasing	0	0%	None	77.0 (graphs)			Click here
Slovakia	Low	None	Low	Increasing	0	0%	None	186.1 (graphs)	1552.1	(graphs)	Click here
Slovenia	Low	Sporadic		Stable	20	30.0%	Type A, Subtype pH1	5.6 (graphs)	1063.4	(graphs)	Click here
Spain	Medium	Regional		Increasing	463	30.9%	Type A, Subtype pH1N1	94.7 (graphs)			Click here
Sweden	Low	Local	Low	Decreasing	75	21.3%	Type A, Subtype pH1	3.3 (graphs)			Click here
Switzerland	Low	Sporadic	Low	Decreasing	23	4.4%	None	31.4 (graphs)			Click here
Turkey	Low	Sporadic	Low	Increasing	16	0%	None	14.6 (graphs)			Click here
Ukraine	Low	Sporadic	Low	Stable	8	12.5%	Type A		404.4	(graphs)	Click here
Uzbekistan	Low	None	Low	Stable			None		19.2	(graphs)	Click here
Wales	Low	Widespread		Increasing				54.8 (graphs)			Click here
Europe					1691	17.5%					Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
*: the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Early start of influenza activity in the European Region

Key Points Week 41/2009:

1) Forty-three of 53 countries in the region have reported data this week.

2) Increased levels in ILI and/or ARI rates were observed in Belgium, Ireland, Spain, United Kingdom (Wales and Northern Ireland) and these data were confirmed with substantial virological detections of the pandemic H1N1 virus.

3) The percentage of influenza positive respiratory specimens collected from sentinel surveillance systems in the European Region was 25%. Eight countries with at least 10 specimens had rates of 25% or more: Belgium, Ireland, Israel, Malta, Norway, Spain, Sweden and United Kingdom (Northern Ireland).

4) The high percentage of positive sentinel specimens is unusual for this time of the year, in the previous winter season only 1% were positive for influenza in week 41/2008.

5) As of 11 October 2009, 49 of the 53 countries in the WHO European Region have reported to WHO over 61,000 laboratory confirmed cases of pandemic (H1N1) 2009 virus infection, 193 of these were laboratory confirmed deaths.

Current situation - week 41/2009: The intensity of influenza activity was high in Ireland, Luxembourg and the United Kingdom (Northern Ireland). The geographic spread of ILI was reported as widespread in six countries (Belgium, Ireland, Israel, Luxembourg, Netherlands and United Kingdom (England, Wales), regional in four countries (Austria, Malta, Spain, Sweden), and local or sporadic in 16 countries. Eleven countries reported no activity. The impact of influenza on health services was reported as moderate in Ireland and low in 25 countries.

Of the 20 countries reporting a dominant subtype, pandemic (H1N1) 2009 was dominant in all countries. For Belgium, Ireland, Israel, Malta, Spain, Sweden and UK (Northern Ireland), at least 25% of sentinel specimens tested positive for influenza in week 41/2009. An increase in clinical incidence was observed for Belgium, Ireland, Spain, Sweden and the United Kingdom.

In countries performing sentinel surveillance for ILI, consultation rates were highest in the 5-14 year age group in Belgium, Israel, Ireland, the Netherlands, Spain, and the UK (England, Northern Ireland and Scotland). In the United Kingdom (Wales) the young children, aged 0-4 years, presented with highest consultation rates.

Virological update- week 41/2009: The total number of respiratory specimens collected by sentinel physicians in week 41/2009 was 1751 of which 430 (25%) were positive for influenza virus: 429 were type A (398 were identified as pandemic A(H1), 31 not subtyped) and 1 type B. In addition, 1283 non-sentinel source specimens (e.g. specimens collected for routine diagnostic purposes in the community, hospitals or as part of enhanced surveillance for pandemic (H1N1) 2009) were reported to be positive for influenza virus: 1278 were influenza type A (768 pandemic A(H1), 13 A(H3), 374* seasonal A(H1) and 123 not subtyped) and 5 type B.

Cumulative virological update- week 40/2009-41/2009:
A total of 3349 influenza viruses have been detected. Of these, 2350 were identified as pandemic A(H1), 603* seasonal A(H1), 350 A not subtyped, 23 A(H3N2) and 23 B. Out of 1435 N-subtyped viruses 1432 were pandemic A(H1N1) and 3 were influenza A(H3N2).

Worldwide, through the WHO Global Influenza Surveillance Network, more than 10,000 pandemic H1N1 viruses have been analysed for susceptibility to oseltamivir. To date, only 28 resistant viruses have been detected in sporadic incidents mostly related to oseltamivir-treatment/prophylaxis regimens. A few patients that have not been exposed to oseltamivir have also been found. In all cases a H275Y mutation was present in the neuraminidase gene. In the EuroFlu database all 599 H1N1v viruses that were tested were sensitive for oseltamivir and zanamivir. For more information on antiviral use and the risk of drug resistance, please click here.

Comment: Influenza activity is low in most countries in Europe: 23 countries reported a low intensity of influenza activity and no or sporadic influenza activity for the geographical spread indicator. However, for example in Belgium, Israel, the Netherlands, Norway, and the UK consultation ILI/ARI rates are above the baseline, this is unusual for this time of the year. Similarly the number of influenza detections is very high for the season, and indicates influenza activity is starting.

Background: The EuroFlu Bulletin presents and comments on influenza activity in the 53 countries of the WHO European Region. Epidemiological, virological or qualitative data is presented for 43 countries in week 41/2009. The spread of influenza viruses and their epidemiological impact in Europe is being monitored by WHO Regional Office for Europe in Copenhagen (Denmark), in collaboration with the WHO Collaborating Centre for Reference and Research on Influenza in London (UK).

**Erratum: For the non-sentinel data in week 41/2009 there was a problem in the technical reporting of data. The number for seasonal A/H1 are incorrect and actually present pandemic H1 detections.*

Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

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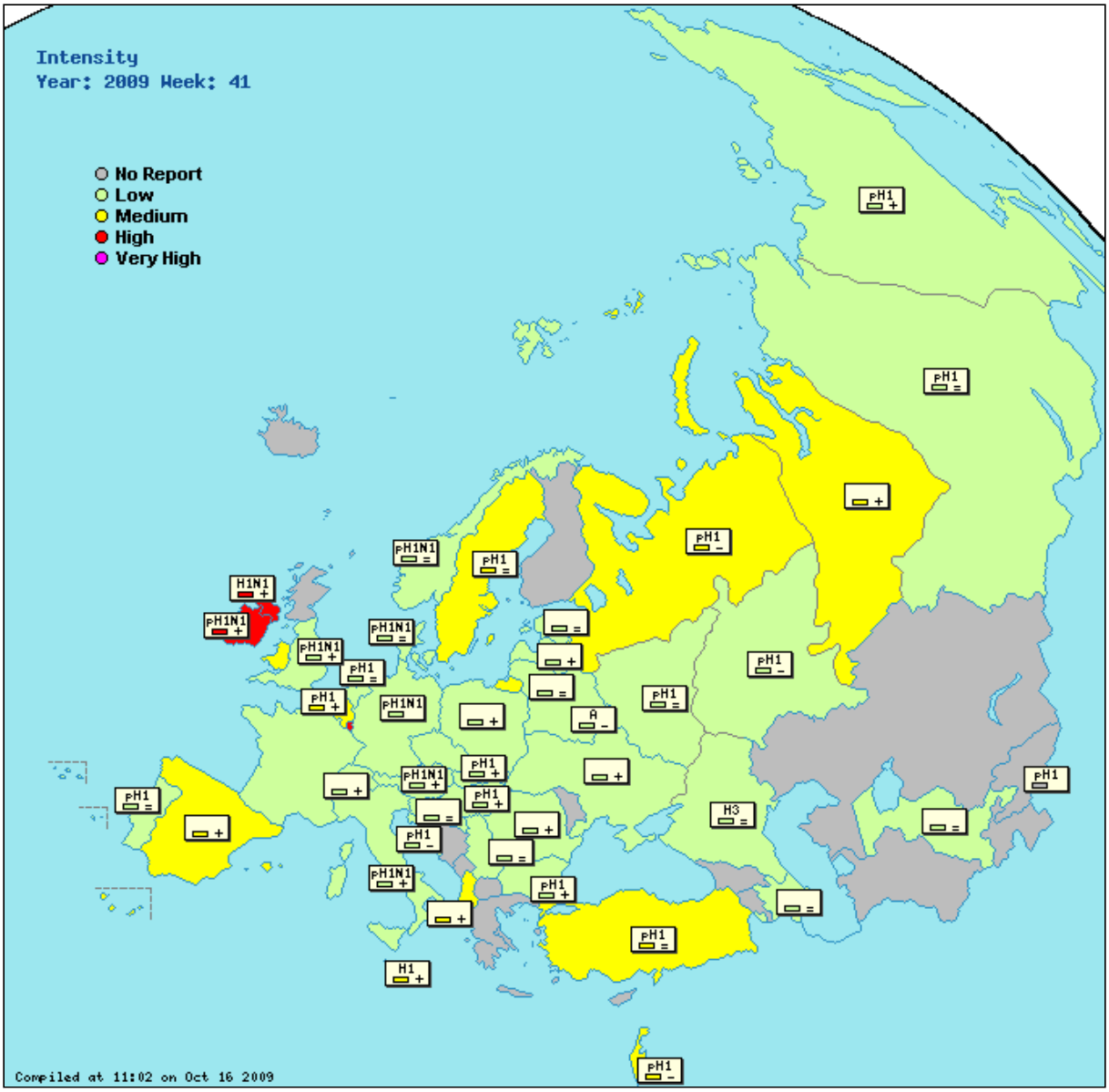
Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



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H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

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+ : increasing clinical activity
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No activity = no laboratory-confirmed case(s) of influenza, or evidence of increased or unusual respiratory disease activity.
Sporadic = isolated cases of laboratory confirmed influenza infection
Localized = limited to one administrative unit of the country (or reporting site) only.
Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites).
Widespread = appearing in ≥50% of the administrative units of the country (or reporting sites).

Country comments (where available)

Switzerland

Activity remained very low last week.

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania	Medium	Sporadic	Low	Increasing	29	0%	None		312.5 (graphs)	Click here
Austria	Low	Regional	Low	Increasing	11	0%	Type A, Subtype pH1N1	(graphs)		Click here
Azerbaijan	Low	None	Low	Stable	12	0%	None	(graphs)		Click here
Belarus	Low	Sporadic	Low	Decreasing	163	0.6%	Type A		939.4 (graphs)	Click here
Belgium	Medium	Widespread	Low	Increasing	253	36.8%	Type A, Subtype pH1	229.3 (graphs)	1750.3 (graphs)	Click here
Bosnia and Herzegovina							None	(graphs)		Click here
Bulgaria	Low	Sporadic		Increasing	0	0%	Type A, Subtype pH1		(graphs)	Click here
Croatia	Low	Sporadic	Low	Decreasing	34	0%	Type A, Subtype pH1	0.6 (graphs)		Click here
Czech Republic	Low	Sporadic		Stable					(graphs)	Click here
Denmark	Low	Sporadic		Stable	1	100.0%	Type A, Subtype pH1N1	61.0 (graphs)		Click here

England	Low	Widespread		Increasing	240	20.4%	Type A, Subtype pH1N1	29.1	(graphs)	408.8 (graphs)	Click here
Estonia	Low	None	Low	Stable	0	0%	None	2.1	(graphs)	262.4 (graphs)	Click here
France	Low	Sporadic	Low	Stable						1825.3 (graphs)	Click here
Georgia					39	0%	None		(graphs)		Click here
Germany	Low	Sporadic	Low		58	17.2%	Type A, Subtype pH1N1			1032.6 (graphs)	Click here
Greece					2	50.0%	None		(graphs)		Click here
Hungary	Low	Sporadic	Low	Increasing	41	14.6%	Type A, Subtype pH1		(graphs)		Click here
Ireland	High	Widespread	Moderate	Increasing	90	36.7%	Type A, Subtype pH1N1	97.1	(graphs)		Click here
Israel	Medium	Widespread	Low	Decreasing	61	32.8%	Type A, Subtype pH1	44.3	(graphs)		Click here
Italy	Low	None		Increasing			Type A, Subtype pH1N1		(graphs)		Click here
Kazakhstan					0	0%	None			(graphs)	Click here
Kyrgyzstan					0	0%	Type A, Subtype pH1			33.1 (graphs)	Click here
Latvia	Low	None		Increasing	1	0%	None		(graphs)	753.4 (graphs)	Click here
Lithuania	Low	None	Low	Stable	0	0%	None		(graphs)		Click here
Luxembourg	High	Widespread	Low						(graphs)		Click here
Malta	Medium	Regional		Increasing	15	53.3%	Type A, Subtype H1		(graphs)		Click here
Netherlands	Low	Widespread	Low	Stable	33	15.2%	Type A, Subtype pH1	68.6	(graphs)		Click here
Northern Ireland	High	Sporadic		Increasing	70	57.1%	Type A, Subtype H1N1	222.6	(graphs)		Click here
Norway	Low	Local		Stable	18	27.8%	Type A, Subtype pH1N1	87.4	(graphs)		Click here
Poland	Low	Sporadic	Low	Increasing	30	6.7%	None	68.8	(graphs)		Click here
Portugal	Low	Sporadic	Low	Stable	2	0%	Type A, Subtype pH1	8.5	(graphs)		Click here
Romania	Low	None	Low	Increasing	37	8.1%	None	11.6	(graphs)	2416.9 (graphs)	Click here
Russian Federation	Low	Sporadic		Stable			Type A, Subtype pH1			608.0 (graphs)	Click here
Serbia	Low	None	Low	Stable	0	0%	None	92.8	(graphs)		Click here
Slovakia	Low	None	Low	Increasing	4	0%	Type A, Subtype pH1	169.2	(graphs)	1513.5 (graphs)	Click here
Slovenia	Low	Sporadic		Stable	17	5.9%	None	5.7	(graphs)	884.4 (graphs)	Click here
Spain	Medium	Regional		Increasing	385	32.5%	None	98.4	(graphs)		Click here
Sweden	Medium	Regional	Low	Stable	78	34.6%	Type A, Subtype pH1	8.9	(graphs)		Click here
Switzerland	Low	None	Low	Increasing	13	0%	None	83.3	(graphs)		Click here
Turkey	Medium	Local	Low	Stable			Type A, Subtype pH1		(graphs)		Click here
Ukraine	Low	None	Low	Increasing	13	0%	None			437.5 (graphs)	Click here
Uzbekistan	Low	None	Low	Stable			None			(graphs)	Click here
Wales	Medium	Widespread		Increasing				62.4	(graphs)		Click here
Europe					1751	24.6%					Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
***:** the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Increasing influenza activity across Europe

Key points

- This week's report is based on material received from 44 of the 53 countries in the WHO European Region.
- The incidence of influenza-like illness (ILI)/ acute respiratory infection (ARI) is increasing in several countries.
- 32% of specimens collected from sentinel sources were positive for influenza virus: a very high level for this time of the year, compared to rates in the previous 5 years.
- Pandemic (H1N1) 2009 virus was dominant in 24 countries and accounted for more than 95% of influenza virus subtype detections.
- As of 19 October 2009, European countries had reported over 63 000 laboratory-confirmed pandemic (H1N1) 2009 cases to WHO, including 236 deaths.

Data reported in week 42

Clinical
Eight countries reported increases in ILI and/or ARI consultations (defined as countries with increases in each of the previous three weeks). In four of these (Belgium, Ireland, the Netherlands and the United Kingdom (Northern Ireland)) the positivity rate of swab specimens exceeded 20% (minimum number of tested specimens: 20).

The intensity of clinical activity was described as very high in Iceland, high in Ireland, Luxembourg and the United Kingdom (Northern Ireland), medium in 10 countries and low in the remaining 25 countries reporting. The occurrence of ILI was reported as widespread in Belgium, Iceland, Ireland, Israel, Luxemburg, the Netherlands and the United Kingdom (England); regional in Austria, Norway, Spain, Sweden and Turkey; local and sporadic in a further 16 countries; 11 countries reported no activity. The impact of influenza on health services was in general reported as low: 23 countries reported low impact and 3 (Albania, Ireland and Turkey), medium impact.

Virological
The 1848 specimens submitted by sentinel physicians were examined, of which 586 (32%) were positive for influenza. Of these, 548 were positive for the pandemic (H1N1) 2009 virus and a further 38, positive for others. Influenza virus positivity in the sentinel specimens was very high compared to rates for week 42 in the previous 5 years (ranging from 0.9% in 2005 to 2% in 2008). The 2522 positive specimens from non-sentinel sources included 1925 positive for pandemic (H1N1) 2009 influenza. Among the countries reporting more than 50 sentinel specimens, the 3 with the highest positivity rates were Ireland (53%), Belgium (48%) and Spain (43%). Of the 41 countries reporting a dominant subtype, pandemic (H1N1) 2009 was dominant in 24.

Comment
The virological data collected support the conclusion that influenza activity is increasing in the European Region. The pandemic (H1N1) 2009 virus is dominant in most countries, and the increased levels of influenza activity are unusual for the month of October.

Most national clinical ARI and ILI data sets show the highest incidence in children aged 0–4 and 5–14 years, respectively, and minimal increases in people aged over 65 years. The widespread though gradual increases in ILI/ARI activity and the continuing detections of pandemic (H1N1) 2009 virus suggest that continued increases in influenza incidence should be anticipated over the next four weeks. Worldwide, more than 10 000 (H1N1) viruses have been further examined for the presence of resistance; 35 have been found resistant to oseltamivir, all showing H275Y point mutation in the neuraminidase gene. More information on antiviral use and the risk of drug resistance is available from WHO headquarters.

Further information
The EuroFlu bulletin presents and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

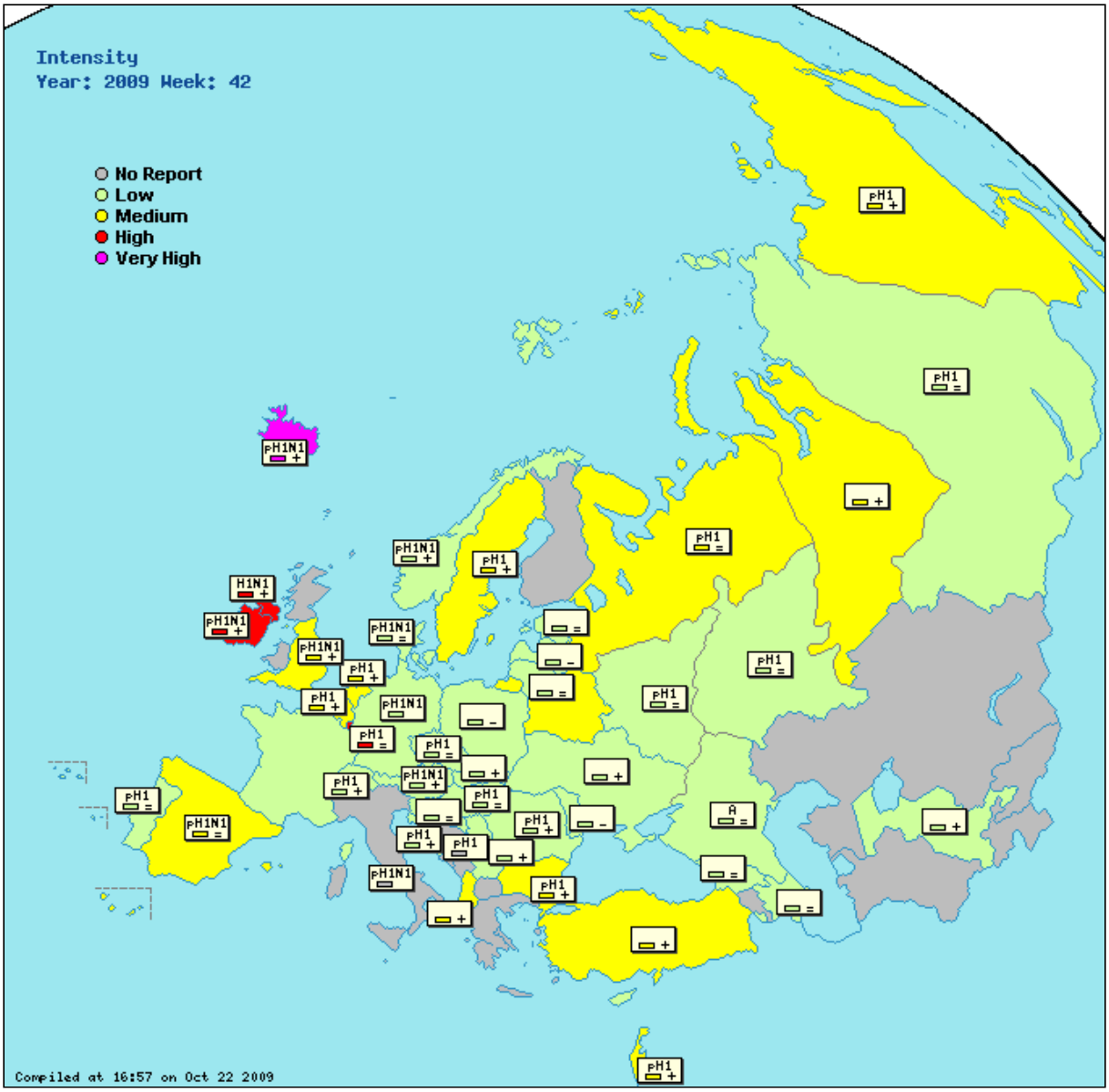
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



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H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
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High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no laboratory-confirmed case(s) of influenza, or evidence of increased or unusual respiratory disease activity.
Sporadic = isolated cases of laboratory confirmed influenza infection
Localized = limited to one administrative unit of the country (or reporting site) only.
Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites).
Widespread = appearing in ≥50% of the administrative units of the country (or reporting sites).

Country comments (where available)

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania	Medium	Sporadic	Moderate	Increasing	21	0%	None		334.6 (graphs)	Click here
Austria	Low	Regional		Increasing	3	33.3%	Type A, Subtype pH1N1	715.9 (graphs)		Click here
Azerbaijan	Low	None	Low	Stable	21	0%	None	(graphs)		Click here
Belarus	Medium	Sporadic	Low	Increasing					1019.3 (graphs)	Click here
Belgium	Medium	Widespread	Low	Increasing	315	47.9%	Type A, Subtype pH1	377.9 (graphs)	1971.0 (graphs)	Click here
Bosnia and Herzegovina					1	100.0%	Type A, Subtype pH1	(graphs)		Click here
Bulgaria	Medium	Sporadic		Increasing			Type A, Subtype pH1		823.1 (graphs)	Click here
Croatia	Low	Local	Low	Increasing	47	0%	Type A, Subtype pH1	0.4 (graphs)		Click here
Cyprus	Low	None		Stable				(graphs)		Click here
Czech Republic	Low	Sporadic		Stable	19	0%	Type A, Subtype pH1	28.4 (graphs)	898.3 (graphs)	Click here
Denmark	Low	Sporadic		Stable			Type A, Subtype pH1N1	73.2 (graphs)		Click here

England	Medium	Widespread		Increasing	268	26.5%	Type A, Subtype pH1N1	39.1 (graphs)	470.2 (graphs)	Click here
Estonia	Low	None	Low	Stable	2	0%	None	1.9 (graphs)	262.5 (graphs)	Click here
France	Low	Sporadic	Low	Stable					1739.4 (graphs)	Click here
Georgia	Low	Sporadic	Low	Stable	36	0%	None	119.0 (graphs)		Click here
Germany	Low	Sporadic	Low		51	21.6%	Type A, Subtype pH1N1		1022.5 (graphs)	Click here
Greece					15	0%	None	(graphs)		Click here
Hungary	Low	Sporadic	Low	Stable	29	17.2%	Type A, Subtype pH1	(graphs)		Click here
Iceland	Very High	Widespread		Increasing			Type A, Subtype pH1N1	527.5 (graphs)		Click here
Ireland	High	Widespread	Moderate	Increasing	162	52.5%	Type A, Subtype pH1N1	158.8 (graphs)		Click here
Israel	Medium	Widespread	Low	Increasing			Type A, Subtype pH1	51.7 (graphs)		Click here
Italy							Type A, Subtype pH1N1	(graphs)		Click here
Kazakhstan					0	0%	None		(graphs)	Click here
Kyrgyzstan					0	0%	None		33.9 (graphs)	Click here
Latvia	Low	None	Low	Decreasing	0	0%	None	0.0 (graphs)	881.6 (graphs)	Click here
Lithuania	Low	None	Low	Stable	3	0%	None	(graphs)		Click here
Luxembourg	High	Widespread	Low		105	29.5%	Type A, Subtype pH1	(graphs)		Click here
Netherlands	Medium	Widespread	Low	Increasing	40	32.5%	Type A, Subtype pH1	76.3 (graphs)		Click here
Northern Ireland	High	Sporadic		Increasing	46	63.0%	Type A, Subtype H1N1	241.1 (graphs)		Click here
Norway	Low	Regional		Increasing	26	15.4%	Type A, Subtype pH1N1	98.1 (graphs)		Click here
Poland	Low	None	Low	Decreasing	24	0%	None	46.4 (graphs)		Click here
Portugal	Low	Sporadic	Low	Stable	6	33.3%	Type A, Subtype pH1	15.0 (graphs)		Click here
Republic of Moldova	Low	None		Decreasing	1	0%	None	(graphs)	121.4 (graphs)	Click here
Romania	Low	None	Low	Increasing	51	0%	Type A, Subtype pH1	0.5 (graphs)	603.4 (graphs)	Click here
Russian Federation	Low	Sporadic		Stable			Type A, Subtype pH1		639.2 (graphs)	Click here
Serbia	Low	None	Low	Increasing	0	0%	None	33.0 (graphs)		Click here
Slovakia	Low	Sporadic	Low	Increasing	2	0%	None	199.7 (graphs)	1578.1 (graphs)	Click here
Slovenia	Low	Sporadic		Stable	17	17.7%	None	5.7 (graphs)	936.8 (graphs)	Click here
Spain	Medium	Regional		Stable	364	43.1%	Type A, Subtype pH1N1	100.2 (graphs)		Click here
Sweden	Medium	Regional	Low	Increasing	97	19.6%	Type A, Subtype pH1	7.8 (graphs)		Click here
Switzerland	Low	Sporadic	Low	Increasing	18	5.6%	Type A, Subtype pH1	47.8 (graphs)		Click here
Turkey	Medium	Regional	Moderate	Increasing	47	2.1%	None	34.0 (graphs)		Click here
Ukraine	Low	None	Low	Increasing	11	0%	None		456.0 (graphs)	Click here
Uzbekistan	Low	None	Low	Increasing			None		28.3 (graphs)	Click here
Wales								66.2 (graphs)		Click here
Europe					1848	31.7%				Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
***:** the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Rapidly increasing influenza activity in the WHO European Region

Key points, week 43/2009

- This report is based on material received from 43 of the 53 countries.
- 37% of specimens collected from sentinel sources were positive for influenza virus.
- The incidence of clinical respiratory illness has increased over each of the past three weeks in 17 countries and for 8 of these the proportion of sentinel specimens testing positive for influenza this week was 20% or greater.
- Pandemic (H1N1) 2009 was dominant in 24 countries and accounted for 100% of influenza A virus subtype detections in sentinel specimens.
- 45 deaths, involving laboratory-confirmed cases of pandemic (H1N1) 2009 virus infection were reported by 13 countries during the period of 21 to 27 October. However, the majority of pandemic cases have resolved without complication.

Current Situation, week 43/2009

Seventeen countries reported increases in ILI and/or ARI consultations (defined as countries with increases in each of the previous three weeks). In eight of these countries (Belgium [69.2%], Germany [27.4%], Ireland [54.9%], Netherlands [51.1%], Norway [65.6%], Spain [46.0%], Sweden [32.7%] and the United Kingdom (Northern Ireland) [80.8%]), the positivity rate of sentinel swab specimens exceeded 20% (minimum number of tested sentinel specimens: 20). These increases have been particularly notable in the 5-14 years age category.

The intensity of clinical activity was described as very high in Iceland and Ireland and high in Belarus, Luxembourg, Malta, Sweden and in Northern Ireland, though not in the United Kingdom generally. While the intensity of clinical activity was reported as medium overall in the Russian Federation, high intensity was reported in the Urals and Far Eastern regions. The clinical incidence of ILI and/or ARI was reported as widespread in Belgium, Iceland, Ireland, Israel, Luxembourg, the Netherlands, Norway, the Russian Federation (Far Eastern region), Spain and most of the United Kingdom. The impact of influenza on health services was reported as moderate in Albania, Ireland, Norway and Ukraine and low in 21 additional countries.

Forty-five deaths associated with laboratory confirmed pandemic (H1N1) 2009 infection were reported by 13 countries in the period of 21 to 27 October. This raises the total number of deaths reported since April 2009 from 236 to 281. The Czech Republic, Finland, the Republic of Moldova, the Russian Federation, Serbia and Turkey all reported their first laboratory-confirmed deaths, seven in total, during this week.

The Minister of Health of Ukraine has reported 12 fatal pneumonia cases in the Ternopol region with another 17 pneumonia patients in intensive care units and a further 6 fatal pneumonia cases in a neighboring region. These cases are reported to have occurred at the same time as increases in less severe acute respiratory illness in local populations. Epidemiologic and virologic investigations are ongoing click here .

Five recent fatalities in Sweden were temporally associated with pandemic influenza vaccination. Investigation by the Medical Products Agency of Sweden revealed that all five patients were receiving medical treatment for previously diagnosed chronic conditions. A public report released on 29 October 2009 states that currently there is nothing to support a causal association between the vaccination and death in these cases click here.

Virological update, week 43/2009

Of the 15 countries testing 20 or more sentinel specimens this week, influenza positive rates ranged from 0% (Albania, Azerbaijan, Croatia, Georgia) to 81% (United Kingdom-Northern Ireland). The total number of respiratory specimens collected by sentinel physicians in the Region in week 43/2009 was 2595, of which 971 (37%) were positive for influenza virus. This is a much higher proportion than is typical for week 43 (less than 2% during 2004-2008). Of the 971 influenza virus detections, 970 were type A (897 pandemic A(H1), 73 not subtyped) and 1 was type B. In addition, 4004 non-sentinel source specimens were reported positive for influenza virus: 3991 type A (3151 pandemic A(H1), 16 A(H3), 50 seasonal A(H1), 774 not subtyped, and 13 type B. The seasonal influenza A subtype detections were reported by Kazakhstan and the Russian Federation.

Comment

Qualitative reporting, clinical trend data and virological data all are consistent with an increasing intensity and geographic spread of influenza infections in the Region. The pandemic (H1N1) 2009 virus is dominant in most countries and has initiated an early start to the influenza season. There have also been recent and concomitant increases in outpatient illness with reports of severe cases and deaths attributable to pandemic (H1N1) 2009. Continued priority should continue to be placed on timely case management, increased access to neuraminidase inhibitors, and the implementation of vaccination programmes.

Further information

The EuroFlu bulletin presents and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

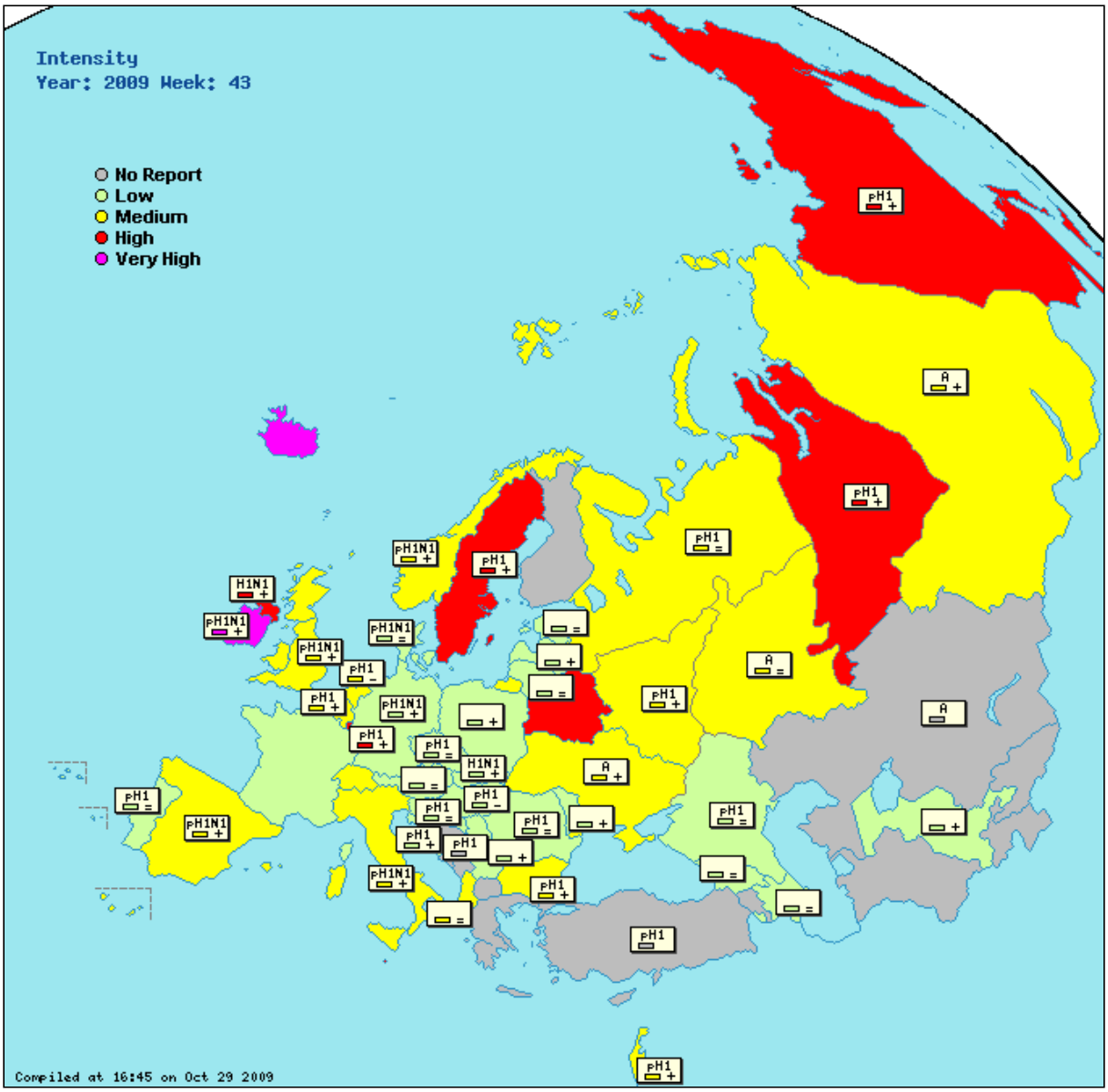
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no laboratory-confirmed case(s) of influenza, or evidence of increased or unusual respiratory disease activity.
Sporadic = isolated cases of laboratory confirmed influenza infection
Localized = limited to one administrative unit of the country (or reporting site) only.
Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites).
Widespread = appearing in ≥50% of the administrative units of the country (or reporting sites).

Country comments (where available)

Norway
The number of virus detections has risen sharply this week. The positivity rate in sentinel specimens is higher in the south than in the north and also higher in densely populated areas than in many countryside communities.

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania	Medium	Sporadic	Moderate	Stable	23	0%	None		323.3 (graphs)	Click here
Austria	Low	Sporadic	Low	Stable	15	6.7%	None	882.9 (graphs)		Click here
Azerbaijan	Low	None	Low	Stable	20	0%	None	(graphs)		Click here

Belarus	High	Local		Increasing					1227.2	(graphs)	Click here
Belgium	Medium	Widespread	Low	Increasing	438	69.2%	Type A, Subtype pH1	712.1	(graphs)	2280.9 (graphs)	Click here
Bosnia and Herzegovina					10	40.0%	Type A, Subtype pH1		(graphs)		Click here
Bulgaria	Medium	Sporadic		Increasing			Type A, Subtype pH1			972.9 (graphs)	Click here
Croatia	Low	Local	Low	Increasing	76	0%	Type A, Subtype pH1	1.5	(graphs)		Click here
Czech Republic	Low	Sporadic		Stable	50	6.0%	Type A, Subtype pH1	28.1	(graphs)	959.2 (graphs)	Click here
Denmark	Low	Sporadic		Stable	3	33.3%	Type A, Subtype pH1N1	65.9	(graphs)		Click here
England	Medium	Widespread		Increasing	497	18.7%	Type A, Subtype pH1N1	42.8	(graphs)	465.4 (graphs)	Click here
Estonia	Low	None	Low	Stable	6	0%	None	2.0	(graphs)	271.6 (graphs)	Click here
France	Low	Sporadic	Low	Stable						1801.6 (graphs)	Click here
Georgia	Low	Sporadic	Low	Stable	31	0%	None	87.1	(graphs)		Click here
Germany	Low	Regional	Low	Increasing	84	27.4%	Type A, Subtype pH1N1 and H1			1105.3 (graphs)	Click here
Greece					16	0%	None		(graphs)		Click here
Hungary	Low	Local	Low	Decreasing	36	13.9%	Type A, Subtype pH1		(graphs)		Click here
Iceland	Very High	Widespread		Stable				557.9	(graphs)		Click here
Ireland	Very High	Widespread	Moderate	Increasing	153	54.9%	Type A, Subtype pH1N1	211.0	(graphs)		Click here
Israel	Medium	Widespread	Low	Increasing			Type A, Subtype pH1	67.2	(graphs)		Click here
Italy	Medium	Local		Increasing	5	100.0%	Type A, Subtype pH1N1	388.2	(graphs)		Click here
Kazakhstan							Type A			(graphs)	Click here
Kyrgyzstan					0	0%	None			32.6 (graphs)	Click here
Latvia	Low	Sporadic		Increasing	0	0%	None		(graphs)	963.8 (graphs)	Click here
Lithuania	Low	Sporadic	Low	Stable	0	0%	None		(graphs)		Click here
Luxembourg	High	Widespread	Low		117	17.1%	Type A, Subtype pH1		(graphs)		Click here
Malta	High	Regional		Increasing					(graphs)		Click here
Netherlands	Medium	Widespread	Low	Decreasing	47	51.1%	Type A, Subtype pH1	72.9	(graphs)		Click here
Northern Ireland	High	Sporadic		Increasing	52	80.8%	Type A, Subtype H1N1	280.6	(graphs)		Click here
Norway	Medium	Widespread	Moderate	Increasing	32	65.6%	Type A, Subtype pH1N1	197.4	(graphs)		Click here
Poland	Low	Sporadic	Low	Increasing	32	6.3%	None	54.6	(graphs)		Click here
Portugal	Low	Sporadic	Low	Stable	5	0%	Type A, Subtype pH1	17.8	(graphs)		Click here
Republic of Moldova	Low	Sporadic		Increasing	6	33.3%	None	0.2	(graphs)	158.5 (graphs)	Click here
Romania	Low	None	Low	Stable	32	6.3%	Type A, Subtype pH1	0.5	(graphs)	642.5 (graphs)	Click here
Russian Federation	Medium	Local		Increasing			Type A, Subtype pH1			775.6 (graphs)	Click here
Scotland	Medium	Regional		Increasing				47.7	(graphs)		Click here
Serbia	Low	None	Low	Increasing	0	0%	None	60.3	(graphs)		Click here
Slovakia	Low	Sporadic	Low	Increasing	5	40.0%	Type A, Subtype H1N1	222.7	(graphs)	1676.0 (graphs)	Click here
Slovenia	Low	Sporadic		Stable	23	39.1%	Type A, Subtype pH1	8.8	(graphs)	1045.3 (graphs)	Click here
Spain	Medium	Widespread		Increasing	637	46.0%	Type A, Subtype pH1N1	182.6	(graphs)		Click here
Sweden	High	Regional	Low	Increasing	98	32.7%	Type A, Subtype pH1	8.7	(graphs)		Click here
Switzerland	Medium	Local	Low	Increasing				64.5	(graphs)		Click here
Turkey							Type A, Subtype pH1		(graphs)		Click here
Ukraine	Medium	Sporadic	Moderate	Increasing	46	0%	Type A			504.9 (graphs)	Click here
Uzbekistan	Low	None	Low	Increasing			None			32.3 (graphs)	Click here
Wales	Medium	Widespread		Increasing				60.2	(graphs)		Click here
Europe					2595	37.4%					Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
***:** the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Ukraine hit by pandemic, as influenza activity continues to rise in most countries in the WHO European Region

Key points: week 44/2009

- This report is based on material received from 40 of the 53 Member States in the WHO European Region and includes an overview of the situation in Ukraine.
- On average, 45% of specimens collected from sentinel sources in the Region were positive for influenza virus.
- The incidence of clinical respiratory illness has increased in 17 countries over the past three weeks, and for seven of these the proportion of sentinel specimens testing positive for influenza this week was 20% or greater.
- Pandemic (H1N1) 2009 was dominant in 28 countries and accounted for 99% of influenza A virus subtype detections.
- From 27 October to 4 November, 11 countries reported a total of 47 deaths involving laboratory-confirmed cases of pandemic (H1N1) 2009 virus infection. Nevertheless, the majority of pandemic cases have resolved without complications.

Ukraine

On Monday, 2 November, a team of nine experts – from WHO, the European Centre for Disease Prevention and Control (ECDC), and the United Nations Children's Fund (UNICEF) – arrived in Ukraine to investigate high levels of acute respiratory illness (ARI). The team was dispatched at the request of the Ministry of Health of Ukraine. The experts were briefed in Kyiv before heading to the western city of Lviv and other affected areas.

Preliminary reports indicate that the rapidly evolving situation in the country is mainly related to pandemic (H1N1) 2009 influenza. The results received from the examination of samples submitted earlier by national laboratories in Kyiv to the WHO collaborating centre for reference and research on influenza in London, United Kingdom, continue to confirm cases of pandemic (H1N1) 2009 virus infection. At this stage, however, other causes for clusters of respiratory illnesses cannot be ruled out.

On 4 November, the Minister of Health of Ukraine reported 70 deaths, 235 patients in a critical condition and more than 250 000 cases of influenza-like illness (ILI). Lviv is one of the most affected regions, with more than 100 000 people reportedly sick with ILI. WHO/Europe regularly issues updated information on the situation in Ukraine on its web site.

Current situation: week 44/2009

17 countries have reported increases in ILI and/or ARI consultations (defined as countries with increases in the previous three weeks). These increases have been particularly notable in the group aged 5–14 years. In 7 of these countries (Belgium, Germany, the Netherlands, Norway, Spain, Sweden and the United Kingdom (Northern Ireland)), the positivity rate of sentinel swab specimens exceeded 20% (minimum number of tested sentinel specimens: 20). In Norway, ILI consultation rates are above the maximum rates recorded in four previous seasons. To lessen the burden on physicians and improve the accessibility of antiviral drugs (oseltamivir and zanamivir), the Norwegian Government has made them available as over-the-counter medications (see press release in Norwegian).

The intensity of clinical activity was described as very high in Iceland and Ireland for the second week in a row, and in the Russian Federation (Urals region) for the first time. Eight countries described high clinical activity: Belarus, Bulgaria, the Netherlands, Norway, Italy, Russian Federation (far eastern, Siberian, north-western and central regions), Sweden and the United Kingdom (Northern Ireland). The clinical incidence of ILI and/or ARI was reported as widespread in 11 countries: Belgium, Iceland, Ireland, Israel, Italy, the Netherlands, Norway, the Russian Federation, Spain, Sweden and most of the United Kingdom (England, Wales, Northern Ireland). Ukraine reported medium intensity, regional clinical incidence and severe impact of influenza on health services. Impact was reported moderate in 7 countries and low in 16 others. For an overview, see the Seasons tables section on EuroFlu.

While clinical influenza activity has increased over the past weeks in 17 countries, it may have passed its peak in Ireland, Iceland and the United Kingdom (Northern Ireland). Countries with recent increases in influenza activity include Bulgaria, Norway and the Russian Federation, indicating the further circulating of influenza across the European Region. In week 44/2009, levels of clinical influenza activity above the baseline were observed in Portugal, Serbia and Ukraine, and the level in Ukraine was significantly higher than those in the same week in six previous seasons.

In the period 27 October – 4 November, 11 countries reported 47 new deaths associated with laboratory-confirmed pandemic (H1N1) 2009 influenza: Belgium (2), Bulgaria (1), Croatia (1), Germany (3), Ireland (8), Norway (4), Portugal (2), the Republic of Moldova (1), Turkey (8), Ukraine (1) and the United Kingdom (16). This raises the total number of deaths reported since April 2009 from 281 to 328. Croatia and Ukraine reported their first laboratory-confirmed deaths during this week.

Virological update: week 44/2009

Of the 19 countries testing 20 or more sentinel specimens this week, influenza-positive rates ranged from 0% (Azerbaijan, Georgia) to 85% (United Kingdom (Northern Ireland)). Sentinel physicians in the Region collected 2730 respiratory specimens in week 44/2009, of which 1219 (45%) were positive for influenza virus. This is a much higher proportion than is typical for week 44 (less than 4% during 2004–2008). Of the 1219 influenza virus detections, 1218 were type A (1156 pandemic A(H1), 1 A(H3) and 61 not subtyped) and 1 was type B.

In addition, 7333 non-sentinel-source specimens were reported positive for influenza virus in week 44/2009: 7328 type A (5572 pandemic A(H1), 36 A(H3), 31 seasonal A(H1), 1689 not subtyped) and 5 type B. The seasonal influenza A subtype detections were reported by Kazakhstan and the Russian Federation.

Since week 40/2009, 21 851 specimens have tested positive for influenza virus. Of these, 17 644 (81%) were pandemic influenza A(H1),

which accounts for 98% of all influenza A viruses that were subtyped. In addition, 335 were seasonal influenza A/H1; 87 were influenza A(H3); 3726 were influenza A not subtyped; and 59 were influenza B. Since week 40/2009, the number of influenza detections has risen sharply, from about 1600 to more than 8500 in week 44/2009. Three countries (Norway, the Russian Federation and Spain) accounted for more than 4000 of these detections. This number far exceeds the peak of detections during the summer of 2009 (about 3000 in week 30/2009) and is the highest recorded number of positive specimens in the Region in any week since 1996 (see graphs for Europe).

Comment

Qualitative reporting, clinical trend data and virological data are all consistent with an increasing intensity and geographic spread of influenza infections in the European Region. For the first time, countries in the Region reported very high intensity of clinical influenza activity. Influenza detections far exceed historical peaks and indicate a surge on the laboratories in several countries. The pandemic (H1N1) 2009 virus is dominant in most countries and continues to account for high levels of influenza activity for the time of year. Since the start of the pandemic, Ukraine is the first country to report a severe impact, mainly reflecting the strain on hospital and intensive care services. This situation highlights the need for countries to be prepared to cope with a surge of patients with severe respiratory disease, to identify best-practice scenarios for treatment and to implement vaccination programmes.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

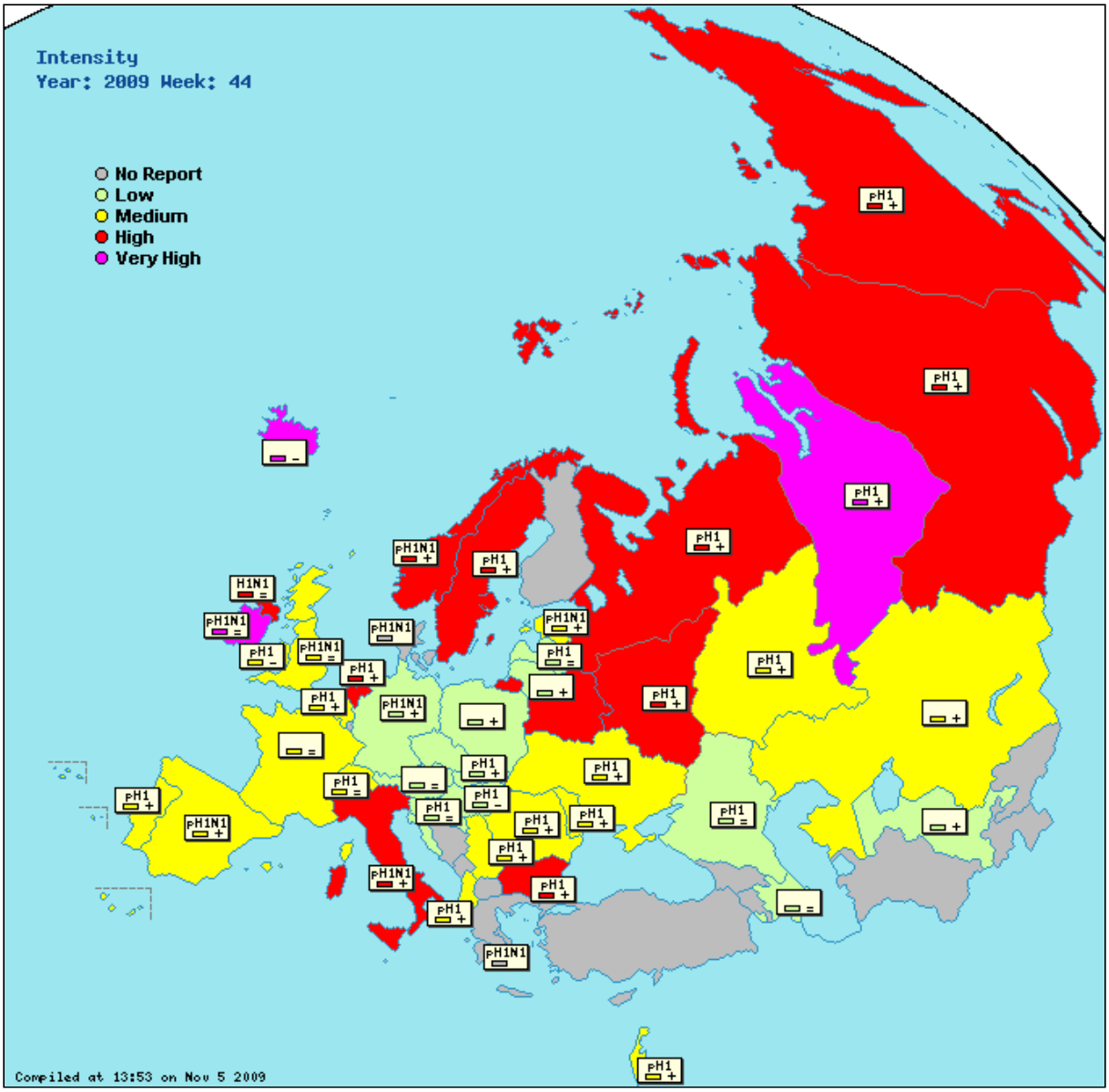
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no laboratory-confirmed case(s) of influenza, or evidence of increased or unusual respiratory disease activity.
Sporadic = isolated cases of laboratory confirmed influenza infection
Localized = limited to one administrative unit of the country (or reporting site) only.
Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites).
Widespread = appearing in ≥50% of the administrative units of the country (or reporting sites).

Country comments (where available)

Croatia
1 case of death presenting as pneumonia (SARI) with confimed A/H1N12009 infection. This is the first new influenza associated death in Croatia Note: case included in ILI figures

Italy
During this last week, a significant increase in the H1N1v influenza lab-confirmed cases has been reported, if compared to the previous week.

Norway
The number of virus detections has continued to rise and are now very high, as is the positivity rate for all laboratories. The positivity rate in sentinel specimens is also high, but there was a decline since the previous week. The positivity rate is higher in the southeast and southwest, and lower in the north. It is also higher in densely populated areas than in many countryside communities. The decline in sentinel positivity rate seems to reflect more active sampling in areas that are lagging behind in the unfolding of the epidemic.

Portugal
Incidence rate is increasing but sligthly above the basezone.

Slovenia
Among non-sentinel 6 specimens were from hospitals, in 5 of them Influenza type A, subtype pH1 was confirmed. One of hospitalized patients died. This is the first fatal case in Slovenia.

Switzerland

In Switzerland, only data on hospitalisations for laboratory-confirmed pandemic (H1N1) 2009 cases are currently available: for these figures, the denominator is the whole population.

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania	Medium	Sporadic	Moderate	Increasing	44	2.3%	Type A, Subtype pH1		(graphs)	Click here
Austria	Low	Regional	Low	Stable	17	17.7%	None	1026.3 (graphs)		Click here
Azerbaijan	Low	None	Low	Stable	38	0%	None	(graphs)		Click here
Belarus	High	Local		Increasing					845.9 (graphs)	Click here
Belgium	Medium	Widespread	Low	Increasing	218	74.8%	Type A, Subtype pH1	811.9 (graphs)	2077.6 (graphs)	Click here
Bulgaria	High	Regional		Increasing			Type A, Subtype pH1		1499.9 (graphs)	Click here
Croatia	Low	Local	Low	Increasing				3.0 (graphs)		Click here
Czech Republic	Low	Local		Stable				35.7 (graphs)	877.9 (graphs)	Click here
Denmark					2	100.0%	Type A, Subtype pH1N1	(graphs)		Click here
England	Medium	Widespread		Stable	439	33.7%	Type A, Subtype pH1N1	37.7 (graphs)	429.3 (graphs)	Click here
Estonia	Medium	Sporadic	Low	Increasing	10	30.0%	Type A, Subtype pH1N1	5.9 (graphs)	260.7 (graphs)	Click here
France	Medium	Regional	Low	Stable					1864.1 (graphs)	Click here
Georgia					54	0%	None	(graphs)		Click here
Germany	Low	Regional	Low	Increasing	152	39.5%	Type A, Subtype pH1N1		1213.1 (graphs)	Click here
Greece					6	16.7%	Type A, Subtype pH1N1	(graphs)		Click here
Hungary	Low	Sporadic	Low	Decreasing	54	7.4%	Type A, Subtype pH1	(graphs)		Click here
Iceland	Very High	Widespread		Decreasing	190	29.0%	None	421.3 (graphs)		Click here
Ireland	Very High	Widespread	Moderate	Stable	80	57.5%	Type A, Subtype pH1N1	178.5 (graphs)		Click here
Israel	Medium	Widespread	Low	Increasing			Type A, Subtype pH1	117.1 (graphs)		Click here
Italy	High	Widespread		Increasing	4	25.0%	Type A, Subtype pH1N1	896.3 (graphs)		Click here
Kazakhstan	Medium	Local	Moderate	Increasing			None		(graphs)	Click here
Kyrgyzstan					0	0%	None		(graphs)	Click here
Latvia	Low	Sporadic		Stable	1	0%	Type A, Subtype pH1	(graphs)	911.8 (graphs)	Click here
Lithuania	Low	Sporadic	Low	Increasing	2	50.0%	None	(graphs)		Click here
Netherlands	High	Widespread	Low	Increasing	79	41.8%	Type A, Subtype pH1	117.7 (graphs)		Click here
Northern Ireland	High	Sporadic		Stable	41	85.4%	Type A, Subtype H1N1	222.1 (graphs)		Click here
Norway	High	Widespread	Moderate	Increasing	66	45.5%	Type A, Subtype pH1N1	439.4 (graphs)		Click here
Poland	Low	Sporadic	Low	Increasing	28	21.4%	None	92.1 (graphs)		Click here
Portugal	Medium	Sporadic	Low	Increasing	17	58.8%	Type A, Subtype pH1	56.5 (graphs)		Click here
Republic of Moldova	Medium	Sporadic		Increasing	19	42.1%	Type A, Subtype pH1	0.9 (graphs)	198.5 (graphs)	Click here
Romania	Medium	Local	Moderate	Increasing	140	36.4%	Type A, Subtype pH1	1.8 (graphs)	904.2 (graphs)	Click here
Russian Federation	High	Widespread		Increasing			Type A, Subtype pH1		1070.7 (graphs)	Click here
Scotland	Medium	Regional		Stable				45.6 (graphs)		Click here
Serbia	Medium	Regional		Increasing	0	0%	Type A, Subtype pH1	108.6 (graphs)		Click here
Slovakia	Low	Local	Low	Increasing	7	85.7%	Type A, Subtype pH1	248.7 (graphs)	1729.9 (graphs)	Click here
Slovenia	Low	Sporadic		Stable	18	27.8%	Type A, Subtype pH1	4.9 (graphs)	915.8 (graphs)	Click here
Spain	Medium	Widespread		Increasing	761	60.8%	Type A, Subtype pH1N1	292.0 (graphs)		Click here
Sweden	High	Widespread	Moderate	Increasing	142	43.0%	Type A, Subtype pH1	17.5 (graphs)		Click here
Switzerland	Medium	Local	Low	Stable	34	17.7%	Type A, Subtype pH1	35.4 (graphs)		Click here
Ukraine	Medium	Regional	Severe	Increasing	16	43.8%	Type A, Subtype pH1		762.3 (graphs)	Click here
Uzbekistan	Low	None	Low	Increasing	28	3.6%	None		34.0 (graphs)	Click here
Wales	Medium	Widespread	Moderate	Decreasing	23	39.1%	Type A, Subtype pH1	59.0 (graphs)		Click here
Europe					2730	44.7%				Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
*: the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Further increase in detections of pandemic (H1N1) 2009 in the WHO European Region. Seven countries report very high influenza activity

Key points: week 45/2009

- This report is based on material received from 43 of the 53 Member States in the WHO European Region and includes an update of the situation in Ukraine.
- On average, 45% of specimens collected from sentinel sources in the Region tested positive for influenza virus.
- The incidence of clinical respiratory illness has increased in 17 countries over the past three weeks, and for eight of these the proportion of sentinel specimens testing positive for influenza this week was 20% or greater.
- Notably, countries in Scandinavia, eastern Europe and south-eastern Europe reported high or very high intensity of influenza.
- Pandemic (H1N1) 2009 was dominant in 36 countries and accounted for 99.7% of influenza A virus subtype detections.
- Most influenza pandemic cases have resolved without complications. From 5 to 12 November, 18 countries reported a total of 145 deaths involving laboratory-confirmed cases of pandemic (H1N1) 2009 virus infection.

Ukraine

There have been 174 deaths due to acute respiratory infection (ARI) reported from Ukraine and 344 people are currently in intensive care units, 45 of whom are on mechanical ventilation. Rates of ARI are at a higher level than any reported for six years and in some regions for 13 years.

Current situation: week 45/2009

Seventeen countries have reported increases in influenza-like illness (ILI) and/or ARI consultations (defined as countries with increases in the previous three weeks). These increases are particularly notable in the group aged 5–14 years. In eight of these countries (Germany, the Netherlands, Norway, Republic of Moldova, Romania, Slovakia, Spain and Sweden), the positivity rate of sentinel swab specimens exceeded 20% (minimum number of tested sentinel specimens: 20).

The intensity of clinical activity was described as very high in Norway, Sweden, Bulgaria and the Republic of Moldova for the first time. Other countries reporting continued very high intensity this week were Iceland, Ireland and the Russian Federation (Urals region and far eastern region). Eight countries/regions described high clinical activity: Belarus, Finland, Kazakhstan, Poland, Russian Federation (central, north-western, Siberian and Volga region), Turkey, Ukraine and Northern Ireland. The clinical incidence of ILI and/or ARI was reported as widespread in 19 countries. The Republic of Moldova reported very high intensity, widespread clinical incidence and severe impact of influenza on health services. Impact was reported as moderate in nine countries, including Ukraine, and low in 17 others. For an overview of the season so far, click here.

Increased clinical illness was reported in Bulgaria and the Republic of Moldova. In Bulgaria, incidence rates were above the epidemic threshold in 10 out of 28 regions. The incidence was highest in children. Current rates are similar to those reported in the 2006-2007 influenza season. For the Republic of Moldova, 555 specimens out of 1141 tested were positive for pandemic (H1N1) 2009 (including five fatal cases).

While clinical influenza activity has increased over the past weeks in 17 countries, it has passed its peak in Belgium, Iceland, and Ireland, and has levelled off or passed its peak in the United Kingdom. Low or medium levels of influenza activity are reported in southern Russian Federation, Azerbaijan, Georgia, the Baltic states, the Czech Republic and Slovakia and in most of these countries incidence is increasing.

In the period 5–12 November, 18 countries reported 145 new deaths associated with laboratory-confirmed pandemic (H1N1) 2009, raising the total since April 2009 from 326 to 471. The deaths were in Bulgaria (9), Croatia (2), Finland (5), France (4), Germany (3), Greece (2), Hungary (1), Ireland (2), Israel (8), Italy (34), the Netherlands (13), Norway (3), the Republic of Moldova (3), Serbia (6), Slovenia (1), Sweden (1), Turkey (31) and the United Kingdom (17).

Virological update: week 45/2009

Of the 27 countries testing 20 or more sentinel specimens this week, influenza-positive rates ranged from 3.5% (Georgia) to 68.3% (Bosnia and Herzegovina). Ten of these countries reported rates greater than 50%. Sentinel physicians in the Region collected 4129 respiratory specimens in week 45/2009, of which 1853 (45%) were positive for influenza virus. Of the 1853 influenza-virus detections, 1845 were type A (1781 pandemic A(H1) and 64 not subtyped) and 8 were type B.

In addition, 11 311 non-sentinel-source specimens were reported positive for influenza virus in week 45/2009: 11 292 type A (9682 pandemic A(H1), 25 A(H3), 14 seasonal A(H1), 1571 not subtyped) and 19 type B.

Of the total 36 087 specimens that have tested positive for influenza virus since week 40/2009, 30 308 (84%) were pandemic influenza A(H1) and these accounted for 99% of all influenza A viruses that were subtyped. In addition, 213 were seasonal influenza A(H1); 113 were influenza A(H3); 5366 were influenza A not subtyped; and 87 were influenza B. The number of influenza detections has risen sharply each week from about 1600 in week 40/2009 to over 13 000 in week 45/2009.

Comment

A total of 14 countries have reported high or very high intensity of influenza activity. A generally increasing trend in clinical data is

confirmed by an increase in virological influenza detections. Notably, countries in Scandinavia, and eastern and south-eastern Europe are affected by the pandemic. Influenza detections far exceed historical peaks and indicate a surge of work in the laboratories in several countries. The pandemic (H1N1) 2009 virus is dominant and continues to account for high levels of influenza activity for the time of year. Reports are widespread of pressure on intensive care facilities.

As of week 45/2009, 16 countries have started pandemic influenza vaccination campaigns. Reports of adverse events are fewer than reported for seasonal influenza vaccination and most events are mild local or systemic reactions. Eight countries in the Region are eligible to receive vaccine donated to WHO and this will begin by late November or early December 2009.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

Erratum: The percentage positive for Denmark in the table below is incorrect. A total of 38 sentinel specimens were collected of which 22 (58%) were positive for pandemic (H1N1) 2009.

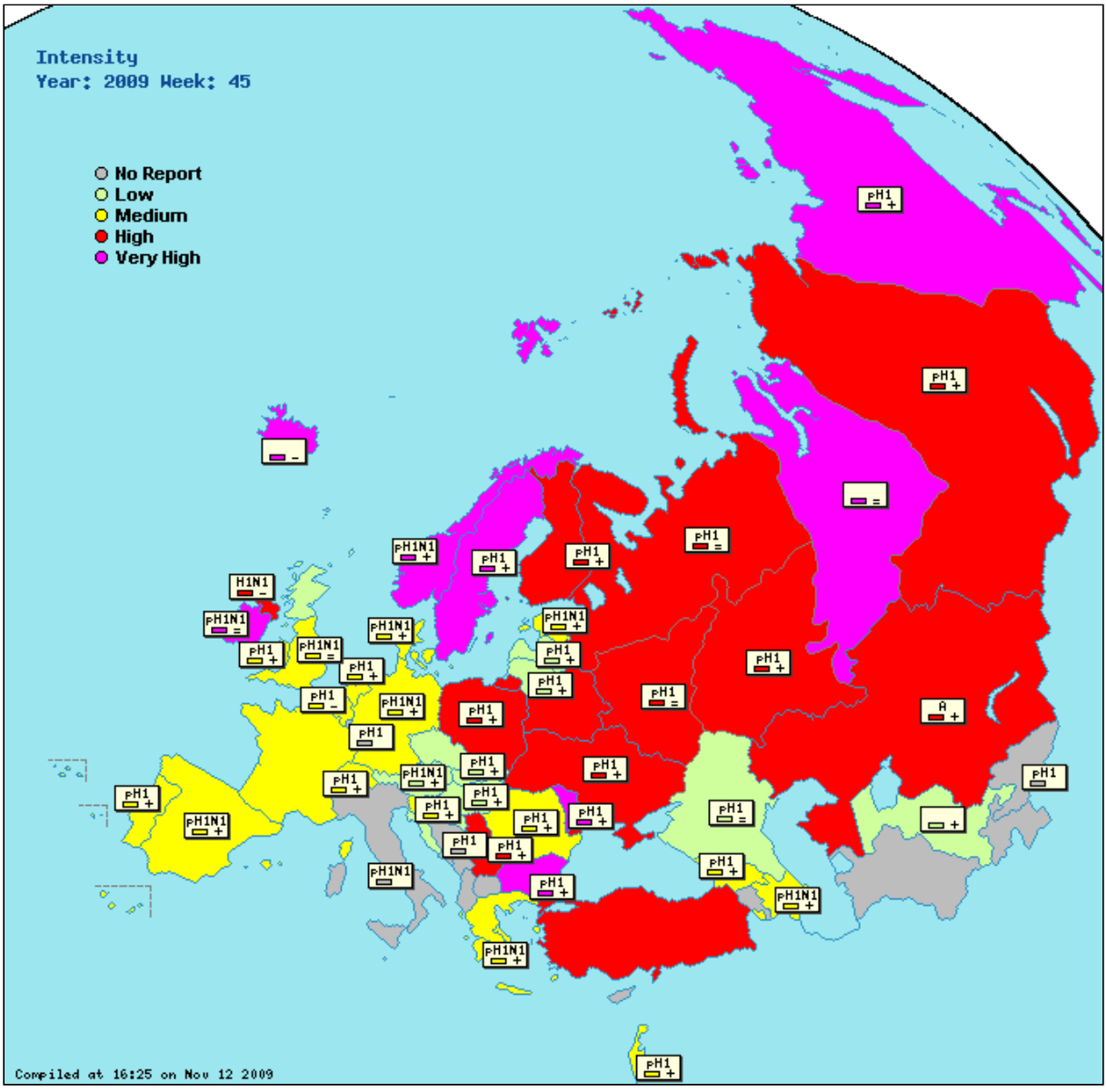
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no laboratory-confirmed case(s) of influenza, or evidence of increased or unusual respiratory disease activity.
Sporadic = isolated cases of laboratory confirmed influenza infection
Localized = limited to one administrative unit of the country (or reporting site) only.
Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites).
Widespread = appearing in ≥50% of the administrative units of the country (or reporting sites).

Country comments (where available)

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Austria	Low	Widespread	Low	Increasing	64	17.2%	Type A, Subtype pH1N1	1436.6 (graphs)		Click here
Azerbaijan	Medium	Local	Low	Increasing	158	6.3%	Type A, Subtype pH1N1	(graphs)		Click here
Belarus	High	Widespread	Moderate	Increasing					3278.2 (graphs)	Click here
Belgium	Medium	Widespread	Low	Decreasing	217	67.7%	Type A, Subtype pH1	488.8 (graphs)	1536.0 (graphs)	Click here
Bosnia and Herzegovina					41	68.3%	Type A, Subtype pH1	(graphs)		Click here
Bulgaria	Very High	Widespread		Increasing			Type A, Subtype pH1		2636.9 (graphs)	Click here
Croatia	Low	Widespread	Low	Increasing				27.6 (graphs)		Click here
Cyprus		None						(graphs)		Click here
Czech Republic	Low	Local		Increasing				55.3 (graphs)	1120.3 (graphs)	Click here
Denmark	Medium	Widespread		Increasing	38	100.0%	Type A, Subtype pH1N1	197.2 (graphs)		Click here
England	Medium	Widespread		Stable	211	26.5%	Type A, Subtype pH1N1	36.0 (graphs)	438.1 (graphs)	Click here
Estonia	Medium	Local	Moderate	Increasing	36	61.1%	Type A, Subtype pH1N1	14.0 (graphs)	288.0 (graphs)	Click here
Finland	High	Widespread		Increasing	136	64.0%	Type A, Subtype pH1	(graphs)		Click here
France	Medium	Regional	Low	Stable					1743.2 (graphs)	Click here
Georgia	Medium	Local	Low	Increasing	57	3.5%	Type A, Subtype pH1	184.2 (graphs)		Click here
Germany	Medium	Widespread	Low	Increasing	345	48.7%	Type A, Subtype pH1N1		1501.1 (graphs)	Click here
Greece	Medium	None		Increasing	48	58.3%	Type A, Subtype pH1N1	162.5 (graphs)		Click here
Hungary	Low	Local	Low	Increasing	86	15.1%	Type A, Subtype pH1	(graphs)		Click here
Iceland	Very High	Widespread		Decreasing	109	27.5%	None	249.7 (graphs)		Click here
Ireland	Very High	Widespread	Moderate	Stable	109	35.8%	Type A, Subtype pH1N1	174.8 (graphs)		Click here
Israel	Medium	Widespread	Low	Increasing			Type A, Subtype pH1	170.2 (graphs)		Click here
Italy							Type A, Subtype pH1N1	(graphs)		Click here
Kazakhstan	High	Regional	Moderate	Increasing	45	37.8%	Type A		(graphs)	Click here
Kyrgyzstan					0	0%	Type A, Subtype pH1		(graphs)	Click here
Latvia	Low	Sporadic		Increasing	3	100.0%	Type A, Subtype pH1	0.9 (graphs)	949.3 (graphs)	Click here
Lithuania	Low	Sporadic	Low	Increasing	14	64.3%	Type A, Subtype pH1	(graphs)		Click here
Luxembourg					57	43.9%	Type A, Subtype pH1	(graphs)		Click here
Netherlands	Medium	Widespread	Low	Increasing	92	45.7%	Type A, Subtype pH1	154.2 (graphs)		Click here
Northern Ireland	High	Sporadic		Decreasing	59	45.8%	Type A, Subtype H1N1	221.0 (graphs)		Click here
Norway	Very High	Widespread	Moderate	Increasing	64	57.8%	Type A, Subtype pH1N1	683.3 (graphs)		Click here
Poland	High	Regional	Low	Increasing	154	11.7%	Type A, Subtype pH1	125.1 (graphs)		Click here
Portugal	Medium	Regional		Increasing	19	57.9%	Type A, Subtype pH1	59.2 (graphs)		Click here
Republic of Moldova	Very High	Widespread	Severe	Increasing	607	58.5%	Type A, Subtype pH1	8.4 (graphs)	452.6 (graphs)	Click here
Romania	Medium	Regional	Moderate	Increasing	337	28.2%	Type A, Subtype pH1	4.5 (graphs)	1524.4 (graphs)	Click here
Russian Federation	High	Widespread		Stable			Type A, Subtype pH1		1169.9 (graphs)	Click here
Scotland	Low	Local		Stable				49.4 (graphs)		Click here
Serbia	High	Regional	Low	Increasing	0	0%	Type A, Subtype pH1	265.6 (graphs)		Click here
Slovakia	Low	Sporadic	Low	Increasing	22	50.0%	Type A, Subtype pH1	325.0 (graphs)	2098.9 (graphs)	Click here
Slovenia	Medium	Local		Increasing	49	53.1%	Type A, Subtype pH1	17.1 (graphs)	1043.7 (graphs)	Click here
Spain	Medium	Widespread		Increasing	683	61.1%	Type A, Subtype pH1N1	343.1 (graphs)		Click here
Sweden	Very High	Widespread	Moderate	Increasing	184	33.7%	Type A, Subtype pH1	26.7 (graphs)		Click here
Switzerland	Medium	Widespread	Low	Increasing	77	22.1%	Type A, Subtype pH1	85.9 (graphs)		Click here
Turkey	High	Regional	Moderate	Increasing				57.4 (graphs)		Click here
Ukraine	High	Regional	Moderate	Increasing			Type A, Subtype pH1		1501.1 (graphs)	Click here
Uzbekistan	Low	None	Low	Increasing			None		41.6 (graphs)	Click here
Wales	Medium	Widespread	Low	Increasing	8	25.0%	Type A, Subtype pH1	65.8 (graphs)		Click here
Europe					4129	44.9%				Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B

Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
*: the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Influenza activity remains high and is widespread across much of the European Region

Key points: week 46/2009

- This report is based on material received from 43 of the 53 Member States in the WHO European Region and includes an update on the situation in Ukraine.
- 42% of specimens collected from sentinel sources in the Region tested positive for influenza virus.
- The incidence of clinical respiratory illness has increased in 13 countries over the past 3 weeks. For 10 of these, the proportion of sentinel specimens testing positive for influenza this week was 20% or greater.
- Countries throughout the Region reported high or very high intensity of influenza.
- Pandemic (H1N1) 2009 was dominant in 36 countries and accounted for 99.2% of influenza A virus subtype detections.
- From 13 to 20 November 2009, 21 countries reported a total of 181 deaths involving laboratory-confirmed cases of pandemic (H1N1) 2009 virus infection.

Ukraine

Preliminary analyses of samples taken from patients in Ukraine show that the virus is similar to that used for production of the pandemic (H1N1) 2009 vaccine. Although influenza activity in Ukraine remains high, the incidence of acute respiratory infection (ARI) is lower than that reported last week.

Current situation: week 46/2009

Thirteen countries have reported increases in influenza-like illness (ILI) and/or ARI consultations (defined as countries with increases in the previous three weeks). These increases are particularly notable in the groups aged 0–4 and 5–14 years. In 11 of these countries (the Czech Republic, Estonia, Germany, Israel, the Netherlands, Poland, Portugal, the Republic of Moldova, Slovakia, Spain and Sweden), the positivity rate of sentinel swab specimens exceeded 20% (minimum number of tested sentinel specimens: 20).

The intensity of clinical activity was described as very high in Italy (for the first time this season), Norway, the Republic of Moldova, the Russian Federation (Urals region) and Sweden. In addition, 14 countries reported high intensity. ILI and/or ARI was reported as geographically widespread in 24 countries. The impact on health services was described as severe in 2 countries (Albania, the Republic of Moldova), moderate in 11 and low in 16 others. For an overview of the season so far, see season tables.

While clinical influenza activity has increased over recent weeks in 13 countries, it has passed its peak in Belgium, Iceland, Ireland and parts of the United Kingdom (England and Northern Ireland). Five countries showed a decrease in clinical influenza activity during the past week: Bulgaria, Romania, the Russian Federation (in the central, far eastern and Urals regions), Serbia and Ukraine. Medium levels of influenza activity were reported in 22 countries, mainly in western and central Europe and the Baltic states. One country (Slovakia) reported low activity this week.

In the period 13–20 November, 21 countries reported 181 new deaths associated with laboratory-confirmed pandemic (H1N1) 2009 influenza, raising the total since April 2009 from 471 to 652. The deaths were reported in Belgium (4), Croatia (2), Finland (3), France (14), Germany (7), Greece (3), Ireland (1), Italy (24), Luxembourg (1), the Netherlands (5), Norway (5), Poland (2), Portugal (3), the Republic of Moldova (2), Serbia (6), Spain (34), Sweden (2), Switzerland (1), the former Yugoslav Republic of Macedonia, (1), Turkey (33) and the United Kingdom (28). Poland, Switzerland and the former Yugoslav Republic of Macedonia reported their first laboratory-confirmed deaths during this week. Most pandemic (H1N1) 2009 cases have resolved without complications.

Virological update: week 46/2009

Of the 31 countries testing 20 or more sentinel specimens this week, influenza-positive rates ranged from 3.1% (Azerbaijan) to 78.6% (Slovenia). Fifteen of these countries reported rates greater than 50%. Sentinel physicians in the Region collected 6179 respiratory specimens this week, of which 2602 (42.1%) were positive for influenza virus. Of these virus detections, 2591 were type A (2490 pandemic A(H1) and 90 not subtyped) and 11 were type B.

In addition, 16 794 non-sentinel-source specimens were reported positive for influenza virus in week 46/2009: 16 782 type A (15 468 pandemic A(H1), 65 A(H3), 76 seasonal A(H1), 1173 not subtyped) and 12 type B.

Of the total of 59 434 specimens that have tested positive for influenza virus since week 40/2009, 51 936 (87.4%) were pandemic influenza A(H1) and these accounted for 99% of all influenza A viruses that were subtyped. In addition, 291 were seasonal influenza A(H1); 191 were influenza A(H3); 6900 were influenza A not subtyped; and 116 were influenza B. The number of influenza detections has risen sharply each week, from about 1 600 in week 40/2009, with 18% of sentinel specimens testing positive, to over 19 000 in week 46/2009, when 45% of sentinel specimens tested positive.

Comment

The pandemic is affecting most countries in the Region, and the intensity is high in 18, especially in children up to the age of 15. In three countries in western Europe the epidemic has passed its peak. In some countries reporting reduced activity, this may have been associated with school closures. Increasing clinical incidence has been corroborated by increases in virological influenza detections. Influenza detections continue to be far higher than historical peaks, and countries are recommended to prioritize their testing strategies to reduce the burden on national influenza centres and therefore national influenza surveillance systems.

As of week 46/2009, 17 countries had started vaccination campaigns against pandemic (H1N1) 2009 influenza. Reports of adverse

events are fewer than for seasonal influenza vaccination, and most events are mild local or systemic reactions. Eight countries in the Region are eligible to receive vaccine donated to WHO and distribution will begin by late November or early December 2009.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

Erratum

The clinical data for Belarus for week 45/2009 were incorrect and have been corrected in this week's bulletin.

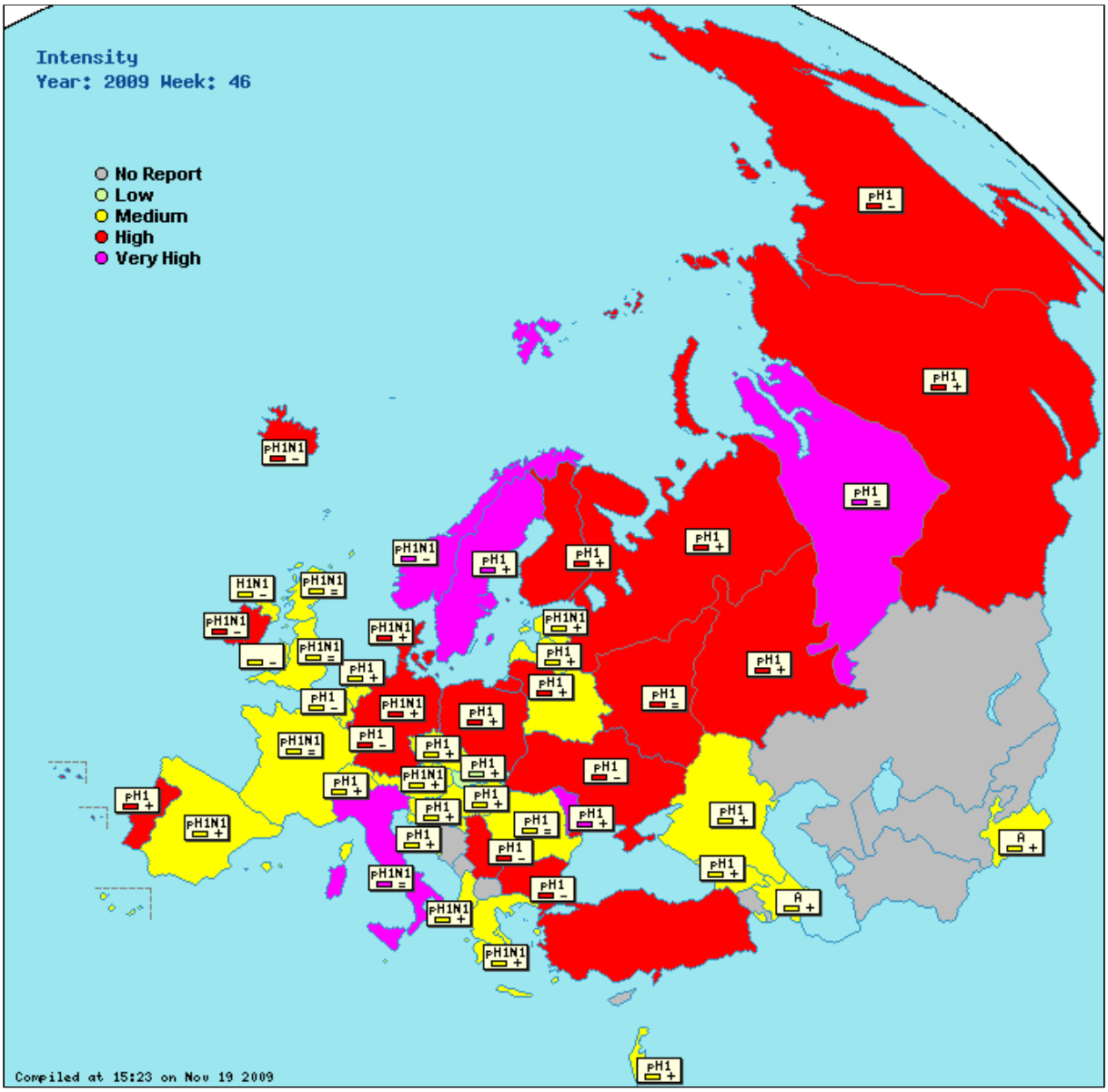
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

No activity = no laboratory-confirmed case(s) of influenza, or evidence of increased or unusual respiratory disease activity.
Sporadic = isolated cases of laboratory confirmed influenza infection
Localized = limited to one administrative unit of the country (or reporting site) only.
Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites).
Widespread = appearing in ≥50% of the administrative units of the country (or reporting sites).

Country comments (where available)

Latvia
Influenza activity continued to increase last week.Pandemic infuenza A(H1v) predominated.
Norway
The number of virus detections remains very high, but has decreased from the previous week.

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania	Medium	Local	Severe	Increasing					396.6 (graphs)	Click here
Austria	Medium	Widespread	Low	Increasing			Type A, Subtype pH1N1	1815.2 (graphs)		Click here
Azerbaijan	Medium	Local	Low	Increasing	320	3.1%	Type A	(graphs)		Click here
Belarus	Medium	Local		Decreasing					1164.5 (graphs)	Click here
Belgium	Medium	Widespread	Low	Decreasing	136	51.5%	Type A, Subtype pH1	392.8 (graphs)	1447.6 (graphs)	Click here
Bulgaria	High	Regional		Decreasing			Type A, Subtype pH1		1945.3 (graphs)	Click here
Croatia	Medium	Widespread	Moderate	Increasing	550	0%	Type A, Subtype pH1	191.8 (graphs)		Click here
Cyprus		Sporadic		Stable				(graphs)		Click here
Czech Republic	Medium	Local		Increasing	37	54.1%	Type A, Subtype pH1	95.0 (graphs)	1246.3 (graphs)	Click here
Denmark	High	Widespread		Increasing	52	59.6%	Type A, Subtype pH1N1	419.5 (graphs)		Click here
England	Medium	Widespread		Stable	273	28.9%	Type A, Subtype pH1N1	35.9 (graphs)	421.0 (graphs)	Click here
Estonia	Medium	Widespread	Moderate	Increasing	52	73.1%	Type A, Subtype pH1N1	18.6 (graphs)	467.7 (graphs)	Click here
Finland	High	Widespread	Moderate	Increasing	109	69.7%	Type A, Subtype pH1	305.9 (graphs)		Click here
France	Medium	Regional	Low	Stable	373	50.1%	Type A, Subtype pH1N1		1603.8 (graphs)	Click here
Georgia	Medium	Regional	Low	Increasing	123	4.9%	Type A, Subtype pH1	271.8 (graphs)		Click here
Germany	High	Widespread	Low	Increasing	362	49.7%	Type A, Subtype pH1N1		1769.2 (graphs)	Click here
Greece	Medium	Regional		Increasing	67	59.7%	Type A, Subtype pH1N1	219.4 (graphs)		Click here
Hungary	Medium	Local	Low	Increasing	130	30.0%	Type A, Subtype pH1 and H3	221.0 (graphs)		Click here
Iceland	High	Widespread		Decreasing	74	20.3%	Type A, Subtype pH1N1	141.9 (graphs)		Click here
Ireland	High	Widespread	Moderate	Decreasing	84	47.6%	Type A, Subtype pH1N1	134.4 (graphs)		Click here
Israel	Medium	Widespread	Low	Increasing	158	67.7%	Type A, Subtype pH1	223.5 (graphs)		Click here
Italy	Very High	Widespread		Stable	24	62.5%	Type A, Subtype pH1N1	626.7 (graphs)		Click here
Latvia	Medium	Regional		Increasing	5	100.0%	Type A, Subtype pH1	133.4 (graphs)	1443.5 (graphs)	Click here
Lithuania	High	Regional	Moderate	Increasing	20	70.0%	Type A, Subtype pH1	(graphs)		Click here
Luxembourg	High	Widespread	Low		51	29.4%	Type A, Subtype pH1	(graphs)		Click here
Malta	Medium	Regional	Low	Increasing				(graphs)		Click here
Montenegro								5.6 (graphs)	118.7 (graphs)	Click here
Netherlands	Medium	Widespread	Low	Increasing	94	53.2%	Type A, Subtype pH1	184.3 (graphs)		Click here
Northern Ireland	Medium	Sporadic		Decreasing	62	43.6%	Type A, Subtype H1N1	106.5 (graphs)		Click here
Norway	Very High	Widespread	Moderate	Decreasing	42	42.9%	Type A, Subtype pH1N1	596.0 (graphs)		Click here
Poland	High	Regional	Moderate	Increasing	110	16.4%	Type A, Subtype pH1	171.3 (graphs)		Click here
Portugal	High	Widespread		Increasing	38	44.7%	Type A, Subtype pH1	125.8 (graphs)		Click here
Republic of Moldova	Very High	Widespread	Severe	Increasing	954	58.7%	Type A, Subtype pH1	18.6 (graphs)	701.4 (graphs)	Click here
Romania	Medium	Regional	Moderate	Stable	93	49.5%	Type A, Subtype pH1	2.2 (graphs)	853.3 (graphs)	Click here
Russian Federation	High	Widespread		Stable			Type A, Subtype pH1		1274.2 (graphs)	Click here
Scotland	Medium	Regional		Stable	521	43.0%	Type A, Subtype pH1N1	42.1 (graphs)		Click here
Serbia	High	Regional	Low	Decreasing	0	0%	Type A, Subtype pH1	241.7 (graphs)		Click here
Slovakia	Low	Local	Low	Increasing	29	55.2%	Type A, Subtype pH1	522.4 (graphs)	2682.8 (graphs)	Click here
Slovenia	Medium	Widespread		Increasing	103	78.6%	Type A, Subtype pH1	76.8 (graphs)	1443.2 (graphs)	Click here
Spain	Medium	Widespread		Increasing	740	56.0%	Type A, Subtype pH1N1	360.8 (graphs)		Click here
Sweden	Very High	Widespread	Moderate	Increasing	191	33.0%	Type A, Subtype pH1	33.8 (graphs)		Click here
Switzerland	Medium	Widespread	Low	Increasing	81	45.7%	Type A, Subtype pH1	(graphs)		Click here
Tajikistan	Medium	Sporadic	Low	Increasing	107	7.5%	Type A	(graphs)		Click here
Turkey	High	Regional	Moderate	Stable				56.3 (graphs)		Click here
Ukraine	High	Widespread	Moderate	Decreasing			Type A, Subtype pH1		934.7 (graphs)	Click here
Wales	Medium	Widespread	Low	Decreasing	14	28.6%	None	36.0 (graphs)		Click here
Europe					6179	42.1%				Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness

Population: per 100,000 population
*: the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

High influenza activity in the European Region

Key points: week 47/2009

- This report is based on data received from 43 of the 53 Member States in the WHO European Region, and includes an update on the situation in Ukraine.
- 37% of specimens collected from sentinel sources in the Region tested positive for influenza virus.
- The incidence of clinical respiratory illness has increased in 16 countries over the past 3 weeks. Out of 12 countries that tested at a least 20 samples, 10 reported that 20% or more of sentinel specimens had tested positive for influenza.
- Countries throughout the Region reported high or very high intensity of influenza, with Albania and the Republic of Moldova reporting severe impact on health services.
- Pandemic (H1N1) 2009 was dominant in 38 countries and accounted for 98.8% of influenza A virus subtype detections.
- From 20 to 26 November 2009, 25 countries reported a total of 267 deaths involving laboratory-confirmed cases of pandemic (H1N1) 2009 virus infection.

Ukraine

Overall influenza activity appears to be decreasing. Preliminary tests of samples taken from patients in Ukraine reveal no significant changes in the pandemic (H1N1) 2009 virus. Analyses are being performed by two WHO influenza collaborating centres as part of the global influenza surveillance network.

Current situation: week 47/2009

Sixteen countries have reported increases in influenza-like illness (ILI) and/or acute respiratory infection (ARI) consultations (defined as countries with increases in the previous three weeks). These increases are particularly notable in the groups aged 0–4 and 5–14 years. In 10 of these countries (Austria, the Czech Republic, Estonia, Germany, Greece, Latvia, Slovakia, Spain, Sweden and Switzerland) the positivity rate of sentinel swab specimens exceeded 20% (minimum number of tested sentinel specimens per country: 20).

The intensity of clinical activity was described as very high in the Republic of Moldova, the Russian Federation (north-western, Siberian and Volga regions) and Sweden. Nineteen countries reported high intensity. Twenty-three reported ILI and/or ARI as geographically widespread. The impact on health services was described as severe in 2 countries (Albania, the Republic of Moldova), moderate in 15 and low in 12 others. For an overview of the season so far, see season tables.

While clinical influenza activity has increased over recent weeks in 16 countries, it appears to have passed its peak in Belgium, Iceland, Ireland, Ukraine and parts of the United Kingdom (Northern Ireland, Wales). Data for week 47 also indicate decreased activity in Bulgaria, Israel, the Netherlands, Norway and Serbia. In Germany and Spain, clinical activity is levelling off, which may indicate that it will peak soon.

In the period 20–26 November, 25 countries reported 267 new deaths associated with laboratory-confirmed pandemic (H1N1) 2009, raising the total number of deaths since April 2009 from to 919. The deaths were reported by Belgium (1), Croatia (6), the Czech Republic (1), Denmark (4), Finland (3), France (36), Germany (30), Greece (4), Hungary (3), Israel (11), Italy (20), the Netherlands (7), Norway (4), Portugal (8), the Republic of Moldova (4), Romania (2), the Russian Federation (6), Serbia (4), Slovakia (1), Slovenia (1), Spain (27), Sweden (9), Switzerland (2),Turkey (39) and the United Kingdom (34). Romania and Slovakia reported their first laboratory-confirmed deaths during this week.

In Norway, mutation was detected in three samples of pandemic (H1N1) 2009 virus. They were isolated from the first two fatal cases in the country and one patient with severe illness. Norwegian scientists have analysed samples from more than 70 patients with clinical illness and no further instances of this mutation have been detected. For further information, see Pandemic (H1N1) 2009 briefing note 17.

A cluster of cases of oseltamivir-resistant pandemic (H1N1) 2009 virus infections among patients in a hospital ward in Wales has been reported to WHO. No further spread has been observed and the virus remained susceptible to zanamivir. For further information, see the National Public Health Service for Wales.

Virological update: week 47/2009

Of the 34 countries testing 20 or more sentinel specimens this week, influenza-positive rates ranged from 0% (Croatia) to 83% (Lithuania). Sentinel physicians in the Region collected 5959 respiratory specimens this week, of which 2221 (37%) were positive for influenza virus. Of these virus detections, 2216 were type A (2041 pandemic A(H1) and 175 not subtyped) and 5 were type B.

In addition, 14 294 non-sentinel specimens were reported positive for influenza virus in week 47/2009: 14 242 type A (12 817 pandemic A(H1), 83 A(H3), 102 seasonal A(H1), 1240 not subtyped) and 52 type B.

Of the 77 816 specimens that have tested positive for influenza virus since week 40/2009, 68 634 (88%) were pandemic influenza A(H1) and these accounted for 99% of all influenza A viruses subtyped. In addition, 394 were seasonal influenza A(H1); 282 were influenza A(H3); 8336 were influenza A not subtyped; and 170 were influenza B. The number of influenza detections rose sharply from week 40/2009 (about 1600, with 18% of sentinel specimens testing positive), to week 46/2009 (over 19 000, with 45% of sentinel specimens testing positive) but decreased in week 47/2009 (16 515 with 37% of sentinel specimens testing positive).

Based on the genetic characterization of 156 influenza viruses reported from week 40/2009 to week 47/2009, all (100%) were pandemic A(H1N1), A/California/7/2009-like.

Seven countries have tested isolates of pandemic (H1N1) 2009 virus for antiviral resistance. Of the 904 cases tested, 4 were resistant to oseltamivir.

Comment

Despite the decrease in influenza virus detections in week 47/2009, the pandemic is affecting most countries in the Region, with the greatest incidence in children up to the age of 15. High or very high intensity was reported in 22 countries. While influenza activity continued to increase in 16 countries, decreasing levels have been observed in 10. The vast majority of influenza viruses detected were pandemic (H1N1) 2009.

The percentage of positive sentinel specimens and the total number of influenza detections slightly decreased in week 47/2009. Less testing is desirable in order to focus on confirmation of severe cases as well as analyses of samples from cases where treatment fails.

A WHO Collaborating Centre for International Drug Monitoring, the Uppsala Monitoring Centre, in Sweden, has set up a web page on influenza vaccine monitoring.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

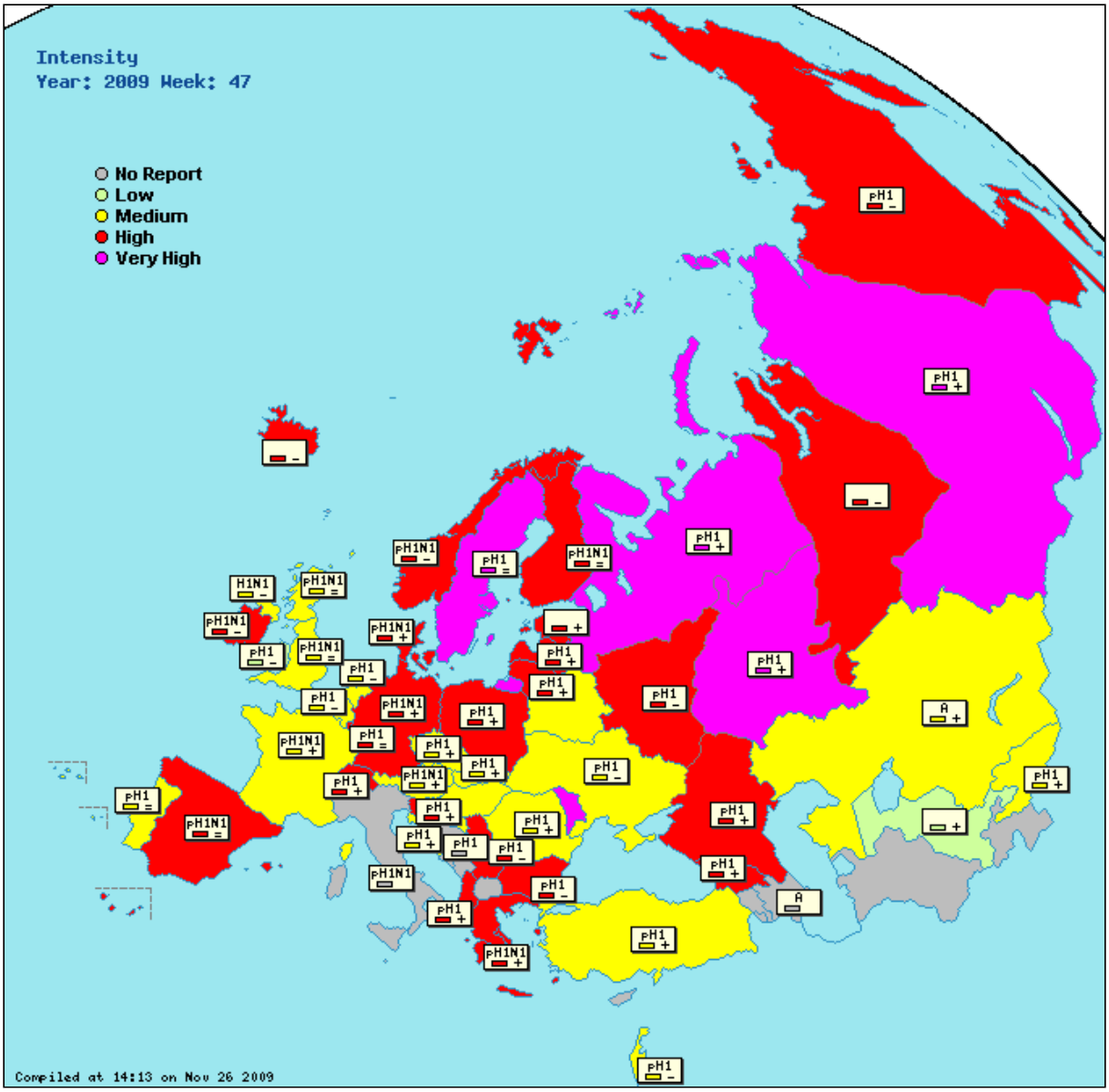
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no laboratory-confirmed case(s) of influenza, or evidence of increased or unusual respiratory disease activity.
Sporadic = isolated cases of laboratory confirmed influenza infection
Localized = limited to one administrative unit of the country (or reporting site) only.
Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites).
Widespread = appearing in ≥50% of the administrative units of the country (or reporting sites).

Country comments (where available)

Italy
During this last week, a significant decrease in the H1N1v influenza lab-confirmed cases has been reported, if compared to the previous week.

Norway
The number of virus detections remains high, but has declined over the last two weeks.

Portugal
Although the incidence rate was lower than the previous week, there is no enough information to classify it as a decreasing trend.

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania	High	Sporadic	Severe	Increasing	417	17.0%	Type A, Subtype pH1		427.1 (graphs)	Click here
Austria	Medium	Widespread	Low	Increasing	86	58.1%	Type A, Subtype pH1N1	1957.9 (graphs)		Click here
Azerbaijan					305	7.5%	Type A	(graphs)		Click here
Belarus	Medium	Local		Decreasing					1144.5 (graphs)	Click here
Belgium	Medium	Widespread	Low	Decreasing	144	41.0%	Type A, Subtype pH1	300.7 (graphs)	1385.4 (graphs)	Click here

Bosnia and Herzegovina					141	56.7%	Type A, Subtype pH1		(graphs)		Click here
Bulgaria	High	Regional		Decreasing			Type A, Subtype pH1			1198.8 (graphs)	Click here
Croatia	Medium	Widespread	Moderate	Increasing	619	0%	Type A, Subtype pH1	316.0 (graphs)			Click here
Czech Republic	Medium	Regional		Increasing	35	62.9%	Type A, Subtype pH1	219.1 (graphs)		1497.6 (graphs)	Click here
Denmark	High	Widespread		Increasing	43	39.5%	Type A, Subtype pH1N1	418.8 (graphs)			Click here
England	Medium	Regional		Stable	270	29.6%	Type A, Subtype pH1N1	39.2 (graphs)		444.7 (graphs)	Click here
Estonia	High	Widespread	Moderate	Increasing	95	50.5%	None	50.6 (graphs)		740.9 (graphs)	Click here
Finland	High	Widespread	Moderate	Stable	53	69.8%	Type A, Subtype pH1N1		(graphs)		Click here
France	Medium	Regional	Low	Increasing	290	61.4%	Type A, Subtype pH1N1			2487.5 (graphs)	Click here
Georgia	High	Regional	Moderate	Increasing	128	16.4%	Type A, Subtype pH1	324.8 (graphs)			Click here
Germany	High	Widespread	Low	Increasing	333	51.4%	Type A, Subtype pH1N1			1817.8 (graphs)	Click here
Greece	High	Widespread		Increasing	62	66.1%	Type A, Subtype pH1N1	395.0 (graphs)			Click here
Hungary	Medium	Regional	Low	Increasing				341.7 (graphs)			Click here
Iceland	High	Regional		Decreasing	39	18.0%	None	78.3 (graphs)			Click here
Ireland	High	Widespread	Moderate	Decreasing	114	38.6%	Type A, Subtype pH1N1	126.9 (graphs)			Click here
Israel	Medium	Widespread	Low	Decreasing	160	69.4%	Type A, Subtype pH1	185.0 (graphs)			Click here
Italy					60	56.7%	Type A, Subtype pH1N1		(graphs)		Click here
Kazakhstan	Medium	Sporadic	Moderate	Increasing	4	50.0%	Type A			(graphs)	Click here
Kyrgyzstan	Medium	Local	Moderate	Increasing	10	100.0%	Type A, Subtype pH1			(graphs)	Click here
Latvia	High	Widespread		Increasing	47	61.7%	Type A, Subtype pH1	424.8 (graphs)		1586.1 (graphs)	Click here
Lithuania	High	Regional	Moderate	Increasing	35	82.9%	Type A, Subtype pH1		(graphs)		Click here
Luxembourg	High	Widespread	Low		60	25.0%	Type A, Subtype pH1		(graphs)		Click here
Netherlands	Medium	Widespread	Low	Decreasing	80	47.5%	Type A, Subtype pH1	113.3 (graphs)			Click here
Northern Ireland	Medium	Sporadic		Decreasing	42	28.6%	Type A, Subtype H1N1	92.0 (graphs)			Click here
Norway	High	Widespread	Moderate	Decreasing	29	44.8%	Type A, Subtype pH1N1	462.0 (graphs)			Click here
Poland	High	Widespread	Moderate	Increasing	432	10.9%	Type A, Subtype pH1	299.5 (graphs)			Click here
Portugal	Medium	Widespread		Stable	55	70.9%	Type A, Subtype pH1	98.9 (graphs)			Click here
Republic of Moldova	Very High	Widespread	Severe	Decreasing				25.2 (graphs)		662.9 (graphs)	Click here
Romania	Medium	Regional	Moderate	Increasing	65	60.0%	Type A, Subtype pH1	5.8 (graphs)		1135.5 (graphs)	Click here
Russian Federation	High	Widespread		Stable			Type A, Subtype pH1			1399.3 (graphs)	Click here
Scotland	Medium	Regional		Stable	536	44.4%	Type A, Subtype pH1N1	42.9 (graphs)			Click here
Serbia	High	Regional	Low	Decreasing	0	0%	Type A, Subtype pH1	180.8 (graphs)			Click here
Slovakia	Medium	Local	Moderate	Increasing	23	65.2%	Type A, Subtype pH1	591.3 (graphs)		2723.3 (graphs)	Click here
Slovenia	High	Widespread		Increasing	97	80.4%	Type A, Subtype pH1	287.9 (graphs)		1741.9 (graphs)	Click here
Spain	High	Widespread		Stable	775	53.3%	Type A, Subtype pH1N1	371.4 (graphs)			Click here
Sweden	Very High	Widespread	Moderate	Stable	120	33.3%	Type A, Subtype pH1		(graphs)		Click here
Switzerland	High	Widespread	Low	Increasing	143	46.9%	Type A, Subtype pH1	350.4 (graphs)			Click here
Turkey	Medium	Regional	Moderate	Increasing			Type A, Subtype pH1	117.7 (graphs)			Click here
Ukraine	Medium	Regional	Moderate	Decreasing			Type A, Subtype pH1 and H1			618.1 (graphs)	Click here
Uzbekistan	Low	None	Low	Increasing			None			84.0 (graphs)	Click here
Wales	Low	Widespread	Low	Decreasing	12	25.0%	Type A, Subtype pH1	25.2 (graphs)			Click here
Europe					5959	37.3%					Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
***:** the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Increasing influenza activity in central and south-eastern Europe

Key points: week 48/2009

- This report is based on data received from 46 of the 53 Member States in the WHO European Region.
- 38% of specimens collected from sentinel sources in the European Region tested positive for influenza virus.
- Over the past 3 weeks, the incidence of clinical respiratory illness has increased in 9 countries, mostly in central and south-eastern Europe, and decreased in 6 others.
- Out of 28 countries that tested at least 20 sentinel specimens for influenza, 23 reported that 30% or more had tested positive for influenza.
- 19 countries throughout the European Region reported high or very high intensity of influenza, with 13 reporting a moderate impact on health services.
- Pandemic (H1N1) 2009 was dominant in 35 countries and accounted for nearly 100% of influenza A virus subtype detections in sentinel specimens and 98% of detections in non-sentinel specimens.
- From 27 November to 3 December, 29 countries reported a total of 324 deaths involving laboratory-confirmed cases of pandemic (H1N1) 2009 virus infection.

Current situation: week 48/2009

Nine countries reported increases in influenza-like illness (ILI) and/or acute respiratory infection (ARI) consultations (defined as countries with increases in the previous three weeks). Increasing influenza activity is most notable in central and south-eastern Europe, as the countries reporting increases are Albania, the Czech Republic, Estonia, Greece, Hungary, Latvia, Poland, the Republic of Moldova and Slovenia. These countries also appear to be reporting relatively sharper increases in consultation rates in the group aged 5–14 years than in the group aged 0–4. Of these countries, 7 tested at least 20 sentinel specimens and have reported a mean influenza positivity rate of 47% (median 45%) with a range of 13–74%.

The intensity of clinical activity was described as very high in two countries (Greece and Lithuania) and the Siberian region of the Russian Federation. Seventeen countries reported high intensity. Twenty-six reported ILI and/or ARI as geographically widespread. The impact on health services was described as moderate in 13 countries.

Clinical respiratory disease activity has declined over the past three weeks in Belgium, Iceland, Ireland, Norway, Serbia and Ukraine. With the exception of Iceland, these countries experienced rapid increases in clinical consultation rates associated with influenza virus circulation during the time since week 40, and reached peaks 3–4 weeks after the initial increases were observed. While consultation rates have subsequently declined somewhat more precipitously in Ukraine than the other countries, several regions in the eastern and western parts of Ukraine continue to report a medium intensity of influenza circulation and a moderate impact on health services.

From 27 November to 3 December, 29 countries reported a total of 324 deaths involving laboratory-confirmed cases of pandemic (H1N1) 2009 virus infection. This raises the total number of deaths reported since April 2009 from 919 to 1243. Austria, Latvia and Lithuania reported their first such deaths during this week.

Virological update: week 48/2009

Sentinel physicians collected 4224 respiratory specimens this week, of which 1606 (38%) were positive for influenza virus. Of these virus detections, 1604 were type A (1481 pandemic A(H1), 118 not subtyped and 5 influenza A(H3)) and 2 were type B. Of the 28 countries testing 20 or more sentinel specimens this week, influenza-positive rates ranged from 2% (Azerbaijan) to 100% (Austria) with a median of 39%, and a mean of 44%.

In addition, 11 376 non-sentinel specimens were reported positive for influenza virus in week 48/2009: 11 335 type A (10 017 pandemic A(H1), 65 A(H3), 104 seasonal A(H1), 1149 not subtyped) and 41 type B.

Based on the antigenic characterization of 238 influenza viruses reported from week 40/2009 to week 48/2009, 237 were pandemic A(H1N1), A/California/7/2009-like and 1 was B/Brisbane/60/2008-like. Genetic characterization of 95 of the pandemic viruses indicated that all were in the pandemic cluster represented by A/California/7/2009

Of the total of 89 129 specimens that have tested positive for influenza virus since week 40/2009, 78 614 (88.2%) were pandemic influenza A(H1) and these accounted for 99% of all influenza A viruses that were subtyped. In addition, 498 viruses were seasonal influenza A(H1); 340 were influenza A(H3); 9466 were influenza A not subtyped; and 211 were influenza B.

Seven countries have tested isolates of pandemic (H1N1) 2009 virus for oseltamivir resistance. Of the 935 cases tested, 10 were resistant to oseltamivir. All viruses tested for resistance to zanamivir (282/282) have been found to be zanamivir-sensitive and all viruses tested for resistance to adamantanes (64/64) have been found to be resistant.

Comment

The pandemic is affecting most countries in the WHO European Region, with some indication that central and south-eastern countries are currently experiencing the greatest intensity of influenza activity. The emergence of the pandemic (H1N1) 2009 virus has produced a level of influenza activity that is unusual for this time of year in Europe, as the proportion of sentinel specimens testing positive for influenza has ranged from 1% to 9% during week 48 over the previous 5 years. High or very high intensity of influenza and respiratory illness activity was reported in 19 countries, although 6 countries now appear to be past their initial peaks in disease activity

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

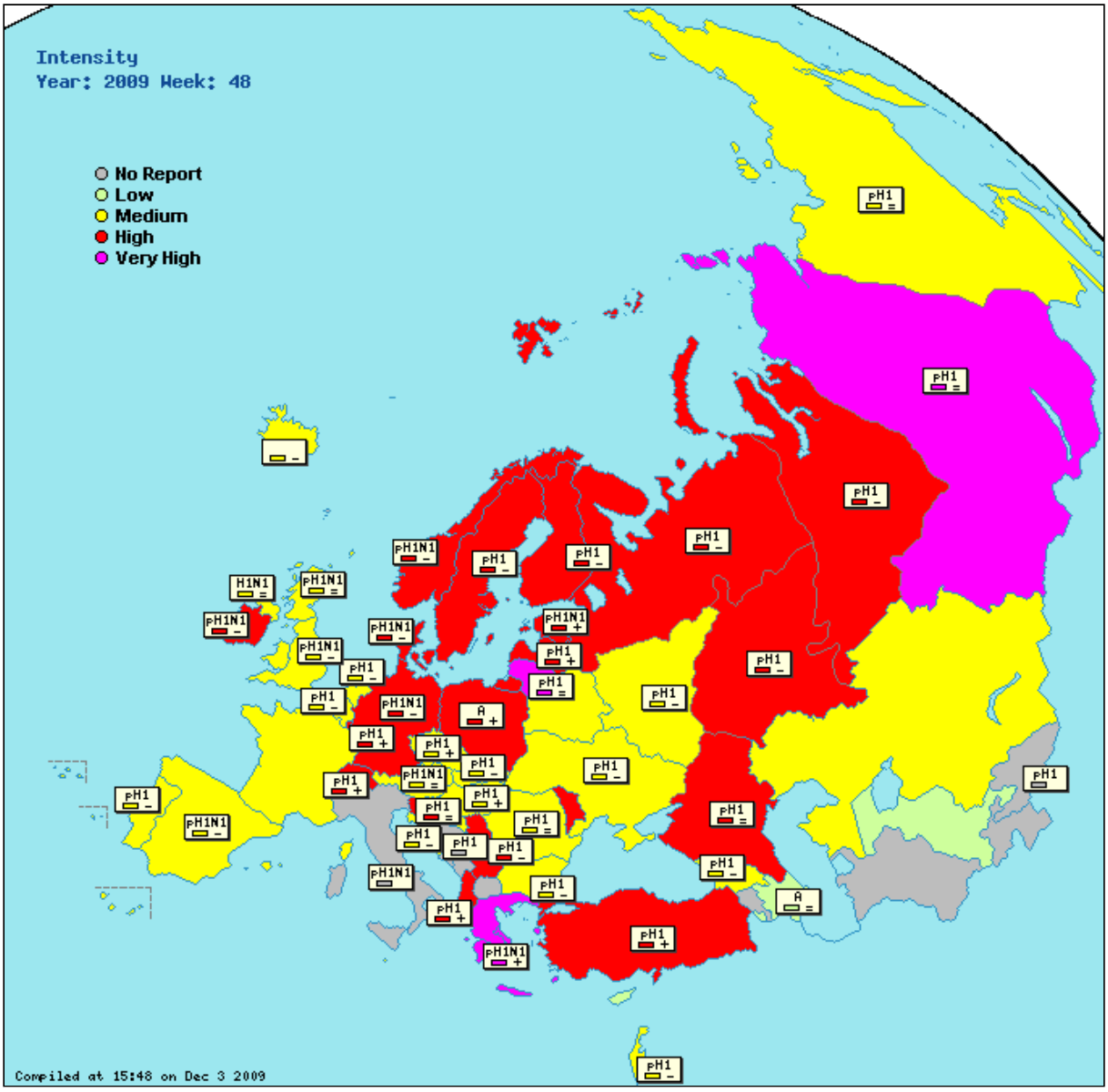
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no laboratory-confirmed case(s) of influenza, or evidence of increased or unusual respiratory disease activity.
Sporadic = isolated cases of laboratory confirmed influenza infection
Localized = limited to one administrative unit of the country (or reporting site) only.
Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites).
Widespread = appearing in ≥50% of the administrative units of the country (or reporting sites).

Country comments (where available)

Norway
The number of virus detections remains high, but has declined substantially over the last three weeks.

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania	High	Local	Moderate	Increasing	179	30.7%	Type A, Subtype pH1		517.8 (graphs)	Click here
Austria	Medium	Widespread	Low	Stable	45	100.0%	Type A, Subtype pH1N1	(graphs)		Click here
Azerbaijan	Low	Local	Low	Stable	210	2.4%	Type A	(graphs)		Click here
Belarus	Medium	Local		Decreasing					1107.2 (graphs)	Click here
Belgium	Medium	Widespread	Low	Decreasing	104	36.5%	Type A, Subtype pH1	246.7 (graphs)	1409.6 (graphs)	Click here
Bosnia and Herzegovina							Type A, Subtype pH1	(graphs)		Click here
Bulgaria	Medium	Local		Decreasing			Type A, Subtype pH1		880.3 (graphs)	Click here
Croatia	Medium	Widespread	Moderate	Decreasing			Type A, Subtype pH1	253.7 (graphs)		Click here
Cyprus	Low	Sporadic		Increasing				4407.5 (graphs)		Click here
Czech Republic	Medium	Regional		Increasing	44	56.8%	Type A, Subtype pH1	292.0 (graphs)	1619.2 (graphs)	Click here
Denmark	High	Widespread		Decreasing	22	36.4%	Type A, Subtype pH1N1	305.7 (graphs)		Click here
England	Medium	Regional		Decreasing	316	26.3%	Type A, Subtype pH1N1	38.6 (graphs)	463.8 (graphs)	Click here
Estonia	High	Widespread	Moderate	Increasing	94	44.7%	Type A, Subtype pH1N1	63.2 (graphs)	1007.5 (graphs)	Click here
Finland	High	Widespread	Moderate	Decreasing	32	31.3%	Type A, Subtype pH1	(graphs)		Click here
France	Medium	Widespread	Moderate	Increasing					2944.0 (graphs)	Click here
Georgia	Medium	Regional	Low	Decreasing	98	30.6%	Type A, Subtype pH1	252.5 (graphs)		Click here
Germany	High	Widespread	Low	Decreasing	200	50.5%	Type A, Subtype pH1N1		1530.9 (graphs)	Click here
Greece	Very High	Widespread		Increasing	38	73.7%	Type A, Subtype pH1N1	630.2 (graphs)		Click here
Hungary	Medium	Widespread	Low	Increasing	222	39.6%	Type A, Subtype pH1	403.7 (graphs)		Click here
Iceland	Medium	Local		Decreasing	22	4.6%	None	42.6 (graphs)		Click here
Ireland	High	Widespread	Moderate	Decreasing	75	24.0%	Type A, Subtype pH1N1	93.6 (graphs)		Click here
Israel	Medium	Widespread	Low	Decreasing	247	65.2%	Type A, Subtype pH1	161.6 (graphs)		Click here
Italy					92	39.1%	Type A, Subtype pH1N1	(graphs)		Click here
Kazakhstan	Medium	Sporadic	Moderate	Increasing					(graphs)	Click here
Kyrgyzstan					24	79.2%	Type A, Subtype pH1		(graphs)	Click here
Latvia	High	Widespread		Increasing	9	88.9%	Type A, Subtype pH1	537.3 (graphs)	2012.0 (graphs)	Click here
Lithuania	Very High	Widespread	Moderate	Stable	22	86.4%	Type A, Subtype pH1	(graphs)		Click here
Luxembourg	High	Widespread	Low		74	40.5%	Type A, Subtype pH1	(graphs)		Click here
Malta	Medium	Regional		Increasing				14519.6 (graphs)		Click here
Montenegro								233.5 (graphs)	578.6 (graphs)	Click here
Netherlands	Medium	Widespread	Low	Decreasing	44	38.6%	Type A, Subtype pH1	86.9 (graphs)		Click here
Northern Ireland	Medium	Sporadic		Stable	41	26.8%	Type A, Subtype H1N1	99.2 (graphs)		Click here
Norway	High	Widespread		Decreasing	26	26.9%	Type A, Subtype pH1N1	295.9 (graphs)		Click here
Poland	High	Widespread	Moderate	Increasing	364	12.9%	Type A	353.0 (graphs)		Click here
Portugal	Medium	Widespread		Decreasing	18	61.1%	Type A, Subtype pH1	71.7 (graphs)		Click here
Republic of Moldova	High	Widespread	Moderate	Decreasing				59.9 (graphs)	653.9 (graphs)	Click here
Romania	Medium	Regional	Moderate	Stable	129	56.6%	Type A, Subtype pH1	7.5 (graphs)	1276.1 (graphs)	Click here
Russian Federation	High	Widespread		Decreasing			Type A, Subtype pH1		1217.9 (graphs)	Click here
Scotland	Medium	Regional		Stable	523	29.5%	Type A, Subtype pH1N1	34.8 (graphs)		Click here
Serbia	High	Regional	Low	Decreasing	0	0%	Type A, Subtype pH1	168.7 (graphs)		Click here
Slovakia	Medium	Local	Low	Decreasing	13	61.5%	Type A, Subtype pH1	494.1 (graphs)	2495.2 (graphs)	Click here
Slovenia	High	Widespread		Stable	92	68.5%	Type A, Subtype pH1	201.6 (graphs)	1751.5 (graphs)	Click here
Spain	Medium	Widespread		Decreasing	599	45.1%	Type A, Subtype pH1N1	242.1 (graphs)		Click here
Sweden	High	Widespread	Moderate	Decreasing	81	29.6%	Type A, Subtype pH1	29.2 (graphs)		Click here
Switzerland	High	Widespread	Low	Increasing	125	56.8%	Type A, Subtype pH1	424.7 (graphs)		Click here
Turkey	High	Regional	Moderate	Increasing			Type A, Subtype pH1	75.1 (graphs)		Click here
Ukraine	Medium	Sporadic	Moderate	Decreasing			Type A, Subtype pH1		469.7 (graphs)	Click here
Uzbekistan	Low	None	Low	Stable					66.9 (graphs)	Click here
Wales	Medium	Widespread		Decreasing				63.0 (graphs)		Click here
Europe					4224	38.0%				Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
*: the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United

Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Influenza activity remains at low levels in the WHO European Region

- This report is based on data received from 41of the 53 Member States in the WHO European Region.
- 6.2% of specimens collected from sentinel sources tested positive for influenza.
- Of the 4 countries testing 20 or more sentinel specimens, 1 reported an influenza positivity rate of over 20%.
- A total of 4764 deaths associated with laboratory-confirmed pandemic (H1N1) 2009 has been reported in the Region since April 2009.

Current situation: week 12/2010

Clinical consultation rates for influenza-like illness (ILI) and acute respiratory infection (ARI) remain at low levels throughout the Region. Belarus, England (United Kingdom), Italy and Spain tested 20 or more sentinel specimens, but only Italy reported an influenza positivity rate over 20% (31%), of which all were influenza B viruses. England and Spain reported influenza positivity rates of 4.7% and 3.3%, respectively, of which all were pandemic (H1N1) 2009 viruses, and Belarus did not report the positivity rate. Most countries (N = 24) reported no dominant type of virus, indicating limited influenza activity. Four countries reported that pandemic (H1N1) 2009 was the dominant influenza virus in circulation. Influenza B was reported as dominant in two: Italy and Sweden.

Eight countries – Armenia, Kazakhstan, Kyrgyzstan, the Republic of Moldova, Romania, Switzerland, Ukraine and Uzbekistan – reported low levels of hospitalizations for severe acute respiratory infection (SARI) compared to rates observed during the peak of the winter pandemic wave. A total of 4764 deaths associated with laboratory-confirmed pandemic (H1N1) 2009 virus infection has been reported in the Region since April 2009.

Virological update: week 12/2010

Sentinel physicians collected 322 respiratory specimens, of which 20 (6.2%) were positive for influenza virus; 9 were type A (9 were subtyped as pandemic A(H1)) and 11 were influenza B. Of the 4 countries testing 20 or more sentinel specimens this week, influenza-positivity rates ranged from 0% to 31.0% (median: 4.0%; mean: 9.8%). Specimens from non-sentinel sources yielded 66 influenza detections: 54 type A (36 pandemic A(H1), 18 not subtyped) and 12 influenza B.

From week 40/2009 to week 12/2010, 165 593 influenza virus detections were reported: 164 488 were influenza A (99.3%) and 1105 (0.7%) were influenza B. Of the influenza A viruses, 149 295 (90.8%) were subtyped, with 147 645 being pandemic A(H1), 1039 A(H1), and 611 A(H3).

Based on the reported antigenic characterization of 2055 influenza viruses from week 40/2009 to week 12/2010: 2030 were A(H1) pandemic A/California/7/2009 (H1N1)-like; 17 were A(H3) A/Perth/16/2009 (H3N2)-like; 1 was A(H1) A/Brisbane/59/2007 (H1N1)-like and 7 were B/Brisbane/60/2008-like (B/Victoria/2/87 lineage). Genetic characterizations were available for 1196 isolates; 1169 belonged to the A/California/7/2009 A(H1N1) pandemic group; 1 belonged to the A/Brisbane/10/2007 (H3) group; 12 to the A/Perth/16/2009 (H3N2) group; 5 to the A/Victoria/208/2009 (H3N2) group; 2 to the B/Bangladesh/3333/2007 (Yamagata lineage) and 7 to the B/England/393/2008 (Victoria lineage) group.

Comment

Pandemic influenza activity has shown a decreasing or stable trend in recent weeks and the winter wave is effectively over in western Europe. The current influenza positivity rate for the Region is low (6.2%), and in week 12/2010 the total number of sentinel influenza B detections exceeded that of influenza A. The viruses characterized to date correspond to those recommended for influenza vaccines for use in the 2010–2011 northern hemisphere influenza season (see the WHO headquarters web site).

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

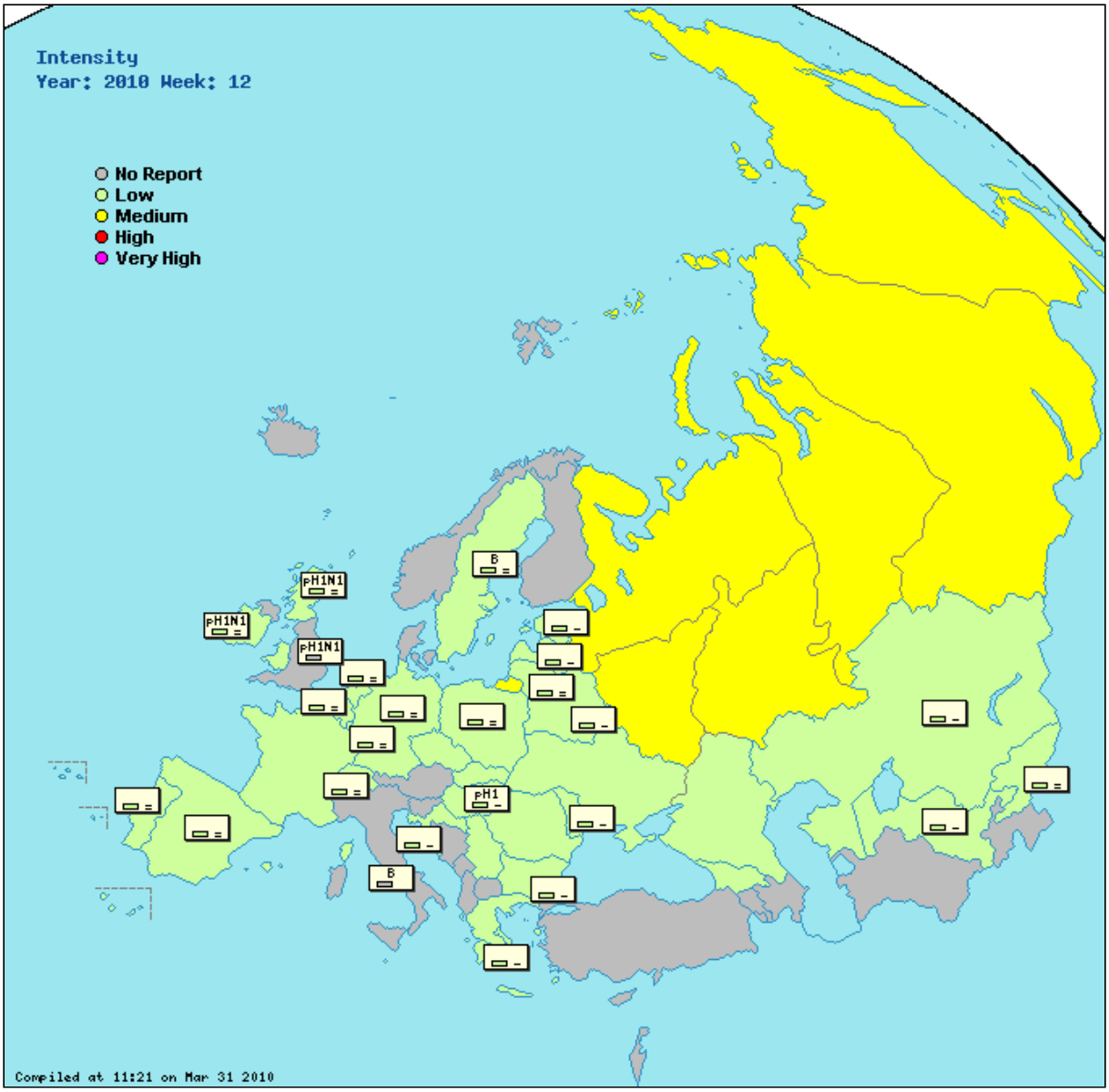
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no evidence of influenza virus activity (clinical activity remains at baseline levels)
Sporadic = isolated cases of laboratory confirmed influenza infection
Local outbreak = increased influenza activity in local areas (e.g. a city) within a region, or outbreaks in two or more institutions (e.g. schools) within a region. Laboratory confirmed.
Regional activity = influenza activity above baseline levels in one or more regions with a population comprising less than 50% of the country's total population. Laboratory confirmed.
Widespread = influenza activity above baseline levels in one or more regions with a population comprising 50% or more of the country's population. Laboratory confirmed.

Country comments (where available)

Malta
situation stable

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Armenia								(graphs)	(graphs)	Click here
Azerbaijan					15	0%	None	(graphs)		Click here
Belarus	Low	Sporadic	Low	Decreasing	24	0%	None		843.1 (graphs)	Click here
Belgium	Low	Sporadic		Stable	12	8.3%	None	56.0 (graphs)	1388.2 (graphs)	Click here
Bosnia and Herzegovina							None	(graphs)		Click here
Bulgaria	Low	None		Decreasing	0	0%	None	(graphs)	700.8 (graphs)	Click here
Croatia	Low	Sporadic	Low	Decreasing			None	0.3 (graphs)		Click here
Czech Republic	Low	Sporadic		Stable				20.0 (graphs)	754.5 (graphs)	Click here

Denmark					4	25.0%	None	(graphs)			Click here
England					61	3.3%	Type A, Subtype pH1N1	(graphs)			Click here
Estonia	Low	Sporadic	Low	Decreasing	16	0%	None	4.3 (graphs)	235.9	(graphs)	Click here
France	Low	Sporadic	Low	Stable				(graphs)	1276.1	(graphs)	Click here
Georgia	Low	Widespread	Low	Decreasing				166.1 (graphs)			Click here
Germany	Low	Sporadic	Low	Stable	17	17.7%	None	(graphs)	845.7	(graphs)	Click here
Greece	Low	Sporadic		Decreasing	2	0%	None	52.0 (graphs)		(graphs)	Click here
Hungary	Low	Sporadic	Low	Decreasing	18	0%	Type A, Subtype pH1	57.3 (graphs)		(graphs)	Click here
Ireland	Low	Sporadic	Low	Stable	7	0%	Type A, Subtype pH1N1	7.1 (graphs)		(graphs)	Click here
Italy					29	31.0%	Type B	(graphs)			Click here
Kazakhstan	Low	Sporadic	Low	Decreasing	5	0%	None			(graphs)	Click here
Kyrgyzstan	Low	None	Low	Stable	0	0%	None		29.8	(graphs)	Click here
Latvia	Low	Sporadic		Decreasing	0	0%	None	0.0 (graphs)	1106.4	(graphs)	Click here
Lithuania	Low	Sporadic	Low	Stable	2	0%	None	1.6 (graphs)	452.0	(graphs)	Click here
Luxembourg	Low	Sporadic	Low		10	10.0%	None	(graphs)			Click here
Malta	Low	None	Low	Stable				(graphs)		(graphs)	Click here
Montenegro								5.0 (graphs)	496.2	(graphs)	Click here
Netherlands	Low	None		Stable	2	0%	None	17.2 (graphs)		(graphs)	Click here
Poland	Low	None	Low	Stable	9	0%	None	85.5 (graphs)		(graphs)	Click here
Portugal	Low	Sporadic		Stable	3	0%	None	3.8 (graphs)		(graphs)	Click here
Republic of Moldova	Low	Sporadic	Low	Decreasing			None	5.3 (graphs)	103.9	(graphs)	Click here
Romania	Low	None	Low	Decreasing				0.7 (graphs)	746.9	(graphs)	Click here
Russian Federation	Medium	Sporadic		Stable					619.5	(graphs)	Click here
Scotland	Low	Sporadic	Low	Stable	14	0%	Type A, Subtype pH1N1	1.6 (graphs)	240.6	(graphs)	Click here
Serbia	Low	None	Low	Decreasing				32.7 (graphs)			Click here
Slovakia	Low	Sporadic	Low	Stable				(graphs)			Click here
Slovenia					3	0%	None	(graphs)			Click here
Spain	Low	None		Stable	43	4.7%	None	8.5 (graphs)		(graphs)	Click here
Sweden	Low	None	Low	Stable	8	12.5%	Type B	1.4 (graphs)		(graphs)	Click here
Switzerland	Low	None	Low	Stable	9	0%	None	9.2 (graphs)			Click here
Turkey					9	0%	None	(graphs)			Click here
Ukraine	Low	Sporadic	Low	Decreasing					417.4	(graphs)	Click here
Uzbekistan	Low	None	Low	Decreasing			None		21.3	(graphs)	Click here
Wales	Low	Sporadic	Low	Decreasing				1.0 (graphs)		(graphs)	Click here
Europe					322	6.2%					Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
***:** the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

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Influenza activity remains at low levels in the WHO European Region

- This report is based on data received from 45 of the 53 Member States in the WHO European Region.
- 5.4% of specimens collected from sentinel sources tested positive for influenza.
- Of the 6 countries testing 20 or more sentinel specimens, none reported an influenza positivity rate of over 20%.
- A total of 4777 deaths associated with laboratory-confirmed pandemic (H1N1) 2009 has been reported in the Region since April 2009.
- In the Netherlands, a mutation in the pandemic strain with reduced susceptibility to zanamivir and oseltamivir was identified in an immunocompromised child who subsequently died (see the virological comment below for further details).

Current situation: week 13/2010

Clinical consultation rates for influenza-like illness (ILI) and acute respiratory infection (ARI) remain at low levels throughout the Region. Belarus, England (United Kingdom), France, Georgia, Hungary, and Kazakhstan tested 20 or more sentinel specimens but only Belarus and Kazakhstan reported influenza positivity rates: 10% and 9.5% respectively. Most countries (N = 36) reported no dominant type of virus, indicating limited influenza activity. Six countries reported that pandemic (H1N1) 2009 was the dominant influenza virus in circulation. Italy, Latvia, Norway, the Russian Federation and Sweden reported influenza B as the dominant type of virus.

Six countries – Armenia, Kazakhstan, Malta, the Republic of Moldova, Ukraine and Uzbekistan – reported hospitalizations for severe acute respiratory infection (SARI), at low levels compared to rates observed during the peak of the winter pandemic wave. A total of 4777 deaths associated with laboratory-confirmed pandemic (H1N1) 2009 virus infection has been reported in the Region since April 2009.

Virological update: week 13/2010

Sentinel physicians collected 333 respiratory specimens, of which 18 (5.4%) were positive for influenza virus; 8 were type A (6 were subtyped as pandemic A(H1)) and 10 were influenza B. Of the 6 countries testing 20 or more sentinel specimens this week, influenza-positivity rates ranged from 0% to 10.0% (median: 0%; mean: 3.3%). Specimens from non-sentinel sources yielded 192 influenza detections: 68 type A (36 pandemic A(H1), 11 A(H3), and 21 not subtyped) and 124 influenza B.

From week 40/2009 to week 13/2010, 164 629 influenza virus detections were reported: 163 281 were influenza A (99.2%) and 1348 (0.8%) were influenza B. Of the influenza A viruses, 148 610 (91.0%) were subtyped, with 146 920 being pandemic A(H1), 1060 A(H1), and 630 A(H3).

Based on the reported antigenic characterization of 2073 influenza viruses from week 40/2009 to week 13/2010: 2047 were A(H1) pandemic A/California/7/2009 (H1N1)-like; 17 were A(H3) A/Perth/16/2009 (H3N2)-like; 1 was A(H1) A/Brisbane/59/2007 (H1N1)-like; 3 were B/Florida/4/2006-like (B/Yamagata/16/88 lineage) and 5 were B/Brisbane/60/2008-like (B/Victoria/2/87 lineage). Genetic characterizations were available for 1238 isolates; 1209 belonged to the A/California/7/2009 A(H1N1) pandemic group; 1 belonged to the A/Brisbane/10/2007 (H3) group; 13 to the A/Perth/16/2009 (H3N2) group; 5 to the A/Victoria/208/2009 (H3N2) group; 2 to the B/Bangladesh/3333/2007 (Yamagata lineage) and 8 to the B/England/393/2008 (Victoria lineage) group.

Comment

Pandemic influenza activity has shown a decreasing or stable trend in recent weeks and the winter wave is effectively over in western Europe. The current influenza positivity rate for the Region is low (5.4%), and in week 13/2010 the total number of sentinel influenza B detections again exceeded that of influenza A. The viruses characterized to date correspond to those recommended for influenza vaccines for use in the 2010–2011 northern hemisphere influenza season (see the WHO headquarters web site).

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

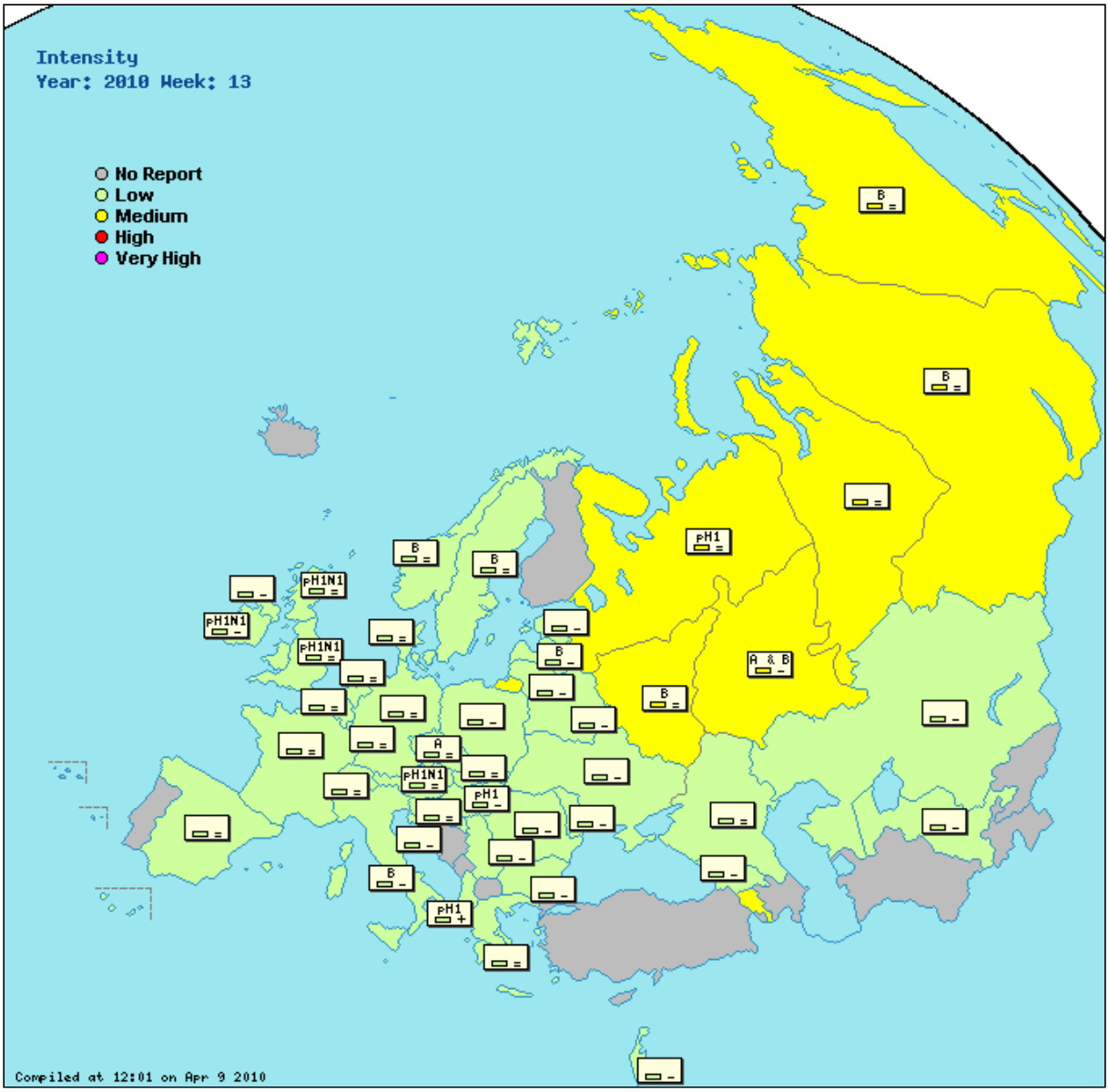
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no evidence of influenza virus activity (clinical activity remains at baseline levels)
Sporadic = isolated cases of laboratory confirmed influenza infection
Local outbreak = increased influenza activity in local areas (e.g. a city) within a region, or outbreaks in two or more institutions (e.g. schools) within a region. Laboratory confirmed.
Regional activity = influenza activity above baseline levels in one or more regions with a population comprising less than 50% of the country's total population. Laboratory confirmed.
Widespread = influenza activity above baseline levels in one or more regions with a population comprising 50% or more of the country's population. Laboratory confirmed.

Country comments (where available)

Malta
situation stable
Netherlands
In the Netherlands, a case of pandemic A(H1N1) 2009 developed in an immunocompromised child with reduced susceptibility to zanamivir and oseltamivir due to an amino-acid mutation at position 223 in the neuraminidase. The child with an underlying condition that rendered him susceptible to infection died due to deterioration of pulmonary problems. No onward transmission of this variant was detected. Previously, amino-acid mutations at the 223 (n1 numbering) or 222 (n2 numbering) position in the neuraminidase have been reported in A(H5N1) and seasonal influenza viruses associated with reduced susceptibility or an enhanced level of resistance in combination with other resistance mutations (e.g. H275Y), for oseltamivir only or for both oseltamivir and zanamivir [Hurt, AC et al. Antimicrobial agents and chemotherapy 2009; 53: 4433-40]. Therefore, inclusion of screening for variation of amino-acids at this position is warranted. The clinical implications of this A(H1N1) 2009 variant are being assessed and a publication is expected.

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania	Low	Sporadic	Low	Increasing	11	9.1%	Type A, Subtype pH1		370.3 (graphs)	Click here
Armenia	Medium	Regional	Moderate	Stable					(graphs)	Click here
Austria	Low	None		Stable	1	0%	Type A, Subtype pH1N1	0.0 (graphs)		Click here
Azerbaijan					6	0%	None	(graphs)		Click here
Belarus	Low	Sporadic	Low	Decreasing	30	10.0%	None		728.2 (graphs)	Click here
Belgium	Low	Sporadic		Stable	10	0%	None	40.3 (graphs)	1215.3 (graphs)	Click here
Bosnia and Herzegovina							None	(graphs)		Click here
Bulgaria	Low	None		Decreasing	0	0%	None	(graphs)	526.6 (graphs)	Click here
Croatia	Low	Sporadic	Low	Decreasing			None	0.1 (graphs)		Click here
Czech Republic	Low	Sporadic		Stable	8	25.0%	Type A	20.7 (graphs)	691.8 (graphs)	Click here
Denmark	Low	None		Stable	5	20.0%	None	28.0 (graphs)	(graphs)	Click here
England	Low	Sporadic		Stable	36	0%	Type A, Subtype pH1N1	4.3 (graphs)	328.3 (graphs)	Click here
Estonia	Low	Sporadic	Low	Decreasing	10	0%	None	2.2 (graphs)	204.1 (graphs)	Click here
France	Low	Sporadic	Low	Stable	35	0%	None	(graphs)	1170.4 (graphs)	Click here
Georgia	Low	None	Low	Decreasing	22	0%	None	72.3 (graphs)		Click here
Germany	Low	Sporadic	Low	Stable	7	0%	None	(graphs)	644.1 (graphs)	Click here
Greece	Low	Sporadic		Stable	1	0%	None	52.6 (graphs)	(graphs)	Click here
Hungary	Low	Sporadic	Low	Decreasing	20	0%	Type A, Subtype pH1	36.9 (graphs)	(graphs)	Click here
Ireland	Low	Sporadic	Low	Decreasing	3	0%	Type A, Subtype pH1N1	4.2 (graphs)	(graphs)	Click here
Israel	Low	None	Low	Decreasing	0	0%	None	4.0 (graphs)		Click here
Italy	Low	Local	Low	Decreasing	14	50.0%	Type B	97.3 (graphs)	(graphs)	Click here
Kazakhstan	Low	Sporadic	Low	Decreasing	21	9.5%	None		(graphs)	Click here
Kyrgyzstan					7	0%	None		(graphs)	Click here
Latvia	Low	Sporadic		Decreasing	0	0%	Type B	0.0 (graphs)	721.0 (graphs)	Click here
Lithuania	Low	Sporadic	Low	Decreasing	1	0%	None	0.3 (graphs)	365.1 (graphs)	Click here
Luxembourg	Low	None	Low		6	0%		(graphs)		Click here
The former Yugoslav Republic of Macedonia							None	(graphs)		Click here
Malta	Low	None	Low	Stable				(graphs)	(graphs)	Click here
Montenegro								3.6 (graphs)	419.6 (graphs)	Click here
Netherlands	Low	None		Stable	3	0%	None	17.5 (graphs)	(graphs)	Click here
Northern Ireland	Low	None		Decreasing	2	0%	None	16.3 (graphs)	365.8 (graphs)	Click here
Norway	Low	Sporadic	Low	Stable	0	0%	Type B	11.0 (graphs)	(graphs)	Click here
Poland	Low	Sporadic	Low	Decreasing	11	0%	None	73.4 (graphs)	(graphs)	Click here
Portugal					0	0%	None	(graphs)		Click here
Republic of Moldova	Low	Sporadic	Low	Decreasing			None	3.6 (graphs)	108.8 (graphs)	Click here
Romania	Low	None	Low	Decreasing	1	0%	None	0.0 (graphs)	571.4 (graphs)	Click here
Russian Federation	Medium	Sporadic		Stable			Type B		608.3 (graphs)	Click here
Scotland	Low	Sporadic	Low	Stable	17	5.9%	Type A, Subtype pH1N1	2.5 (graphs)	189.8 (graphs)	Click here
Serbia	Low	None	Low	Decreasing	1	0%	None	22.6 (graphs)		Click here
Slovakia	Low	Sporadic	Low	Stable	2	0%	None	(graphs)		Click here
Slovenia	Low	None		Stable	2	0%	None	0.0 (graphs)	891.1 (graphs)	Click here
Spain	Low	None		Stable	17	0%	None	5.3 (graphs)	(graphs)	Click here
Sweden	Low	None	Low	Stable	11	9.1%	Type B	0.0 (graphs)	(graphs)	Click here
Switzerland	Low	None	Low	Stable	2	0%	None	7.3 (graphs)		Click here
Turkey					7	0%	None	(graphs)		Click here
Ukraine	Low	Sporadic	Low	Decreasing	3	0%	None		385.8 (graphs)	Click here
Uzbekistan	Low	None	Low	Decreasing			None		18.8 (graphs)	Click here
Wales	Low	Sporadic	Low	Stable				1.8 (graphs)	(graphs)	Click here
Europe					333	5.4%				Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
*: the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Influenza activity in Europe is at a low level typical for this time of year

- This report is based on data received from 46 of the 53 Member States in the WHO European Region.
- 6.9% of specimens collected from sentinel sources tested positive for influenza.
- A total of 4784 deaths associated with laboratory-confirmed pandemic (H1N1) 2009 has been reported in the Region since April 2009.

Current situation: week 14/2010

Clinical consultation rates for influenza-like illness (ILI) and acute respiratory infection (ARI) remain at low levels throughout the Region. No countries tested 20 or more sentinel specimens. Overall 6.9% percent of sentinel specimens tested positive across the Region. Most countries (N = 38) reported no dominant type of virus, indicating limited influenza activity. Of the 10 countries that reported a dominant virus, 5 reported pandemic (H1N1) 2009, 4 reported influenza B and 1 reported influenza type A.

Virological update: week 14/2010

Sentinel physicians collected 175 respiratory specimens, of which 12 (6.9%) were positive for influenza virus; 3 were type A (2 were subtyped as pandemic A(H1), and 1 was not subtyped) and 9 were influenza B. Specimens from non-sentinel sources yielded 164 influenza detections: 36 type A (21 pandemic A(H1), 7 A(H3), 4 A (H1) and 4 not subtyped) and 128 influenza B.

From week 40/2009 to week 14/2010, 163 013 influenza virus detections were reported: 161 541 were influenza A (99.1%) and 1472 (0.9%) were influenza B. Of the influenza A viruses, 148 302 (91.8%) were subtyped, with 146 603 being pandemic A(H1), 1063 A(H1), and 636 A(H3).

Based on the reported antigenic characterization of 2300 influenza viruses from week 40/2009 to week 14/2010: 2277 were A(H1) pandemic A/California/7/2009 (H1N1)-like; 17 were A(H3) A/Perth/16/2009 (H3N2)-like; 1 was A(H1) A/Brisbane/59/2007 (H1N1)-like; and 5 were B/Brisbane/60/2008-like (B/Victoria/2/87 lineage). Genetic characterizations were available for 1243 isolates; 1214 belonged to the A/California/7/2009 A(H1N1) pandemic group; 1 belonged to the A/Brisbane/10/2007 (H3) group; 13 to the A/Perth/16/2009 (H3N2) group; 5 to the A/Victoria/208/2009 (H3N2) group; 2 to the B/Bangladesh/3333/2007 (Yamagata lineage) and 8 to the B/England/393/2008 (Victoria lineage) group.

Comment

Influenza activity is low throughout the Region, and pandemic (H1N1) 2009 winter activity has run its course. The current influenza positivity rate for the Region is low (6.9%), and in week 14/2010 the total number of sentinel influenza B detections clearly exceeded that of influenza A. The viruses characterized to date correspond to those recommended for influenza vaccines for use in the 2010–2011 northern hemisphere influenza season.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

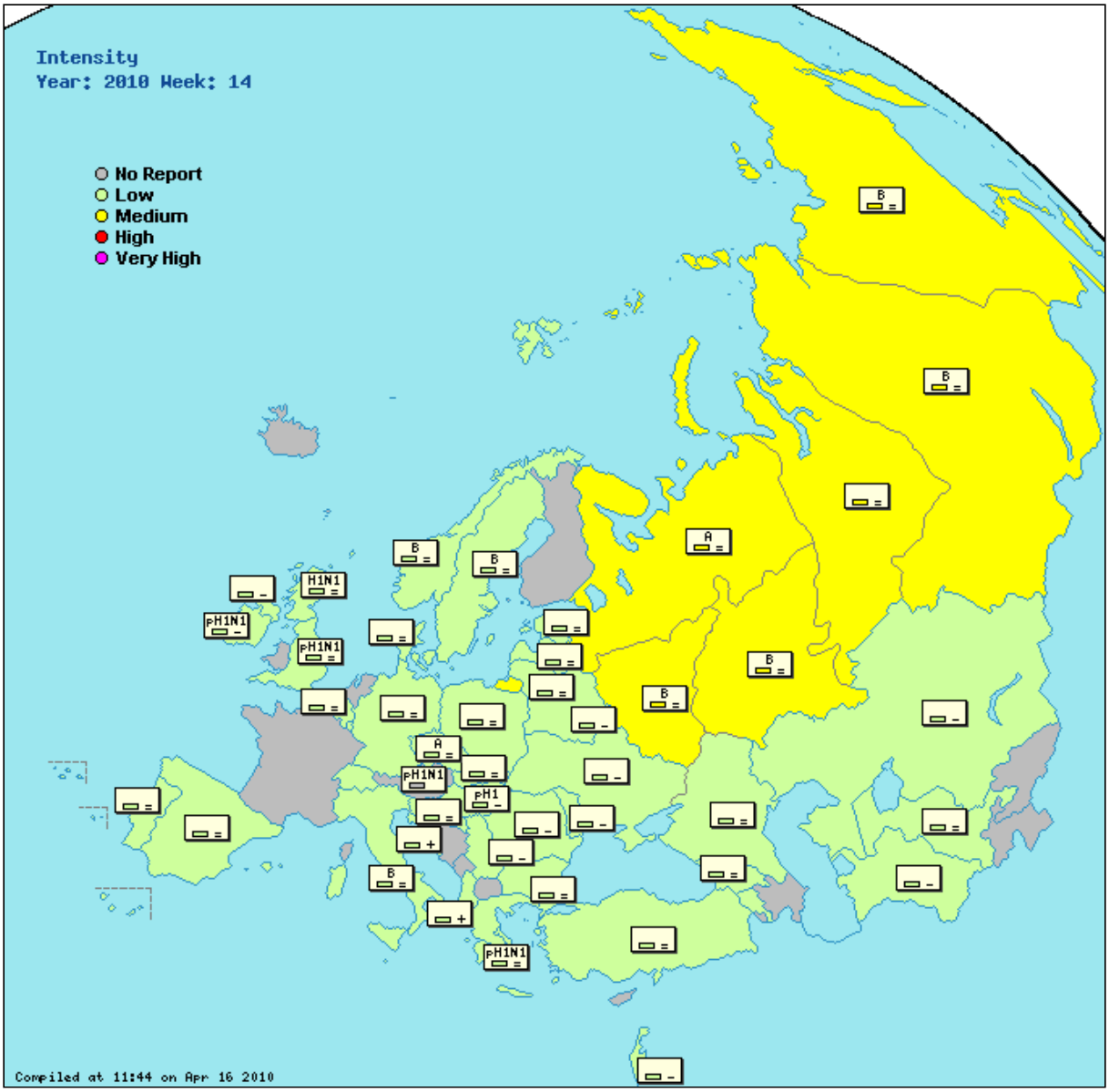
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no evidence of influenza virus activity (clinical activity remains at baseline levels)
Sporadic = isolated cases of laboratory confirmed influenza infection
Local outbreak = increased influenza activity in local areas (e.g. a city) within a region, or outbreaks in two or more institutions (e.g. schools) within a region. Laboratory confirmed.
Regional activity = influenza activity above baseline levels in one or more regions with a population comprising less than 50% of the country's total population. Laboratory confirmed.
Widespread = influenza activity above baseline levels in one or more regions with a population comprising 50% or more of the country's population. Laboratory confirmed.

Country comments (where available)

Malta
situation stable

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania	Low	Sporadic	Low	Increasing	5	0%	None		365.5 (graphs)	Click here
Armenia	Low	Regional	Low	Decreasing				(graphs)	(graphs)	Click here
Austria					0	0%	Type A, Subtype pH1N1	(graphs)		Click here
Azerbaijan					4	0%	None	(graphs)		Click here
Belarus	Low	Sporadic	Low	Decreasing	10	20.0%	None		761.1 (graphs)	Click here
Belgium	Low	Sporadic		Stable	7	28.6%	None	11.8 (graphs)	460.8 (graphs)	Click here
Bosnia and Herzegovina							None	(graphs)		Click here
Bulgaria	Low	None		Stable	0	0%	None	(graphs)	495.6 (graphs)	Click here

Croatia	Low	Local	Low	Increasing			None	0.4 (graphs)			Click here
Czech Republic	Low	Sporadic		Stable	10	10.0%	Type A	16.8 (graphs)	683.3	(graphs)	Click here
Denmark	Low	None		Stable	2	0%	None	19.5 (graphs)		(graphs)	Click here
England	Low	Sporadic		Stable	11	0%	Type A, Subtype pH1N1	3.7 (graphs)	304.9	(graphs)	Click here
Estonia	Low	Sporadic	Low	Stable	8	0%	None	2.5 (graphs)	216.4	(graphs)	Click here
France					7	0%	None			(graphs)	Click here
Georgia	Low	None	Low	Stable	15	0%	None	89.8 (graphs)			Click here
Germany	Low	Sporadic	Low	Stable	2	0%	None	(graphs)	654.7	(graphs)	Click here
Greece	Low	Sporadic		Stable	0	0%	Type A, Subtype pH1N1	72.4 (graphs)		(graphs)	Click here
Hungary	Low	Sporadic	Low	Decreasing	10	0%	Type A, Subtype pH1	34.9 (graphs)		(graphs)	Click here
Ireland	Low	Sporadic	Low	Decreasing	2	0%	Type A, Subtype pH1N1	2.2 (graphs)		(graphs)	Click here
Israel	Low	None	Low	Decreasing	3	0%	None	2.6 (graphs)			Click here
Italy	Low	Local	Low	Stable	6	33.3%	Type B	93.5 (graphs)		(graphs)	Click here
Kazakhstan	Low	Sporadic	Low	Decreasing	10	10.0%	None			(graphs)	Click here
Kyrgyzstan					1	0%	None			(graphs)	Click here
Latvia	Low	Sporadic		Stable	0	0%	None	0.0 (graphs)	803.1	(graphs)	Click here
Lithuania	Low	None	Low	Stable	2	0%	None	0.6 (graphs)	352.2	(graphs)	Click here
Luxembourg	Low	None	Low					(graphs)			Click here
The former Yugoslav Republic of Macedonia							None	(graphs)			Click here
Malta	Low	None	Low	Stable				(graphs)		(graphs)	Click here
Montenegro								1.9 (graphs)	404.4	(graphs)	Click here
Netherlands					9	0%	None	(graphs)			Click here
Northern Ireland	Low	None		Decreasing	0	0%	None	8.3 (graphs)	255.1	(graphs)	Click here
Norway	Low	Sporadic	Low	Stable	0	0%	Type B	13.6 (graphs)		(graphs)	Click here
Poland	Low	None	Low	Stable	3	0%	None	67.1 (graphs)		(graphs)	Click here
Portugal	Low	None	Low	Stable	0	0%	None	0.0 (graphs)		(graphs)	Click here
Republic of Moldova	Low	Sporadic	Low	Decreasing			None	1.8 (graphs)	90.1	(graphs)	Click here
Romania	Low	None	Low	Decreasing	3	0%	None	0.2 (graphs)	492.5	(graphs)	Click here
Russian Federation	Medium	Sporadic		Increasing	0	0%	Type B		594.1	(graphs)	Click here
Scotland	Low	Sporadic	Low	Stable	9	0%	Type A, Subtype H1N1	2.8 (graphs)	187.1	(graphs)	Click here
Serbia	Low	None	Low	Decreasing	1	0%	None	21.3 (graphs)			Click here
Slovakia	Low	Sporadic	Low	Stable	3	0%		(graphs)			Click here
Slovenia	Low	None		Stable	0	0%	None	0.0 (graphs)	859.4	(graphs)	Click here
Spain	Low	None		Stable	19	5.3%	None	5.2 (graphs)		(graphs)	Click here
Sweden	Low	None	Low	Stable	5	60.0%	Type B	1.7 (graphs)		(graphs)	Click here
Switzerland	Low	None	Low	Stable				6.7 (graphs)			Click here
Turkey	Low	None	Low	Stable	8	0%	None	(graphs)			Click here
Turkmenistan	Low	Sporadic	Low	Decreasing	0	0%	None	(graphs)			Click here
Ukraine	Low	Sporadic	Low	Decreasing	0	0%	None		305.5	(graphs)	Click here
Uzbekistan	Low	None	Low	Stable			None		19.0	(graphs)	Click here
Europe					175	6.9%					Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
***:** the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

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Winter pandemic influenza activity in Europe has run its course

- This report is based on data received from 44 of the 53 Member States in the WHO European Region.
- Most countries reported a low intensity of influenza activity.
- 4.5% of specimens collected from sentinel sources tested positive for influenza.
- A total of 4836 deaths associated with laboratory-confirmed pandemic (H1N1) 2009 has been reported in the Region since April 2009.

Current situation: week 15/2010

Clinical consultation rates for influenza-like illness (ILI) and acute respiratory infection (ARI) remain at low levels throughout the Region. In the Region, 4.5% of sentinel specimens tested positive. Most countries (N = 30) did not report a dominant virus, indicating limited influenza activity overall.

Virological update: week 15/2010

Sentinel physicians collected 311 respiratory specimens, of which 14 (4.5%) were positive for influenza virus; 8 were type A (2 were subtyped as pandemic A(H1), and 6 were not subtyped) and 6 were influenza B. Of the 27 countries testing sentinel specimens this week, influenza-positivity rates ranged from 0% to 46.2 % (median: 0.0 %; mean: 4.1 %). Specimens from non-sentinel sources yielded 197 influenza detections: 58 type A (15 pandemic A(H1), 23 A(H3), 15 A(H1) and 5 not subtyped) and 139 influenza B.

From week 40/2009 to week 15/2010, 163 187 influenza virus detections were reported: 161 644 were influenza A (99.1%) and 1543 (0.9%) were influenza B. Of the influenza A viruses, 148 419 (91.8%) were subtyped, with 146 715 being pandemic A(H1), 1066 A(H1), and 638 A(H3).

Based on the reported antigenic characterization of 2305 influenza viruses from week 40/2009 to week 15/2010: 2277 were A(H1) pandemic A/California/7/2009 (H1N1)-like; 17 were A(H3) A/Perth/16/2009 (H3N2)-like; 1 was A(H1) A/Brisbane/59/2007 (H1N1)-like; 5 were B/Florida/4/2006-like (B/Yamagata/16/88 lineage) and 5 were B/Brisbane/60/2008-like (B/Victoria/2/87 lineage). Genetic characterizations were available for 1249 isolates: 1214 belonged to the A/California/7/2009 A(H1N1) pandemic group; 1 belonged to the A/Brisbane/10/2007 (H3) group; 13 to the A/Perth/16/2009 (H3N2) group; 5 to the A/Victoria/208/2009 (H3) group; 2 to the B/Bangladesh/3333/2007 (Yamagata lineage) and 14 to the B/England/393/2008 (Victoria lineage) group.

Comment

Influenza activity throughout Europe is at a low level. The current influenza positivity rate for the Region is low (4.5%), and in week 15/2010 the total number of influenza B detections exceeded that of influenza A and most were reported in the eastern part of the Region (Central, Siberian and Far Eastern regions of the Russian Federation). The viruses characterized to date correspond to those recommended for influenza vaccines for use in the 2010–2011 northern hemisphere influenza season.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

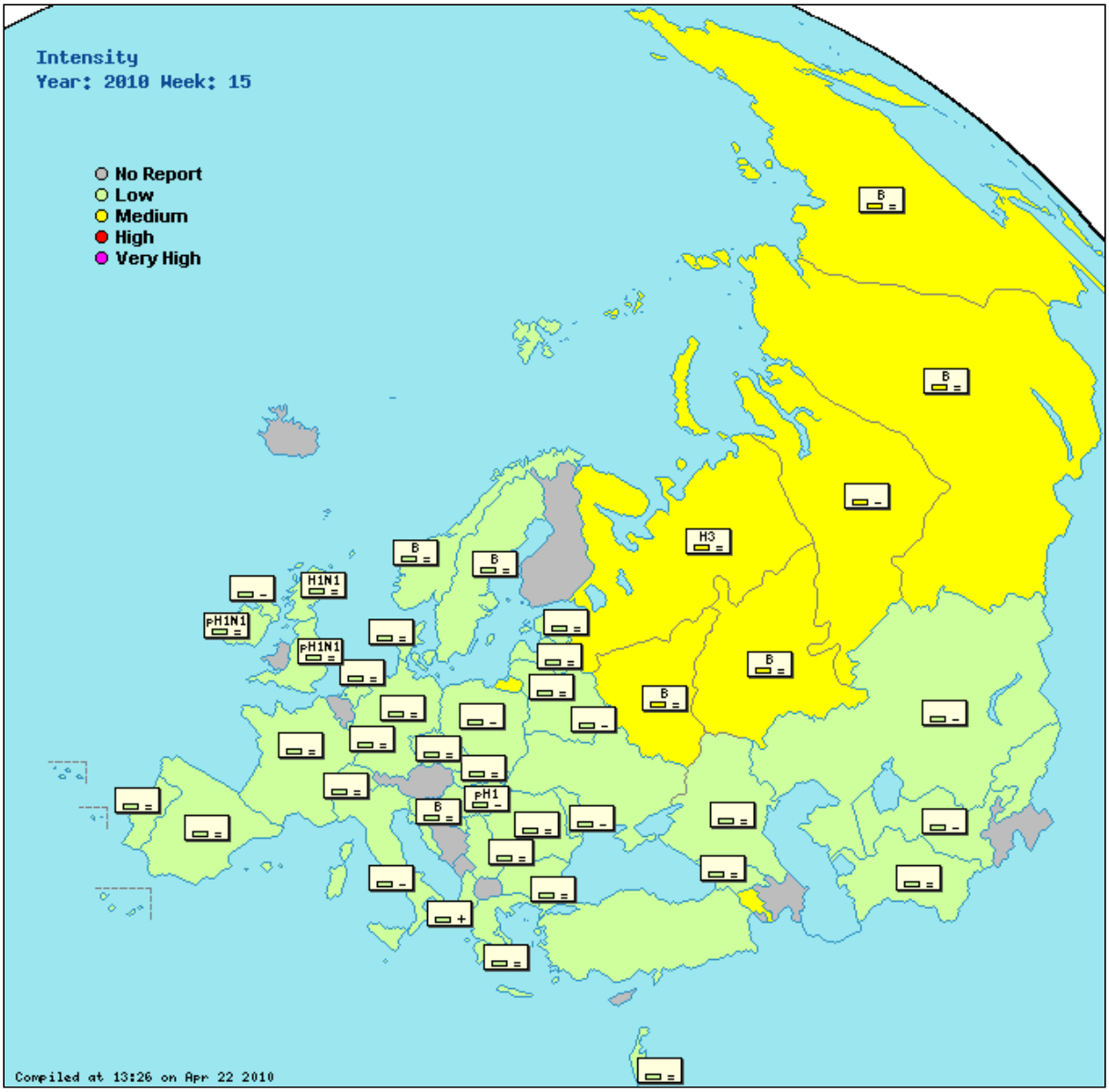
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no evidence of influenza virus activity (clinical activity remains at baseline levels)
Sporadic = isolated cases of laboratory confirmed influenza infection
Local outbreak = increased influenza activity in local areas (e.g. a city) within a region, or outbreaks in two or more institutions (e.g. schools) within a region. Laboratory confirmed.
Regional activity = influenza activity above baseline levels in one or more regions with a population comprising less than 50% of the country's total population. Laboratory confirmed.
Widespread = influenza activity above baseline levels in one or more regions with a population comprising 50% or more of the country's population. Laboratory confirmed.

Country comments (where available)

Malta
situation stable

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania	Low	Sporadic	Low	Increasing	5	0%	None		358.7 (graphs)	Click here
Armenia	Medium	Regional	Moderate	Increasing					(graphs)	Click here
Azerbaijan					5	0%	None	(graphs)		Click here
Belarus	Low	Sporadic	Low	Decreasing	11	18.2%	None		666.4 (graphs)	Click here
Bosnia and Herzegovina							None	(graphs)		Click here
Bulgaria	Low	None		Stable	0	0%	None	(graphs)	543.2 (graphs)	Click here
Croatia	Low	Sporadic	Low	Decreasing				0.0 (graphs)		Click here
Czech Republic	Low	None		Stable	8	0%	None	17.5 (graphs)	729.4 (graphs)	Click here

Denmark	Low	None		Stable	3	0%	None	21.5	(graphs)		(graphs)	Click here
England	Low	Sporadic		Stable	20	5.0%	Type A, Subtype pH1N1	5.8	(graphs)	373.5	(graphs)	Click here
Estonia	Low	Sporadic	Low	Stable	2	0%	None	2.8	(graphs)	223.9	(graphs)	Click here
France	Low	Sporadic	Low	Stable	9	0%	None		(graphs)	1096.1	(graphs)	Click here
Georgia	Low	None	Low	Stable	31	0%	None	97.9	(graphs)			Click here
Germany	Low	Sporadic	Low	Stable	12	0%	None		(graphs)	737.5	(graphs)	Click here
Greece	Low	None		Stable	1	0%	None	54.5	(graphs)		(graphs)	Click here
Hungary	Low	Sporadic	Low	Decreasing	14	0%	Type A, Subtype pH1	34.1	(graphs)		(graphs)	Click here
Ireland	Low	None	Low	Stable	1	0%	Type A, Subtype pH1N1	2.4	(graphs)		(graphs)	Click here
Israel	Low	None	Low	Stable	2	0%	None	3.7	(graphs)			Click here
Italy	Low	Sporadic	Low	Decreasing	8	0%	None	84.7	(graphs)		(graphs)	Click here
Kazakhstan	Low	Sporadic	Low	Decreasing	13	23.1%	None				(graphs)	Click here
Kyrgyzstan	Low	Sporadic	Low	Decreasing						35.0	(graphs)	Click here
Latvia	Low	Sporadic		Stable	0	0%	None	0.0	(graphs)	721.8	(graphs)	Click here
Lithuania	Low	None	Low	Stable	4	0%	None	0.1	(graphs)	372.9	(graphs)	Click here
Luxembourg	Low	Sporadic	Low		3	0%			(graphs)			Click here
The former Yugoslav Republic of Macedonia							None		(graphs)			Click here
Malta	Low	None	Low	Decreasing					(graphs)		(graphs)	Click here
Montenegro								1.3	(graphs)	412.3	(graphs)	Click here
Netherlands	Low	None		Stable	4	0%	None	17.0	(graphs)		(graphs)	Click here
Northern Ireland	Low	None		Decreasing	0	0%	None	12.1	(graphs)	314.3	(graphs)	Click here
Norway	Low	Sporadic	Low	Stable	0	0%	Type B	20.8	(graphs)		(graphs)	Click here
Poland	Low	Sporadic	Low	Decreasing	13	46.2%	None	47.6	(graphs)		(graphs)	Click here
Portugal	Low	None		Stable	0	0%	None	0.0	(graphs)		(graphs)	Click here
Republic of Moldova	Low	Sporadic	Low	Decreasing			None	1.4	(graphs)	96.7	(graphs)	Click here
Romania	Low	None	Low	Stable	4	0%	None	0.3	(graphs)	607.4	(graphs)	Click here
Russian Federation	Medium	Sporadic		Stable	32	3.1%	Type B			613.3	(graphs)	Click here
Scotland	Low	Sporadic	Low	Stable	7	0%	Type A, Subtype H1N1	1.5	(graphs)	175.7	(graphs)	Click here
Serbia	Low	None	Low	Stable	1	0%	None	22.2	(graphs)			Click here
Slovakia	Low	Sporadic	Low	Stable	0	0%	None		(graphs)			Click here
Slovenia	Low	Sporadic		Stable	9	0%	Type B	6.7	(graphs)	856.6	(graphs)	Click here
Spain	Low	None		Stable	33	0%	None	7.9	(graphs)		(graphs)	Click here
Sweden	Low	None	Low	Stable	6	16.7%	Type B	0.7	(graphs)		(graphs)	Click here
Switzerland	Low	None	Low	Stable	2	0%	None	3.5	(graphs)			Click here
Turkey	Low	None	Low	Stable				15.8	(graphs)			Click here
Turkmenistan	Low	Sporadic	Low	Stable	48	0%	None		(graphs)			Click here
Ukraine	Low	Sporadic	Low	Decreasing						357.0	(graphs)	Click here
Uzbekistan	Low	None	Low	Decreasing			None			18.4	(graphs)	Click here
Europe					311	4.5%						Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
***:** the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Influenza activity in Europe is at a low level

- This report is based on data received from 42 of the 53 Member States in the WHO European Region.
- Most countries reported a low intensity of influenza activity.
- 5.3% of specimens collected from sentinel sources tested positive for influenza.
- A total of 4861 deaths associated with laboratory-confirmed pandemic (H1N1) 2009 has been reported in the Region since April 2009.

Current situation: week 16/2010

Clinical consultation rates for influenza-like illness (ILI) and acute respiratory infection (ARI) remain at low levels throughout the Region. Most countries (N = 29) did not report a dominant virus, indicating limited influenza activity overall.

Virological update: week 16/2010

Sentinel physicians collected 282 respiratory specimens, of which 15 (5.3%) were positive for influenza virus; 5 were type A (1 was subtyped as pandemic A(H1), and 4 were not subtyped) and 10 were influenza B. Specimens from non-sentinel sources yielded 200 influenza detections: 40 type A (12 pandemic A(H1), 9 A(H3), 17 A(H1) and 2 not subtyped) and 160 influenza B.

From week 40/2009 to week 16/2010, 163 432 influenza virus detections were reported: 161 717 were influenza A (99.0%) and 1715 (1.0%) were influenza B. Of the influenza A viruses, 148 486 (91.8%) were subtyped, with 146 754 being pandemic A(H1), 1083 A(H1), and 649 A(H3).

Based on the reported antigenic characterization of 3048 influenza viruses from week 40/2009 to week 16/2010: 3005 were A(H1) pandemic A/California/7/2009 (H1N1)-like; 17 were A(H3) A/Perth/16/2009 (H3N2)-like; 8 were A(H3) A/ Brisbane/10/2007 (H3N2)-like; 2 were A(H1) A/Brisbane/59/2007 (H1N1)-like; 5 were B/Florida/4/2006-like (B/Yamagata/16/88 lineage) and 11 were B/Brisbane/60/2008-like (B/Victoria/2/87 lineage). Genetic characterizations were available for 1262 isolates: 1223 belonged to the A/California/7/2009 A(H1N1) pandemic group; 1 belonged to the A/Brisbane/10/2007 (H3) group; 13 to the A/Perth/16/2009 (H3N2) group; 5 to the A/Victoria/208/2009 (H3) group; 2 to the B/Bangladesh/3333/2007 (Yamagata lineage) and 18 to the B/England/393/2008 (Victoria lineage) group.

Comment

Influenza activity throughout the European Region is at a low level. The current influenza positivity rate for the Region is low (5.3%), and in week 16/2010 the total number of sentinel and non-sentinel influenza B detections (79.1%) exceeded that of influenza A (20.9%) with seven counties reporting influenza B as a dominant type. The viruses characterized to date correspond to those recommended for influenza vaccines for use in the 2010–2011 northern hemisphere influenza season.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

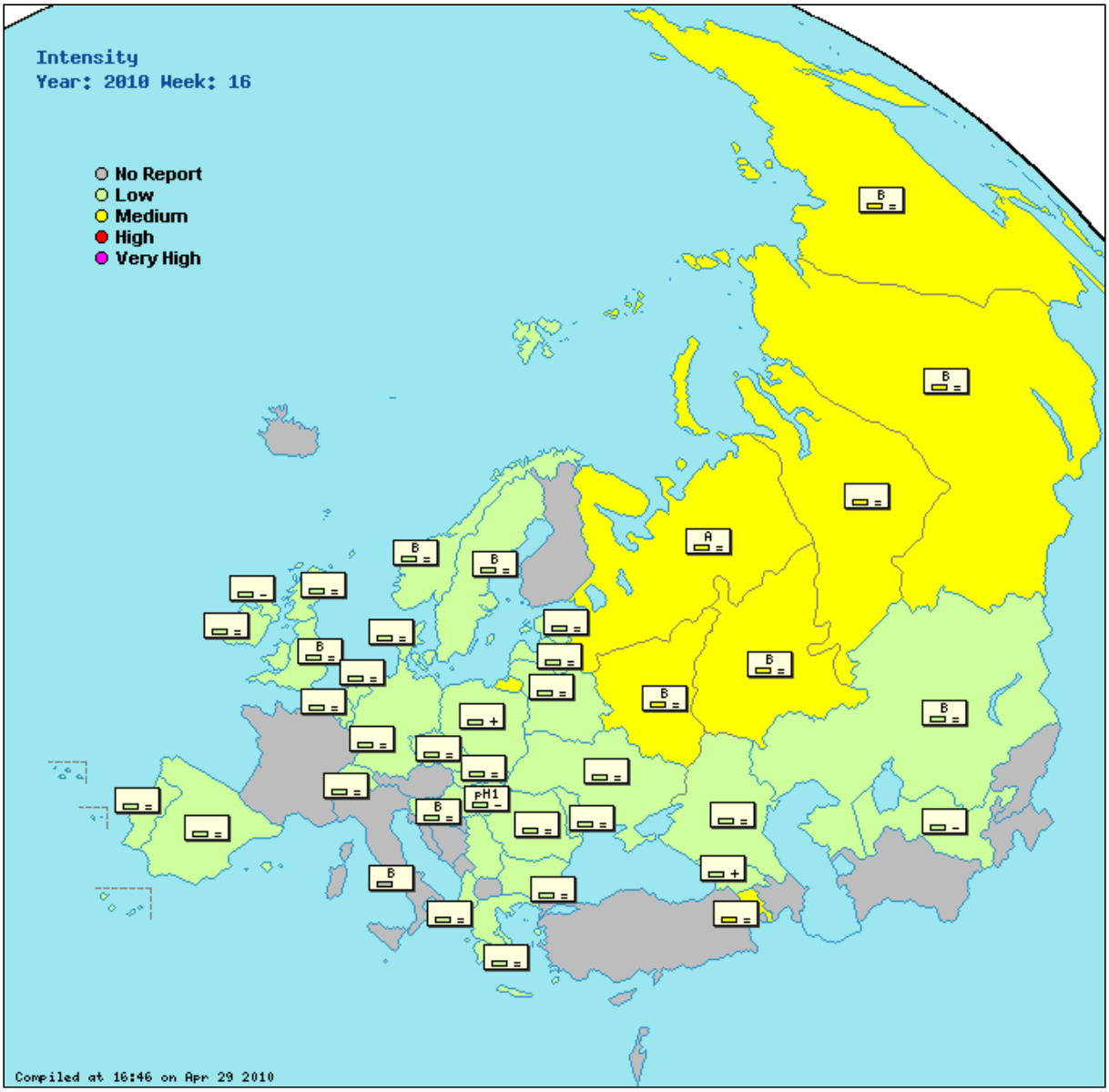
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no evidence of influenza virus activity (clinical activity remains at baseline levels)
Sporadic = isolated cases of laboratory confirmed influenza infection
Local outbreak = increased influenza activity in local areas (e.g. a city) within a region, or outbreaks in two or more institutions (e.g. schools) within a region. Laboratory confirmed.
Regional activity = influenza activity above baseline levels in one or more regions with a population comprising less than 50% of the country's total population. Laboratory confirmed.
Widespread = influenza activity above baseline levels in one or more regions with a population comprising 50% or more of the country's population. Laboratory confirmed.

Country comments (where available)

Greece
A non-sentinel source swab, collected in Athens during week 16, was confirmed by real time PCR to be positive for influenza virus type A (subtype H1N1). Concerning antiviral susceptibility this seasonal influenza isolate (the first detected in 2010) was found by NA activity determination (MUNANA assay) to be oseltamivir resistant.The mutation responsible for oseltamivir resistance was confirmed by neuraminidase gene sequencing.

Netherlands
In week 15 a cluster of nosocomial spread involving three cases of pandemic A(H1N1) 2009 occurred on a hospital ward in the Netherlands. The initial case was hospitalised with pneumonia and in second instance diagnosed for viral infection. When found positive for pandemic A(H1N1) 2009 virus four days after admission all patients in the same room were put into isolation. Two out of three patients in the same room became subsequently positive for pandemic A(H1N1) 2009 virus. By direct sequencing it was confirmed that the viruses of the index case and one of the contacts were identical but unique in the Dutch background set of A(H1N1) 2009 sequences. The viral load of the other contact was too low for direct sequencing. Investigations are ongoing.

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania	Low	Sporadic	Low	Stable	3	0%	None		370.1 (graphs)	Click here
Armenia	Medium	Regional	Moderate	Stable			None	(graphs)	80.2 (graphs)	Click here
Austria					0	0%	None	(graphs)		Click here
Azerbaijan					4	0%	None	(graphs)		Click here
Belarus	Low	Sporadic	Low	Increasing					822.2 (graphs)	Click here
Belgium	Low	Sporadic		Stable	6	16.7%	None	22.7 (graphs)	735.3 (graphs)	Click here
Bosnia and Herzegovina							None	(graphs)		Click here
Bulgaria	Low	None		Stable	0	0%	None	(graphs)	542.9 (graphs)	Click here
Croatia							None	0.2 (graphs)		Click here
Czech Republic	Low	None		Stable	13	7.7%	None	16.2 (graphs)	730.0 (graphs)	Click here
Denmark	Low	None		Stable	4	0%	None	29.6 (graphs)	(graphs)	Click here
England	Low	Sporadic		Stable	32	0%	Type B	4.3 (graphs)	367.1 (graphs)	Click here
Estonia	Low	Sporadic	Low	Stable	9	0%	None	2.6 (graphs)	223.8 (graphs)	Click here
Georgia	Low	Sporadic	Low	Increasing	46	2.2%	None	129.6 (graphs)		Click here
Germany	Low	Sporadic	Low	Stable				(graphs)	651.5 (graphs)	Click here
Greece	Low	None		Stable	0	0%	None	44.1 (graphs)	(graphs)	Click here
Hungary	Low	Sporadic	Low	Decreasing	10	0%	Type A, Subtype pH1	33.0 (graphs)	(graphs)	Click here
Ireland	Low	Sporadic	Low	Stable	3	0%	None	5.4 (graphs)	(graphs)	Click here
Italy					7	14.3%	Type B	(graphs)		Click here
Kazakhstan	Low	Sporadic	Low	Stable	32	12.5%	Type B		(graphs)	Click here
Kyrgyzstan					1	0%	None		(graphs)	Click here
Latvia	Low	Sporadic		Stable	0	0%	None	0.0 (graphs)	733.6 (graphs)	Click here
Lithuania	Low	None	Low	Stable	0	0%	None	0.4 (graphs)	413.5 (graphs)	Click here
Luxembourg	Low	None	Low		5	0%	None	(graphs)		Click here
Malta								0.0 (graphs)	(graphs)	Click here
Montenegro								0.3 (graphs)	432.5 (graphs)	Click here
Netherlands	Low	None		Stable	10	0%	None	21.6 (graphs)	(graphs)	Click here
Northern Ireland	Low	None		Decreasing	2	0%	None	8.2 (graphs)	316.1 (graphs)	Click here
Norway	Low	Sporadic		Stable	0	0%	Type B	17.7 (graphs)	(graphs)	Click here
Poland	Low	None	Low	Increasing	1	0%	None	76.3 (graphs)	(graphs)	Click here
Portugal	Low	None	Low	Stable	0	0%	None	0.0 (graphs)	(graphs)	Click here
Republic of Moldova	Low	Sporadic	Low	Stable			None	1.1 (graphs)	119.0 (graphs)	Click here
Romania	Low	None	Low	Stable	1	0%	None	0.0 (graphs)	585.9 (graphs)	Click here
Russian Federation	Medium	Sporadic		Stable	34	2.9%	Type B		632.5 (graphs)	Click here
Scotland	Low	None	Low	Stable	4	0%	None	2.7 (graphs)	166.2 (graphs)	Click here
Serbia	Low	None	Low	Decreasing				16.4 (graphs)		Click here
Slovakia	Low	Sporadic	Low	Stable	2	0%	None	(graphs)		Click here
Slovenia	Low	Sporadic		Stable	6	16.7%	Type B	0.0 (graphs)	903.0 (graphs)	Click here
Spain	Low	None		Stable	24	4.2%	None	6.1 (graphs)	(graphs)	Click here
Sweden	Low	None	Low	Stable	5	20.0%	Type B	1.0 (graphs)	(graphs)	Click here
Switzerland	Low	None	Low	Stable	6	16.7%	None	5.7 (graphs)		Click here
Turkey					3	0%	None	(graphs)		Click here
Ukraine	Low	Sporadic	Low	Stable	9	22.2%	None		375.1 (graphs)	Click here
Uzbekistan	Low	None	Low	Decreasing			None		16.5 (graphs)	Click here
Wales	Low	Sporadic	Low	Stable				1.0 (graphs)	(graphs)	Click here
Europe					282	5.3%				Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
*: the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Influenza activity in Europe approaching out-of-season levels

- This report is based on data received from 39 of the 53 Member States in the WHO European Region.
- Most countries reported a low intensity of influenza activity.
- 3.8% of specimens collected from sentinel sources tested positive for influenza.
- A total of 4862 deaths associated with laboratory-confirmed pandemic A(H1N1) 2009 has been reported in the Region since April 2009.

Current situation: week 17/2010

Clinical consultation rates for influenza-like illness (ILI) and acute respiratory infection (ARI) remain at low levels throughout the Region. Most countries (N = 31) did not report a dominant virus, indicating limited influenza activity overall.

Virological update: week 17/2010

Sentinel physicians collected 263 respiratory specimens, of which 10 (3.8%) tested positive for influenza virus; 3 were unsubtyped influenza A and 7 were influenza B. Specimens from non-sentinel sources yielded 155 influenza detections: 21 type A (2 pandemic A(H1), 6 A(H3), 3 A(H1) and 10 A unsubtyped) and 134 influenza B.

From week 40/2009 to week 17/2010, 166 169 influenza virus detections have been reported: 164 317 were influenza A (98.9%) and 1852 (1.1%) were influenza B. Of the influenza A viruses, 150 267 (91.4%) were subtyped, with 148 521 being pandemic A(H1), 1086 A(H1), and 660 A(H3).

Based on the reported antigenic characterization of 3436 influenza viruses from week 40/2009 to week 17/2010, 3392 were A(H1) pandemic A/California/7/2009 (H1N1)-like; 2 were A(H1) A/Brisbane/59/2007 (H1N1)-like; 8 were A(H3) A/ Brisbane/10/2007 (H3N2)-like; 17 were A(H3) A/Perth/16/2009 (H3N2)-like; 5 were B/Florida/4/2006-like (B/Yamagata/16/88 lineage) and 12 were B/Brisbane/60/2008-like (B/Victoria/2/87 lineage). Genetic characterizations have been reported for 1262 isolates: 1223 belonged to the A/California/7/2009 A(H1N1) pandemic group; 1 belonged to the A/Brisbane/10/2007 (H3N2) group; 13 to the A/Perth/16/2009 (H3N2) group; 5 to the A/Victoria/208/2009 (H3N2) group; 2 to the B/Bangladesh/3333/2007 (Yamagata) and 18 to the B/England/393/2008 (Victoria) lineages.

Comment

Influenza activity is at a low level throughout the European Region. The current influenza positivity rate for the Region is low (3.8%), and in week 17/2010 the number of sentinel and non-sentinel influenza B detections (141, 85.5%) exceeded that of influenza A (24, 14.5%). The viruses characterized to date are similar to those recommended as components of influenza vaccines for use in the 2010–2011 northern hemisphere influenza season.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

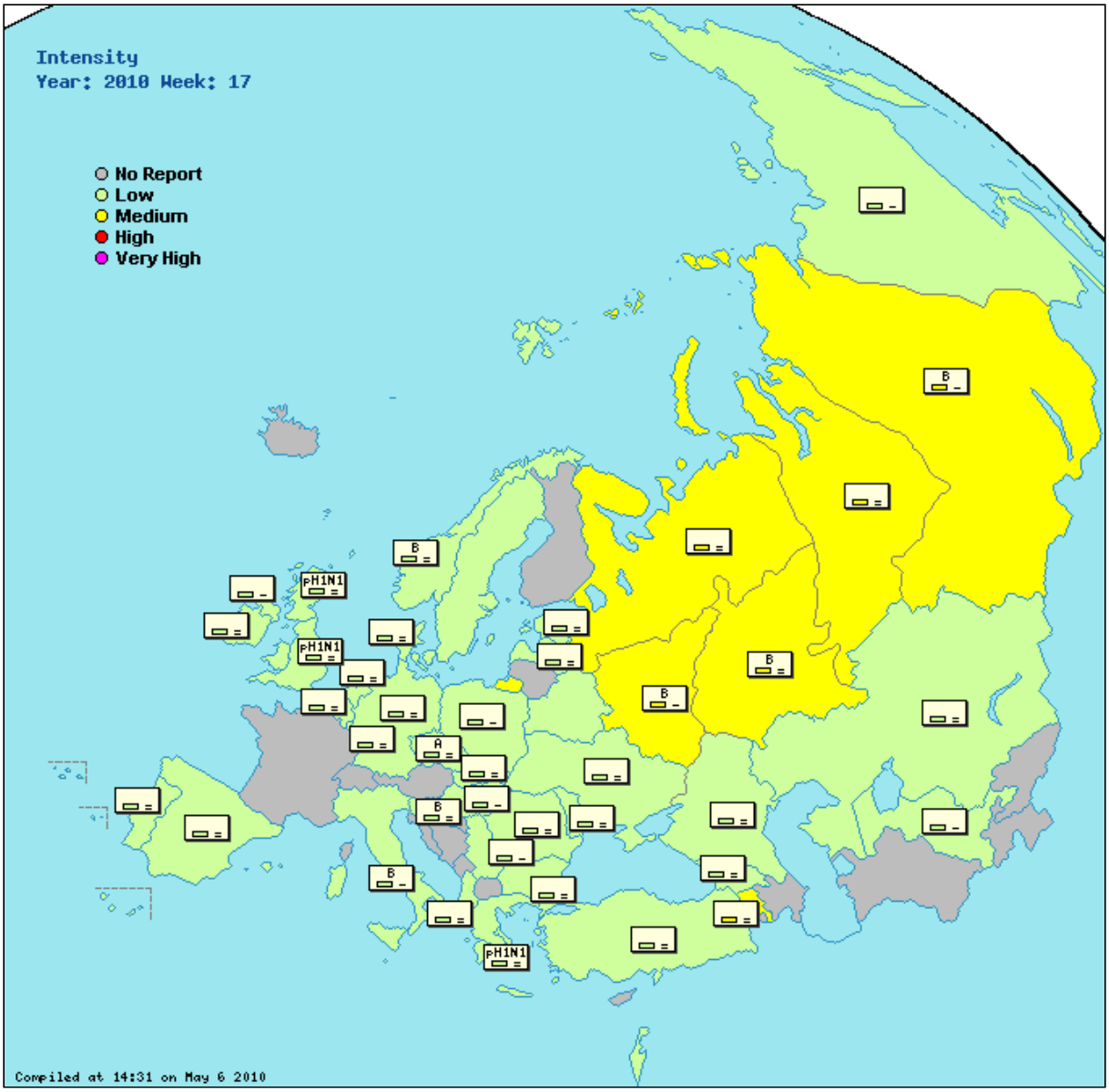
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no evidence of influenza virus activity (clinical activity remains at baseline levels)
Sporadic = isolated cases of laboratory confirmed influenza infection
Local outbreak = increased influenza activity in local areas (e.g. a city) within a region, or outbreaks in two or more institutions (e.g. schools) within a region. Laboratory confirmed.
Regional activity = influenza activity above baseline levels in one or more regions with a population comprising less than 50% of the country's total population. Laboratory confirmed.
Widespread = influenza activity above baseline levels in one or more regions with a population comprising 50% or more of the country's population. Laboratory confirmed.

Country comments (where available)

Malta
situation stable

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania	Low	Sporadic	Low	Stable	7	0%	None		355.7 (graphs)	Click here
Armenia	Medium	Local	Low	Stable			None	(graphs)	79.7 (graphs)	Click here
Austria					0	0%	None	(graphs)		Click here
Azerbaijan					2	0%	None	(graphs)		Click here
Belarus	Low	Sporadic	Low	Increasing					899.0 (graphs)	Click here
Belgium	Low	Sporadic		Stable	5	20.0%	None	22.9 (graphs)	894.4 (graphs)	Click here
Bosnia and Herzegovina							None	(graphs)		Click here
Bulgaria	Low	None		Stable	0	0%	None	(graphs)	530.0 (graphs)	Click here

Czech Republic	Low	Sporadic		Stable	10	30.0%	Type A	14.2 (graphs)	709.5 (graphs)	Click here
Denmark	Low	None		Stable	2	0%	None	15.0 (graphs)	(graphs)	Click here
England	Low	Sporadic		Stable	26	0%	Type A, Subtype pH1N1	3.3 (graphs)	387.2 (graphs)	Click here
Estonia	Low	None	Low	Stable	3	0%	None	2.3 (graphs)	243.2 (graphs)	Click here
Georgia	Low	Sporadic	Low	Stable	53	1.9%	None	142.4 (graphs)		Click here
Germany	Low	Sporadic	Low	Stable	10	0%	None	(graphs)	624.8 (graphs)	Click here
Greece	Low	None		Stable	1	0%	Type A, Subtype pH1N1	42.6 (graphs)	(graphs)	Click here
Hungary	Low	None	Low	Decreasing	5	0%	None	30.0 (graphs)	(graphs)	Click here
Ireland	Low	None	Low	Stable	1	0%	None	4.0 (graphs)	(graphs)	Click here
Israel	Low	None	Low	Stable				4.2 (graphs)		Click here
Italy	Low	Sporadic	Low	Decreasing	11	9.1%	Type B	57.9 (graphs)	(graphs)	Click here
Kazakhstan	Low	Sporadic	Low	Stable	14	7.1%	None		(graphs)	Click here
Kyrgyzstan					2	0%	None		(graphs)	Click here
Latvia	Low	Sporadic		Stable	0	0%	None	0.0 (graphs)	652.3 (graphs)	Click here
Lithuania					2	0%	None	(graphs)		Click here
Luxembourg	Low	Sporadic	Low		5	20.0%	None	(graphs)		Click here
The former Yugoslav Republic of Macedonia							None	(graphs)		Click here
Malta	Low	Local	Low	Decreasing				(graphs)	(graphs)	Click here
Montenegro								0.3 (graphs)	475.9 (graphs)	Click here
Netherlands	Low	None		Stable	3	0%	None	13.7 (graphs)	(graphs)	Click here
Northern Ireland	Low	None		Decreasing	2	0%	None	6.2 (graphs)	297.2 (graphs)	Click here
Norway	Low	Sporadic		Stable	0	0%	Type B	19.6 (graphs)	(graphs)	Click here
Poland	Low	None	Low	Decreasing	6	0%	None	63.7 (graphs)	(graphs)	Click here
Portugal	Low	None	Low	Stable	0	0%	None	0.0 (graphs)	(graphs)	Click here
Republic of Moldova	Low	Sporadic	Low	Stable			None	1.0 (graphs)	105.2 (graphs)	Click here
Romania	Low	None	Low	Stable	1	0%	None	0.0 (graphs)	594.6 (graphs)	Click here
Russian Federation	Medium	Sporadic		Stable	32	3.1%	Type B		585.9 (graphs)	Click here
Scotland	Low	None	Low	Stable	4	0%	Type A, Subtype pH1N1	1.0 (graphs)	172.1 (graphs)	Click here
Serbia	Low	None	Low	Decreasing	2	0%	None	13.7 (graphs)		Click here
Slovakia	Low	None	Low	Stable	0	0%		(graphs)		Click here
Slovenia	Low	None		Stable	1	100.0%	Type B	0.0 (graphs)	526.3 (graphs)	Click here
Spain	Low	None		Stable	37	0%	None	7.2 (graphs)	(graphs)	Click here
Sweden	Low	None	Low	Stable				1.6 (graphs)	(graphs)	Click here
Switzerland					2	0%	None	(graphs)		Click here
Turkey	Low	None	Low	Stable	10	0%	None	12.7 (graphs)		Click here
Ukraine	Low	Sporadic	Low	Stable	4	0%	None		381.0 (graphs)	Click here
Uzbekistan	Low	None	Low	Decreasing			None		15.2 (graphs)	Click here
Wales	Low	Sporadic	Low	Stable				0.7 (graphs)	(graphs)	Click here
Europe					263	3.8%				Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
***:** the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Influenza activity in Europe at out-of-season levels

- This report is based on data received from 37 of the 53 Member States in the WHO European Region.
- Most countries reported low intensity of influenza activity.
- 2.4% of specimens collected from sentinel sources tested positive for influenza.
- A total of 4875 deaths associated with laboratory-confirmed pandemic A(H1N1) 2009 has been reported in the Region since April 2009.

Current situation: week 18/2010

Clinical consultation rates for influenza-like illness (ILI) and acute respiratory infection (ARI) remain at low levels throughout the Region. Most countries (N = 25) did not report a dominant virus, indicating limited influenza activity overall.

Virological update: week 18/2010

Sentinel physicians collected 209 respiratory specimens, of which 5 (2.4%) tested positive for influenza virus; 2 were pandemic A(H1), 1 was unsubtyped influenza A and 2 were influenza B. Specimens from non-sentinel sources yielded 96 influenza detections:14 type A (5 pandemic A(H1), 5 A(H1) and 4 A unsubtyped) and 82 influenza B.

From week 40/2009 to week 18/2010, 166 284 influenza virus detections have been reported: 164 335 were influenza A (98.8%) and 1 949 (1.2%) were influenza B. Of the influenza A viruses, 150 278 (91.4%) were subtyped, with 148 527 being pandemic A(H1), 1 091 A(H1), and 660 A(H3).

Based on the reported antigenic characterization of 3439 influenza viruses from week 40/2009 to week 18/2010, 3391 were A(H1) pandemic A/California/7/2009 (H1N1)-like; 2 were A(H1) A/Brisbane/59/2007 (H1N1)-like; 8 were A(H3) A/ Brisbane/10/2007 (H3N2)-like; 19 were A(H3) A/Perth/16/2009 (H3N2)-like; 5 were B/Florida/4/2006-like (B/Yamagata/16/88 lineage) and 14 were B/Brisbane/60/2008-like (B/Victoria/2/87 lineage). Genetic characterizations have been reported for 1267 isolates: 1228 belonged to the A/California/7/2009 A(H1N1) pandemic group; 1 belonged to the A/Brisbane/10/2007 (H3N2) group; 13 to the A/Perth/16/2009 (H3N2) group; 5 to the A/Victoria/208/2009 (H3N2) group; 2 to the B/Bangladesh/3333/2007 (Yamagata) and 18 to the B/England/393/2008 (Victoria) lineages.

Comment

Influenza activity is at low levels throughout the European Region. The current influenza positivity rate for the Region is low (2.4%), and in week 18/2010 the number of sentinel and non-sentinel influenza B detections (84, 83%) exceeded that of influenza A (17, 17%). The viruses characterized to date are similar to those recommended as components of influenza vaccines for use in the 2010–2011 northern hemisphere influenza season.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

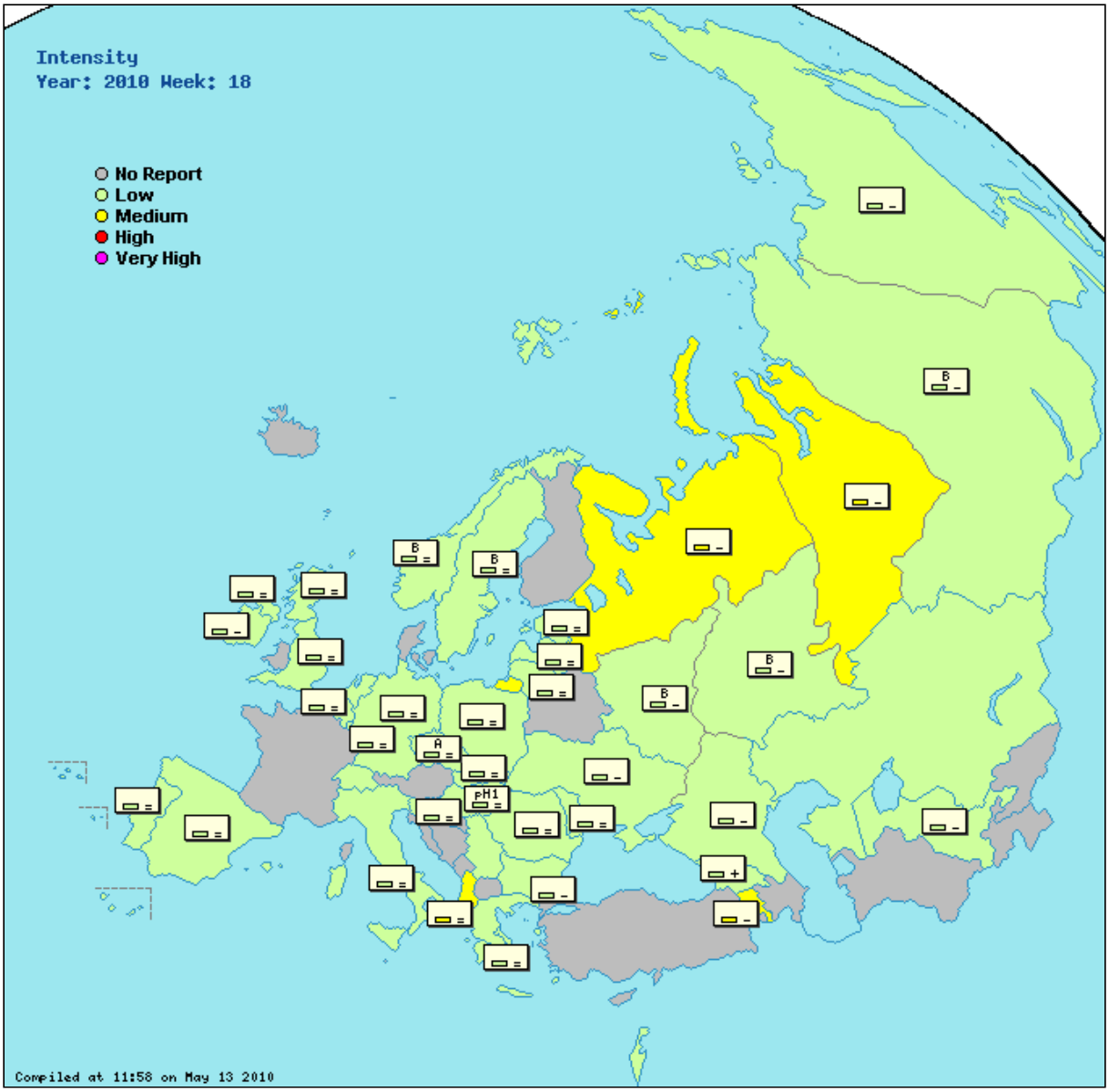
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no evidence of influenza virus activity (clinical activity remains at baseline levels)
Sporadic = isolated cases of laboratory confirmed influenza infection
Local outbreak = increased influenza activity in local areas (e.g. a city) within a region, or outbreaks in two or more institutions (e.g. schools) within a region. Laboratory confirmed.
Regional activity = influenza activity above baseline levels in one or more regions with a population comprising less than 50% of the country's total population. Laboratory confirmed.
Widespread = influenza activity above baseline levels in one or more regions with a population comprising 50% or more of the country's population. Laboratory confirmed.

Country comments (where available)

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania	Medium	Sporadic	Moderate	Stable	2	0%	None		359.1 (graphs)	Click here
Armenia	Medium	Local	Moderate	Decreasing	0	0%	None	(graphs)	76.5 (graphs)	Click here
Austria					0	0%	None	(graphs)		Click here
Azerbaijan					3	0%	None	(graphs)		Click here
Belarus					24	8.3%	None		(graphs)	Click here
Belgium	Low	Sporadic		Stable	8	12.5%	None	27.1 (graphs)	743.5 (graphs)	Click here
Bosnia and Herzegovina							None	(graphs)		Click here
Bulgaria	Low	None		Decreasing	0	0%	None	(graphs)	340.9 (graphs)	Click here
Czech Republic	Low	Sporadic		Stable	6	16.7%	Type A	15.0 (graphs)	714.4 (graphs)	Click here

Denmark					3	0%	None		(graphs)		Click here
England	Low	Sporadic		Stable	27	0%	None	3.3	(graphs)	305.6 (graphs)	Click here
Estonia	Low	Sporadic	Low	Stable	3	0%	None	2.8	(graphs)	182.2 (graphs)	Click here
Georgia	Low	None	Low	Increasing	46	0%	None	284.0	(graphs)		Click here
Germany	Low	None	Low	Stable	2	0%	None		(graphs)	609.6 (graphs)	Click here
Greece	Low	None		Stable	1	0%	None	51.5	(graphs)	(graphs)	Click here
Hungary	Low	Sporadic	Low	Stable	3	0%	Type A, Subtype pH1	30.9	(graphs)	(graphs)	Click here
Ireland	Low	None	Low	Decreasing	1	0%	None	1.4	(graphs)	(graphs)	Click here
Israel	Low	None	Low	Stable				3.8	(graphs)		Click here
Italy	Low	None	Low	Stable	0	0%	None	61.3	(graphs)	(graphs)	Click here
Kazakhstan	Low	Sporadic	Low	Decreasing						(graphs)	Click here
Kyrgyzstan					1	0%	None			(graphs)	Click here
Latvia	Low	Sporadic		Stable	0	0%	None	0.0	(graphs)	610.3 (graphs)	Click here
Lithuania	Low	None	Low	Stable	2	0%	None	0.3	(graphs)	448.9 (graphs)	Click here
Luxembourg	Low	None	Low		3	0%	None	0.0	(graphs)		Click here
The former Yugoslav Republic of Macedonia							None		(graphs)		Click here
Malta								0.0	(graphs)	(graphs)	Click here
Montenegro								1.1	(graphs)	435.2 (graphs)	Click here
Netherlands	Low	None		Stable				10.4	(graphs)	(graphs)	Click here
Northern Ireland	Low	None		Stable	2	0%	None	10.4	(graphs)	285.0 (graphs)	Click here
Norway	Low	Sporadic		Stable	0	0%	Type B	20.3	(graphs)	(graphs)	Click here
Poland	Low	None	Low	Stable	0	0%	None	59.4	(graphs)	(graphs)	Click here
Portugal	Low	None	Low	Stable	0	0%	None	0.0	(graphs)	(graphs)	Click here
Republic of Moldova	Low	Sporadic	Low	Stable			None	0.8	(graphs)	126.8 (graphs)	Click here
Romania	Low	None	Low	Stable	0	0%	None	0.0	(graphs)	593.6 (graphs)	Click here
Russian Federation					38	2.6%	Type B			470.8 (graphs)	Click here
Scotland	Low	None	Low	Stable	5	0%	None	1.5	(graphs)	158.9 (graphs)	Click here
Serbia	Low	None	Low	Decreasing				12.9	(graphs)		Click here
Slovakia	Low	None	Low	Stable	0	0%			(graphs)		Click here
Slovenia	Low	None		Stable	0	0%	None	0.0	(graphs)	595.1 (graphs)	Click here
Spain	Low	None		Stable	26	0%	None	5.9	(graphs)	(graphs)	Click here
Sweden	Low	None	Low	Stable	2	0%	Type B	0.4	(graphs)	(graphs)	Click here
Switzerland	Low	None	Low	Stable				4.6	(graphs)		Click here
Turkey					1	0%	None		(graphs)		Click here
Ukraine	Low	Sporadic	Low	Decreasing	0	0%	None			286.5 (graphs)	Click here
Uzbekistan	Low	None	Low	Decreasing			None			13.8 (graphs)	Click here
Europe					209	2.4%					Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
*: the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Influenza activity in Europe at out-of-season levels

- This report is based on data received from 41 of the 53 Member States in the WHO European Region.
- All countries reported low intensity of influenza activity.
- 3.1% of specimens collected from sentinel sources tested positive for influenza.
- A total of 4879 deaths associated with laboratory-confirmed pandemic A(H1N1) 2009 has been reported in the Region since April 2009.

Current situation: week 19/2010

Clinical consultation rates for influenza-like illness (ILI) and acute respiratory infection (ARI) remain at low levels throughout the Region. Most countries (N = 33) did not report a dominant virus, indicating limited influenza activity overall.

Virological update: week 19/2010

Sentinel physicians collected 227 respiratory specimens, of which 7 (3.1%) tested positive for influenza virus; 4 were pandemic A(H1), 1 was unsubtyped influenza A and 2 were influenza B. Specimens from non-sentinel sources yielded 112 influenza detections:18 type A (2 pandemic A(H1), 4 A(H1), 1 A(H3) and 11 A unsubtyped) and 94 influenza B.

From week 40/2009 to week 19/2010, 166 516 influenza virus detections have been reported: 164 456 were influenza A (98.8%) and 2060 (1.2%) were influenza B. Of the influenza A viruses, 150 385 (91.4%) were subtyped, with 148 611 being pandemic A(H1), 1105 A(H1), and 669 A(H3).

Based on the reported antigenic characterization of 3988 influenza viruses from week 40/2009 to week 19/2010, 3927 were A(H1) pandemic A/California/7/2009 (H1N1)-like; 2 were A(H1) A/Brisbane/59/2007 (H1N1)-like; 8 were A(H3) A/ Brisbane/10/2007 (H3N2)-like; 19 were A(H3) A/Perth/16/2009 (H3N2)-like; 6 were B/Florida/4/2006-like (B/Yamagata/16/88 lineage) and 26 were B/Brisbane/60/2008-like (B/Victoria/2/87 lineage). Genetic characterizations have been reported for 1284 isolates: 1245 belonged to the A/California/7/2009 A(H1N1) pandemic group; 1 belonged to the A/Brisbane/10/2007 (H3N2) group; 13 to the A/Perth/16/2009 (H3N2) group; 5 to the A/Victoria/208/2009 (H3N2) group; 2 to the B/Bangladesh/3333/2007 (Yamagata) and 18 to the B/England/393/2008 (Victoria) lineages.

Comment

Influenza activity is at low levels throughout the European Region. The current influenza positivity rate for the Region is low (3.1%) and, while the total number of influenza detections was low in week 19/2010, the number of sentinel and non-sentinel influenza B detections (96, 80.7%) exceeded that of influenza A (23, 19.3%). The viruses characterized to date are similar to those recommended as components of influenza vaccines for use in the 2010–2011 northern hemisphere influenza season.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

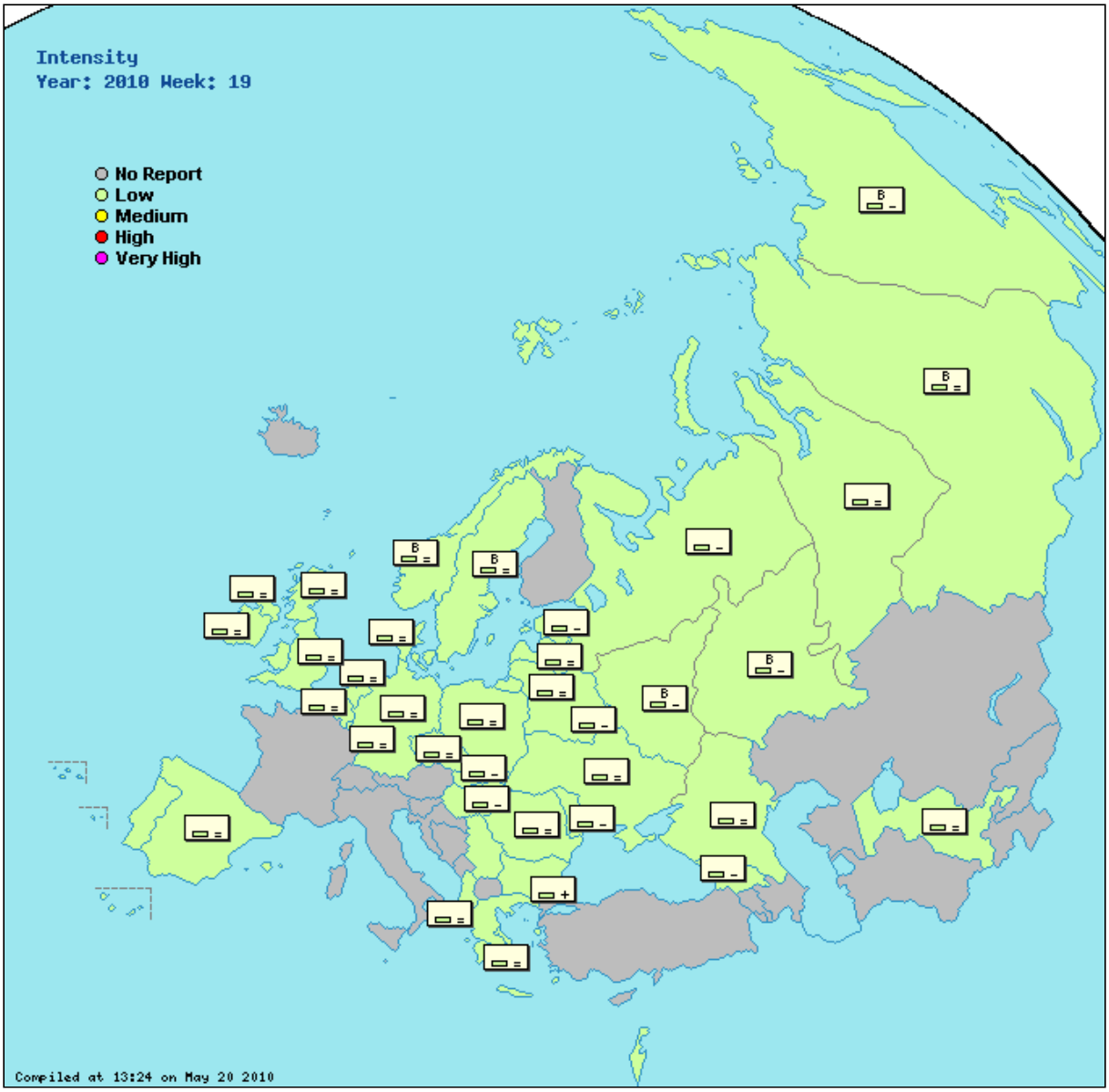
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no evidence of influenza virus activity (clinical activity remains at baseline levels)
Sporadic = isolated cases of laboratory confirmed influenza infection
Local outbreak = increased influenza activity in local areas (e.g. a city) within a region, or outbreaks in two or more institutions (e.g. schools) within a region. Laboratory confirmed.
Regional activity = influenza activity above baseline levels in one or more regions with a population comprising less than 50% of the country's total population. Laboratory confirmed.
Widespread = influenza activity above baseline levels in one or more regions with a population comprising 50% or more of the country's population. Laboratory confirmed.

Country comments (where available)

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania	Low	Sporadic	Low	Stable			None		343.7 (graphs)	Click here
Armenia					0	0%	None		(graphs)	Click here
Austria					0	0%	None	(graphs)		Click here
Azerbaijan					3	0%	None	(graphs)		Click here
Belarus	Low	Sporadic	Low	Decreasing	28	3.6%	None		804.8 (graphs)	Click here
Belgium	Low	Sporadic		Stable	2	50.0%	None	32.7 (graphs)	726.3 (graphs)	Click here
Bosnia and Herzegovina							None	(graphs)		Click here
Bulgaria	Low	None		Increasing	0	0%	None	(graphs)	452.3 (graphs)	Click here
Czech Republic	Low	None		Stable	6	16.7%	None	13.3 (graphs)	712.6 (graphs)	Click here

Denmark	Low	None		Stable	0	0%	None	28.0 (graphs)		(graphs)	Click here
England	Low	Sporadic		Stable	26	0%	None	4.2 (graphs)	373.0	(graphs)	Click here
Estonia	Low	Sporadic	Low	Decreasing	5	0%	None	2.2 (graphs)	181.2	(graphs)	Click here
Georgia	Low	None	Low	Decreasing	39	0%	None	142.9 (graphs)			Click here
Germany	Low	None	Low	Stable	6	0%	None	(graphs)	611.3	(graphs)	Click here
Greece	Low	None		Stable	1	0%	None	46.5 (graphs)		(graphs)	Click here
Hungary	Low	None	Low	Decreasing	0	0%	None	28.1 (graphs)		(graphs)	Click here
Ireland	Low	None	Low	Stable	2	0%	None	4.9 (graphs)		(graphs)	Click here
Israel	Low	None	Low	Stable				4.7 (graphs)			Click here
Italy					0	0%	None	(graphs)			Click here
Kyrgyzstan					0	0%	None			(graphs)	Click here
Latvia	Low	Sporadic		Stable	0	0%	None	0.0 (graphs)	645.9	(graphs)	Click here
Lithuania	Low	None	Low	Stable	2	0%	None	0.2 (graphs)	383.1	(graphs)	Click here
Luxembourg	Low	Sporadic	Low		3	33.3%	None	(graphs)			Click here
Malta								0.0 (graphs)		(graphs)	Click here
Montenegro								1.0 (graphs)	469.1	(graphs)	Click here
Netherlands	Low	Sporadic		Stable	6	16.7%	None	16.6 (graphs)		(graphs)	Click here
Northern Ireland	Low	None		Stable	3	0%	None	14.7 (graphs)	338.6	(graphs)	Click here
Norway	Low	Sporadic		Stable	0	0%	Type B	14.7 (graphs)		(graphs)	Click here
Poland	Low	None	Low	Stable	0	0%	None	77.0 (graphs)		(graphs)	Click here
Portugal	Low	None	Low	Stable				4.1 (graphs)		(graphs)	Click here
Republic of Moldova	Low	None	Low	Decreasing			None	0.4 (graphs)	105.9	(graphs)	Click here
Romania	Low	None	Low	Stable	0	0%	None	0.0 (graphs)	610.2	(graphs)	Click here
Russian Federation	Low	Sporadic		Decreasing	34	0%	Type B		410.5	(graphs)	Click here
Scotland	Low	None	Low	Stable	23	0%	None	2.0 (graphs)	171.1	(graphs)	Click here
Serbia	Low	None	Low	Stable				14.8 (graphs)			Click here
Slovakia	Low	None	Low	Decreasing	0	0%	None	(graphs)			Click here
Slovenia					3	33.3%	None	(graphs)			Click here
Spain	Low	None		Stable	27	3.7%	None	6.5 (graphs)		(graphs)	Click here
Sweden	Low	None	Low	Stable	0	0%	Type B	1.0 (graphs)		(graphs)	Click here
Switzerland					2	0%	None	(graphs)			Click here
Turkey					5	0%	None	(graphs)			Click here
Ukraine	Low	Sporadic	Low	Stable	1	0%	None		299.1	(graphs)	Click here
Uzbekistan	Low	None	Low	Stable			None		14.3	(graphs)	Click here
Wales	Low	Sporadic	Low	Stable				2.0 (graphs)		(graphs)	Click here
Europe					227	3.1%					Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
***:** the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Influenza activity in Europe at out-of-season levels

- This report is based on data received from 44 of the 53 Member States in the WHO European Region.
- All countries reported low intensity of influenza activity.
- 4.5% of specimens collected from sentinel sources tested positive for influenza.
- One death associated with laboratory-confirmed pandemic A(H1N1) 2009 has been reported in week 20/2010, taking the total to 4880 such deaths reported in the Region since April 2009.

Current situation: week 20/2010

Clinical consultation rates for influenza-like illness (ILI) and acute respiratory infection (ARI) have reached low levels throughout the Region. Most countries (N = 37) did not report a dominant virus, indicating limited influenza activity overall.

Virological update: week 20/2010

Sentinel physicians collected 201 respiratory specimens, of which 9 (4.5%) tested positive for influenza virus; 1 was unsubtyped influenza A and 8 were influenza B. Specimens from non-sentinel sources yielded 71 influenza detections: 10 type A (3 pandemic A(H1), 4 A(H1), 2 A(H3) and 1 A unsubtyped) and 61 influenza B.

From week 40/2009 to week 20/2010, 166 744 influenza virus detections have been reported: 164 607 were influenza A (98.7%) and 2137 (1.3%) were influenza B. Of the influenza A viruses, 150 536 (91.5%) were subtyped, with 148 756 being pandemic A(H1), 1109 A(H1), and 671 A(H3).

Based on the reported antigenic characterization of 4065 influenza viruses from week 40/2009 to week 20/2010, 3937 were A(H1) pandemic A/California/7/2009 (H1N1)-like; 1 was A(H1) A/Brisbane/59/2007 (H1N1)-like; 8 were A(H3) A/Brisbane/10/2007 (H3N2)-like; 19 were A(H3) A/Perth/16/2009 (H3N2)-like; 6 were B/Florida/4/2006-like (B/Yamagata/16/88 lineage) and 94 were B/Brisbane/60/2008-like (B/Victoria/2/87 lineage). Genetic characterizations have been reported for 1387 isolates: 1345 belonged to the A/California/7/2009 A(H1N1) pandemic group; 1 belonged to the A/Brisbane/10/2007 (H3N2) group; 13 to the A/Perth/16/2009 (H3N2) group; 7 to the A/Victoria/208/2009 (H3N2) group; 2 to the B/Bangladesh/3333/2007 (Yamagata) and 19 to the B/England/393/2008 (Victoria) lineages.

Comment

Influenza activity is at out-of-season levels throughout the European Region. The current influenza positivity rate for the Region is low at 4.5%. Influenza detections that were reported in week 20/2010 were mainly from non-sentinel sources. Of the 80 influenza detections this week, most (86%) were influenza B. The viruses characterized to date are similar to those recommended as components of influenza vaccines for use in the 2010–2011 northern hemisphere influenza season.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

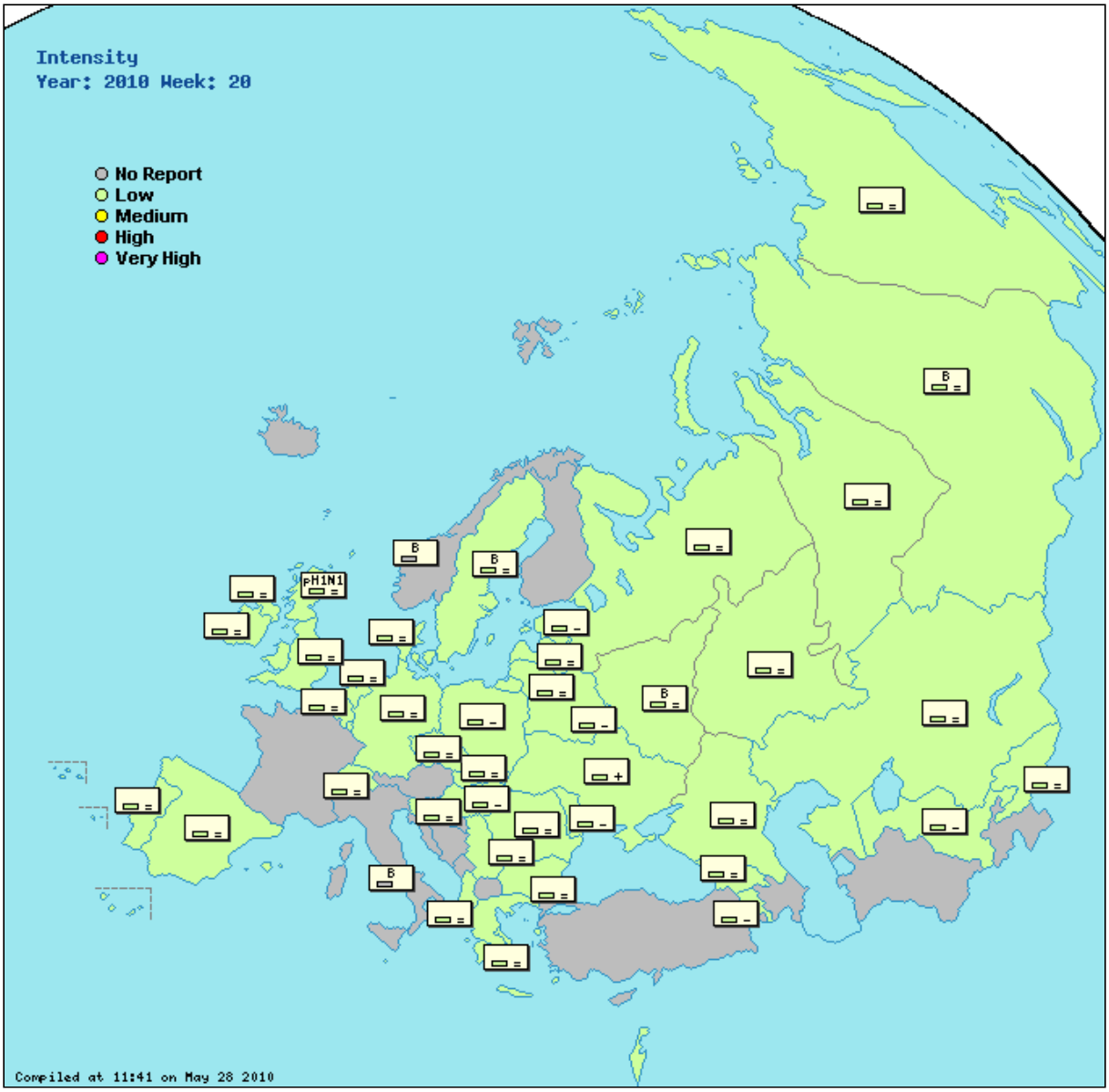
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no evidence of influenza virus activity (clinical activity remains at baseline levels)
Sporadic = isolated cases of laboratory confirmed influenza infection
Local outbreak = increased influenza activity in local areas (e.g. a city) within a region, or outbreaks in two or more institutions (e.g. schools) within a region. Laboratory confirmed.
Regional activity = influenza activity above baseline levels in one or more regions with a population comprising less than 50% of the country's total population. Laboratory confirmed.
Widespread = influenza activity above baseline levels in one or more regions with a population comprising 50% or more of the country's population. Laboratory confirmed.

Country comments (where available)

Latvia
0
Malta
situation stable

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania	Low	Sporadic	Low	Stable	2	0%	None		336.3 (graphs)	Click here
Armenia	Low	Sporadic	Low	Decreasing			None	(graphs)	58.9 (graphs)	Click here
Austria					0	0%	None	(graphs)		Click here
Azerbaijan					1	0%	None	(graphs)		Click here
Belarus	Low	Sporadic	Low	Decreasing	19	0%	None		735.0 (graphs)	Click here
Belgium	Low	None		Stable	4	0%	None	21.6 (graphs)	1063.8 (graphs)	Click here

Bosnia and Herzegovina							None	(graphs)			Click here
Bulgaria	Low	None		Stable	0	0%	None	(graphs)	412.1	(graphs)	Click here
Croatia							None	(graphs)			Click here
Czech Republic	Low	None		Stable	5	20.0%	None	12.8 (graphs)	705.7	(graphs)	Click here
Denmark	Low	None		Stable	0	0%	None	22.2 (graphs)		(graphs)	Click here
England	Low	None		Stable	15	0%	None	3.6 (graphs)	387.5	(graphs)	Click here
Estonia	Low	None	Low	Decreasing	0	0%	None	1.9 (graphs)	158.2	(graphs)	Click here
Georgia	Low	None	Low	Stable	45	0%	None	121.0 (graphs)			Click here
Germany	Low	None	Low	Stable	6	16.7%	None	(graphs)	625.2	(graphs)	Click here
Greece	Low	None		Stable	0	0%	None	24.6 (graphs)		(graphs)	Click here
Hungary	Low	Sporadic	Low	Decreasing	2	0%	None	21.4 (graphs)		(graphs)	Click here
Ireland	Low	None	Low	Stable	4	0%	None	4.1 (graphs)		(graphs)	Click here
Israel	Low	None	Low	Stable				2.4 (graphs)			Click here
Italy					0	0%	Type B	(graphs)			Click here
Kazakhstan	Low	Sporadic	Low	Stable	14	7.1%	None			(graphs)	Click here
Kyrgyzstan	Low	None	Low	Stable	3	0%	None		34.0	(graphs)	Click here
Latvia	Low	Sporadic		Stable	0	0%	None	0.0 (graphs)	511.6	(graphs)	Click here
Lithuania	Low	None	Low	Stable	1	0%	None	0.3 (graphs)	384.7	(graphs)	Click here
Luxembourg	Low	None	Low					0.0 (graphs)			Click here
The former Yugoslav Republic of Macedonia							None	(graphs)			Click here
Malta	Low	None	Low	Stable				(graphs)		(graphs)	Click here
Montenegro								0.8 (graphs)	426.0	(graphs)	Click here
Netherlands	Low	None		Stable	0	0%	None	13.8 (graphs)		(graphs)	Click here
Northern Ireland	Low	None		Stable	0	0%	None	11.3 (graphs)	362.8	(graphs)	Click here
Norway					0	0%	Type B	(graphs)			Click here
Poland	Low	None	Low	Decreasing	1	0%	None	27.8 (graphs)		(graphs)	Click here
Portugal	Low	None	Low	Stable	0	0%	None	6.7 (graphs)		(graphs)	Click here
Republic of Moldova	Low	None	Low	Decreasing	2	0%	None	0.2 (graphs)	113.9	(graphs)	Click here
Romania	Low	None	Low	Stable	0	0%	None	0.0 (graphs)	600.0	(graphs)	Click here
Russian Federation	Low	Sporadic		Stable	45	0%	Type B		403.4	(graphs)	Click here
Scotland	Low	None	Low	Stable	9	0%	Type A, Subtype pH1N1	2.6 (graphs)	186.4	(graphs)	Click here
Serbia	Low	None	Low	Stable	1	0%	None	16.0 (graphs)			Click here
Slovakia	Low	None	Low	Stable	0	0%	None	(graphs)			Click here
Slovenia	Low	None		Stable	3	0%	None	0.0 (graphs)	725.4	(graphs)	Click here
Spain	Low	None		Stable	15	40.0%	None	6.2 (graphs)		(graphs)	Click here
Sweden	Low	None	Low	Stable	0	0%	Type B	0.0 (graphs)		(graphs)	Click here
Switzerland	Low	None	Low	Stable	0	0%	None	0.0 (graphs)			Click here
Turkey					0	0%	None	(graphs)			Click here
Ukraine	Low	Sporadic	Low	Increasing	4	0%	None		312.5	(graphs)	Click here
Uzbekistan	Low	None	Low	Decreasing			None		13.0	(graphs)	Click here
Wales	Low	Sporadic	Low	Stable				1.3 (graphs)		(graphs)	Click here
Europe					201	4.5%					Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
*: the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Influenza activity in Europe is at out-of-season levels

- This report is based on data received from 35 of the 53 Member States in the WHO European Region.
- All countries reported low intensity of influenza activity.
- 2.4 % of specimens collected from sentinel sources tested positive for influenza.
- A total of 4880 deaths associated with laboratory-confirmed pandemic A(H1N1) 2009 has been reported in the Region since April 2009. No such deaths were reported in week 21/2010.

Current situation: week 21/2010

Clinical consultation rates for influenza-like illness (ILI) and acute respiratory infection (ARI) have reached low levels throughout the Region. Only one country reported a dominant virus, indicating limited influenza activity in the Region.

Virological update: week 21/2010

Sentinel physicians collected 127 respiratory specimens, of which 3 (2.4%) tested positive for influenza virus; 1 was pandemic A(H1N1), 1 was unsubtyped influenza A, and 1 was influenza B. Specimens from non-sentinel sources yielded 32 influenza detections: 5 type A (4 pandemic A(H1), and 1 A unsubtyped) and 27 influenza B.

From week 40/2009 to week 21/2010, 166 783 influenza virus detections were reported: 164 615 were influenza A (98.7%) and 2168 (1.3%) were influenza B. Of the influenza A viruses, 150 542 (91.5%) were subtyped, with 148 761 being pandemic A(H1), 1109 A(H1), and 672 A(H3).

Based on the reported antigenic characterization of 3984 influenza viruses from week 40/2009 to week 21/2010, 3859 were A(H1) pandemic A/California/7/2009 (H1N1)-like; 1 was A(H1) A/Brisbane/59/2007 (H1N1)-like; 3 were A(H3) A/Brisbane/10/2007 (H3N2)-like; 19 were A(H3) A/Perth/16/2009 (H3N2)-like; 6 were B/Florida/4/2006-like (B/Yamagata/16/88 lineage) and 96 were B/Brisbane/60/2008-like (B/Victoria/2/87 lineage). Genetic characterizations have been reported for 915 isolates: 873 belonged to the A/California/7/2009 A(H1N1) pandemic group; 1 belonged to the A/Brisbane/10/2007 (H3N2) group; 13 to the A/Perth/16/2009 (H3N2) group; 7 to the A/Victoria/208/2009 (H3N2) group; 2 to the B/Bangladesh/3333/2007 (Yamagata) and 19 to the B/England/393/2008 (Victoria) lineages.

Comment

Influenza activity is at out-of-season levels throughout the European Region. The current influenza positivity rate for the Region is low (2.4%). Most of the influenza detections (32: 91%) reported in week 21/2010 were from non-sentinel sources, and 28 (80%) were influenza B. The viruses characterized to date are similar to those recommended as components of influenza vaccines for use in the 2010–2011 northern hemisphere influenza season.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

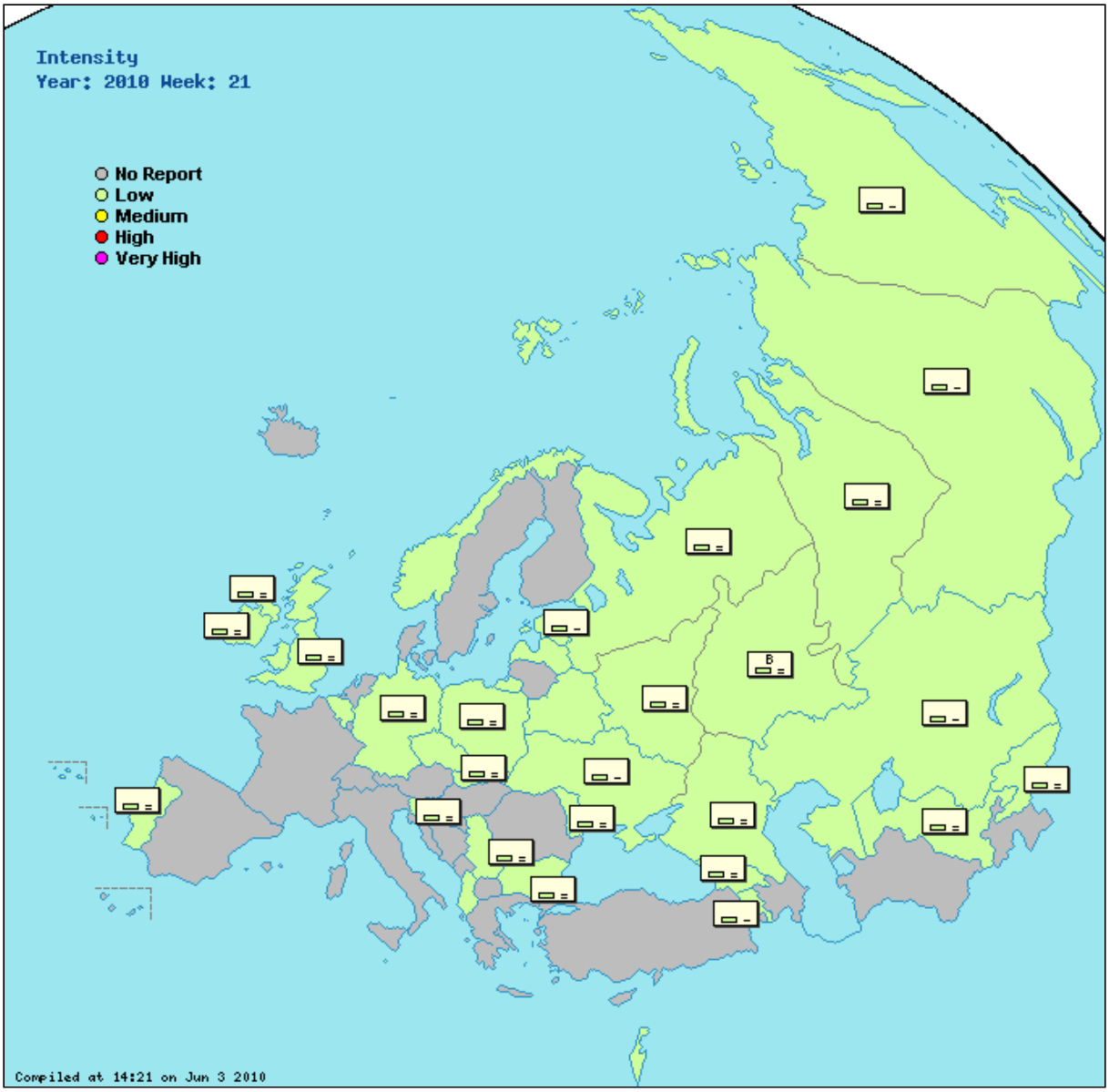
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no evidence of influenza virus activity (clinical activity remains at baseline levels)
Sporadic = isolated cases of laboratory confirmed influenza infection
Local outbreak = increased influenza activity in local areas (e.g. a city) within a region, or outbreaks in two or more institutions (e.g. schools) within a region. Laboratory confirmed.
Regional activity = influenza activity above baseline levels in one or more regions with a population comprising less than 50% of the country's total population. Laboratory confirmed.
Widespread = influenza activity above baseline levels in one or more regions with a population comprising 50% or more of the country's population. Laboratory confirmed.

Country comments (where available)

Kazakhstan
?????????: ??????? ??? ??????????? -12 ???????? ?? ???????? ??????????, ?? ??? ?? ??? -1 ????????????? ?? ????? -?. ?? ?????????? ?????????? ??????????? -64 ???????, ??????? ?????????????????? ??????????? -48, ?? ??? ????????????? -4 ? ??? ????? ??????????-2, ??-2. ??? ??????? ??????????? -16, ?? ??? ????????????? -2 ? ??? ????? ?????-? -2.

Malta
situation stable

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania	Low	Sporadic	Low	Stable					327.7 (graphs)	Click here
Armenia	Low	Sporadic	Low	Decreasing			None	(graphs)	49.3 (graphs)	Click here
Azerbaijan					1	0%	None	(graphs)		Click here
Belarus	Low		Low	Decreasing					709.0 (graphs)	Click here

Belgium	Low	None		Stable				12.5 (graphs)	641.9 (graphs)	Click here
Bosnia and Herzegovina							None	(graphs)		Click here
Bulgaria	Low	None		Stable	0	0%	None	(graphs)	407.6 (graphs)	Click here
Czech Republic	Low	None		Stable				11.7 (graphs)	683.6 (graphs)	Click here
Denmark					0	0%	None	(graphs)		Click here
England	Low	None		Stable	15	0%	None	2.4 (graphs)	361.9 (graphs)	Click here
Estonia	Low	None	Low	Decreasing	0	0%	None	1.9 (graphs)	151.3 (graphs)	Click here
Georgia	Low	None	Low	Stable	31	0%	None	87.3 (graphs)		Click here
Germany	Low	None	Low	Stable	9	0%	None	(graphs)	570.0 (graphs)	Click here
Ireland	Low	None	Low	Stable	3	0%	None	3.9 (graphs)	(graphs)	Click here
Israel	Low	None	Low	Stable				3.1 (graphs)		Click here
Italy					0	0%	None	(graphs)		Click here
Kazakhstan	Low	None	Low	Decreasing	12	8.3%	None		(graphs)	Click here
Kyrgyzstan	Low	Sporadic	Low	Stable			None		35.5 (graphs)	Click here
Latvia	Low	None	Low	Stable				0.0 (graphs)	562.8 (graphs)	Click here
Lithuania					3	0%	None	(graphs)		Click here
Malta	Low	None	Low	Stable				(graphs)	(graphs)	Click here
Montenegro								0.3 (graphs)	477.0 (graphs)	Click here
Netherlands					4	0%	None	(graphs)		Click here
Northern Ireland	Low	None		Stable	2	0%	None	8.9 (graphs)	256.4 (graphs)	Click here
Norway	Low	Sporadic		Stable				14.1 (graphs)	(graphs)	Click here
Poland	Low	None	Low	Stable	2	100.0%	None	16.9 (graphs)	(graphs)	Click here
Portugal	Low	None	Low	Stable	0	0%	None	4.7 (graphs)	(graphs)	Click here
Republic of Moldova	Low	None	Low	Stable			None	0.1 (graphs)	108.3 (graphs)	Click here
Russian Federation	Low	Sporadic		Stable	37	0%	Type B		372.5 (graphs)	Click here
Scotland	Low	None	Low	Stable				2.1 (graphs)	170.5 (graphs)	Click here
Serbia	Low	None	Low	Stable	2	0%	None	15.9 (graphs)		Click here
Slovakia	Low	None	Low	Stable	0	0%	None	(graphs)		Click here
Slovenia	Low	None		Stable	2	0%	None	1.4 (graphs)	735.9 (graphs)	Click here
Sweden					0	0%	None	(graphs)		Click here
Turkey					1	0%	None	(graphs)		Click here
Ukraine	Low	None	Low	Decreasing	3	0%	None		265.3 (graphs)	Click here
Uzbekistan	Low	None	Low	Stable			None		13.1 (graphs)	Click here
Wales	Low	Sporadic	Low	Stable				1.3 (graphs)	(graphs)	Click here
Europe					127	2.4%				Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
***:** the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Influenza activity in Europe is at out-of-season levels

During weeks 22–39/2010, the EuroFlu bulletin will be published biweekly and will report available data.

- This is the first summer report, based on data reported in week 23/2010 by 34 Member States in the WHO European Region.
- 3 out of 112 of specimens collected from sentinel sources tested positive for influenza, with 1 of these positive for pandemic A(H1).

Current situation: week 23/2010

Clinical consultation rates for influenza-like illness (ILI) and acute respiratory infection (ARI) have reached low levels throughout the Region. 24 countries reported assessments of influenza activity based on qualitative indicators: all reported low intensity of influenza activity, with 8 reporting sporadic activity.

Virological update: week 23/2010

Sentinel physicians collected 112 respiratory specimens, of which 3 (2.7%) tested positive for influenza virus; 1 was pandemic A(H1) and 2 were influenza B. Specimens from non-sentinel sources yielded 26 influenza detections: 8 type A (5 pandemic A(H1), and 3 A unsubtyped) and 18 influenza B.

Cumulative virological data: from week 22/2010
From week 22/2010 to week 23/2010, 75 influenza virus detections were reported: 19 were influenza A (25.3%) and 56 (74.7%) were influenza B. Of the influenza A viruses, 12 (63.2%) were subtyped, with 7 being pandemic A(H1) and 5 A(H1).

Comment

Influenza activity is at out-of-season levels throughout the European Region. The current influenza positivity rate for the Region is low (2.7%) and, while the total number of influenza detections was low in week 23/2010, the number of sentinel and non-sentinel influenza B detections (20: 69.0%) exceeded that of influenza A (9: 31.1%). The viruses characterized to date are similar to those recommended as components of influenza vaccines for use in the 2010–2011 northern hemisphere influenza season.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

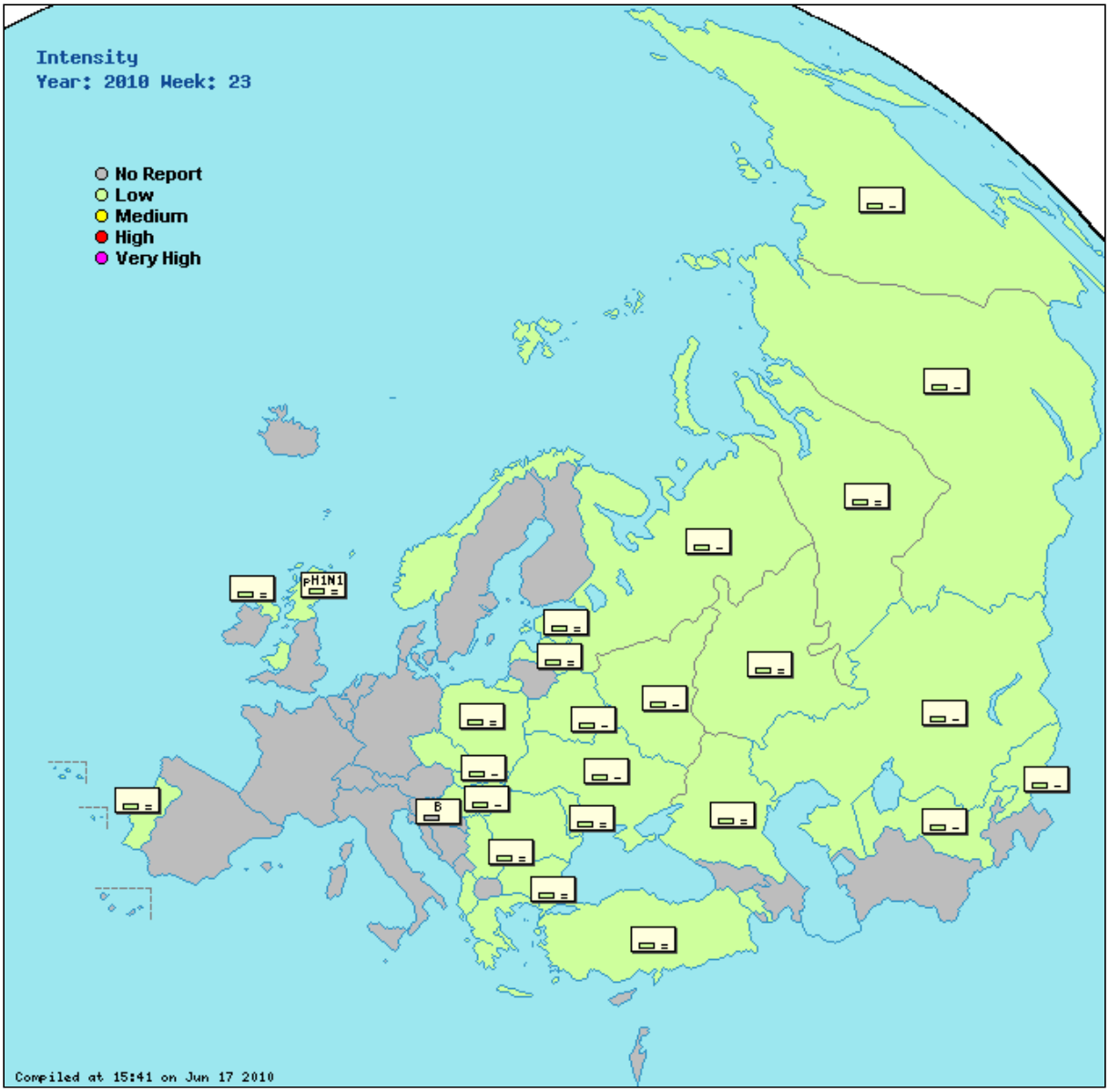
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no evidence of influenza virus activity (clinical activity remains at baseline levels)
Sporadic = isolated cases of laboratory confirmed influenza infection
Local outbreak = increased influenza activity in local areas (e.g. a city) within a region, or outbreaks in two or more institutions (e.g. schools) within a region. Laboratory confirmed.
Regional activity = influenza activity above baseline levels in one or more regions with a population comprising less than 50% of the country's total population. Laboratory confirmed.
Widespread = influenza activity above baseline levels in one or more regions with a population comprising 50% or more of the country's population. Laboratory confirmed.

Country comments (where available)

Kazakhstan

?? ???????? ??????? ??????????? ????? ???? -4, ????????????? ?? ????????. ????? ?? ???? ????????????? -8, ????????????? ???. ?? ?????????? ??????????? ????? -94. ? ??? ????? ?? ????????? ???????????-30 (????????????? -0), ??? -7 (?????-0), ????? ?????????????????? ?? ??. ?? ?????????? -87 (????????????? -13) ????? ??? ?????????????-9, ?? -4.

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania	Low	None	Low	Decreasing					329.1 (graphs)	Click here
Armenia	Low	Sporadic	Low	Increasing				(graphs)	53.3 (graphs)	Click here
Austria					0	0%	None	(graphs)		Click here
Azerbaijan					3	0%	None	(graphs)		Click here
Belarus	Low	Sporadic	Low	Decreasing			None		528.5 (graphs)	Click here
Belgium					1	100.0%	None	(graphs)		Click here

Bosnia and Herzegovina							None	(graphs)			Click here
Bulgaria	Low	None		Stable	0	0%	None	(graphs)	348.0	(graphs)	Click here
Czech Republic	Low	None		Stable				9.5 (graphs)	586.9	(graphs)	Click here
England					4	0%	None	(graphs)			Click here
Estonia	Low	None	Low	Stable	0	0%	None	1.3 (graphs)	98.1	(graphs)	Click here
Georgia					17	0%	None	91.5 (graphs)			Click here
Germany					5	20.0%	None			(graphs)	Click here
Greece	Low	None		Stable				25.6 (graphs)		(graphs)	Click here
Hungary	Low	None	Low	Decreasing	16	0%	None	14.1 (graphs)		(graphs)	Click here
Ireland					1	0%	None	(graphs)			Click here
Italy					0	0%	None	(graphs)			Click here
Kazakhstan	Low	None	Low	Decreasing	4	0%	None			(graphs)	Click here
Kyrgyzstan	Low	Sporadic	Low	Decreasing	1	0%	None		22.4	(graphs)	Click here
Latvia	Low	None		Stable	0	0%	None	0.0 (graphs)	429.9	(graphs)	Click here
Lithuania					1	0%	None	(graphs)			Click here
Netherlands					2	0%	None	(graphs)			Click here
Northern Ireland	Low	None		Stable	0	0%	None	9.3 (graphs)	213.1	(graphs)	Click here
Norway	Low	Sporadic		Stable				12.6 (graphs)		(graphs)	Click here
Poland	Low	None	Low	Stable	0	0%	None	21.3 (graphs)		(graphs)	Click here
Portugal	Low	None	Low	Stable	0	0%	None	4.9 (graphs)		(graphs)	Click here
Republic of Moldova	Low	None	Low	Stable			None	0.1 (graphs)	86.2	(graphs)	Click here
Romania	Low	None	Low	Stable				0.0 (graphs)	516.2	(graphs)	Click here
Russian Federation	Low	Sporadic		Decreasing	34	0%	None		289.1	(graphs)	Click here
Scotland	Low	None	Low	Stable	16	0%	Type A, Subtype pH1N1	1.1 (graphs)	150.9	(graphs)	Click here
Serbia	Low	None	Low	Stable	1	0%	None	8.7 (graphs)			Click here
Slovakia	Low	None	Low	Decreasing	0	0%	None	(graphs)			Click here
Slovenia					2	50.0%	Type B	(graphs)			Click here
Turkey	Low	None	Low	Stable	1	0%	None	13.9 (graphs)			Click here
Ukraine	Low	Sporadic	Low	Decreasing	3	0%	None		247.5	(graphs)	Click here
Uzbekistan	Low	None	Low	Decreasing			None		11.4	(graphs)	Click here
Wales	Low	Sporadic	Low	Stable				1.3 (graphs)		(graphs)	Click here
Europe					112	2.7%					Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
***:** the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Almost no virologically confirmed influenza activity in the WHO European Region

During weeks 22–39/2010, the EuroFlu bulletin will be published biweekly and report available data.

- This report is based on data reported in week 25/2010 by 36 Member States in the WHO European Region.
- None of 123 specimens collected from sentinel sources tested positive for influenza.

Current situation: week 25/2010

Clinical consultation rates for influenza-like illness (ILI) and acute respiratory infection (ARI) have reached low levels throughout the Region. 31 countries reported low levels of clinical incidence and, since there were no confirmed cases from sentinel sources, it can be concluded that there is no recognizable influenza activity.

Virological update: week 25/2010

Sentinel physicians collected 123 respiratory specimens, none of which tested positive for influenza virus. Specimens from non-sentinel sources yielded 20 influenza detections: 4 type A (3 pandemic A(H1), and 1 A unsubtyped) and 16 influenza B.

Cumulative virological data from week 22/2010
From week 22/2010 to week 25/2010, 95 influenza virus detections were reported: 23 were influenza A (24.0%) and 72 (76.0%) were influenza B. Of the influenza A viruses, 15 (65.2%) were subtyped, with 9 being pandemic A(H1) and 6 A(H1).

Comment

Influenza activity is at very low levels throughout the European Region. Virological surveillance at sentinel sites yielded no influenza-positive specimens. In week 25, the number of non-sentinel influenza B detections (16: 80.0%) exceeded that of influenza A (4: 20.0%). The viruses characterized to date are similar to those recommended as components of influenza vaccines for use in the 2010–2011 northern hemisphere influenza season.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

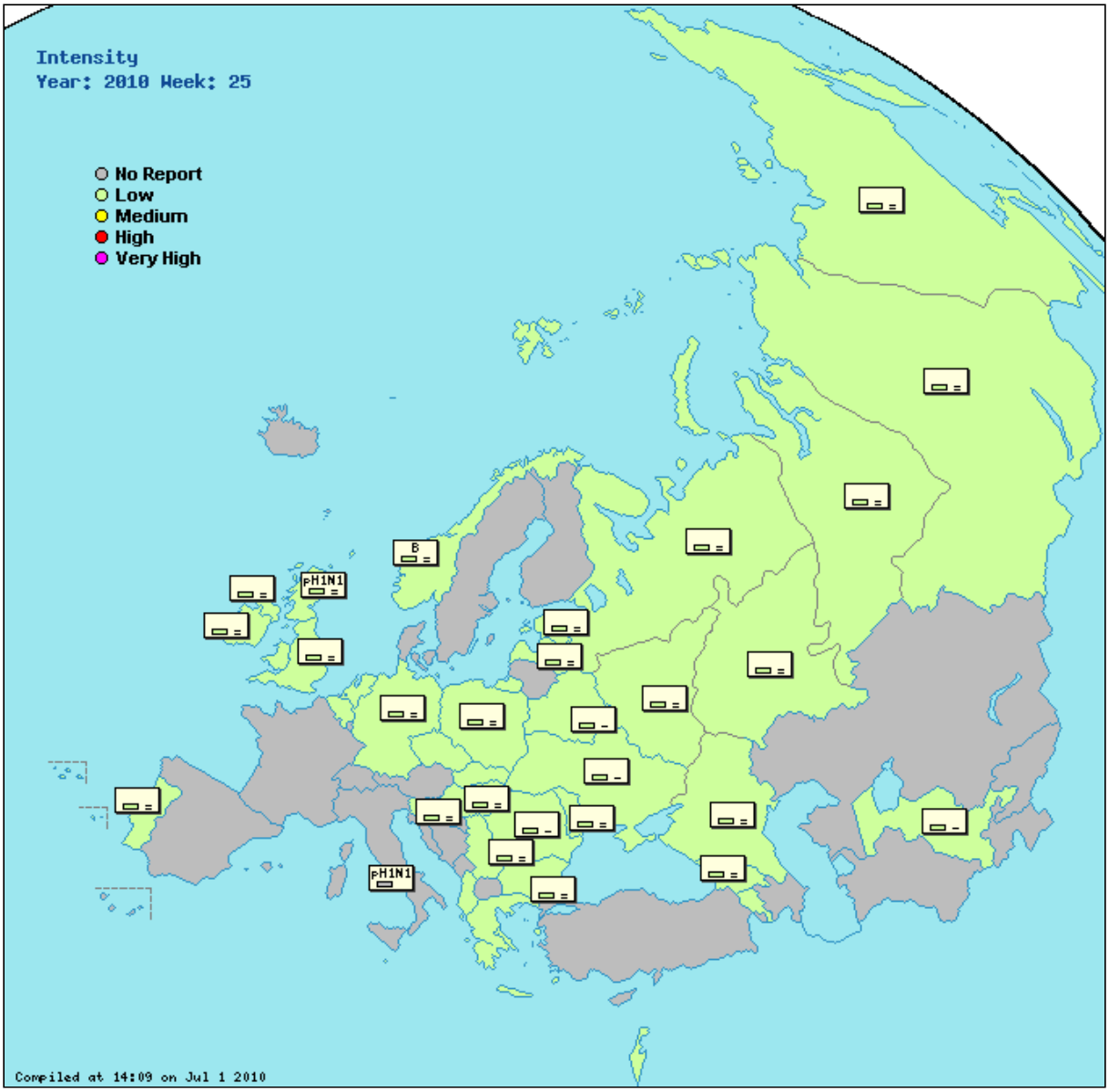
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no evidence of influenza virus activity (clinical activity remains at baseline levels)
Sporadic = isolated cases of laboratory confirmed influenza infection
Local outbreak = increased influenza activity in local areas (e.g. a city) within a region, or outbreaks in two or more institutions (e.g. schools) within a region. Laboratory confirmed.
Regional activity = influenza activity above baseline levels in one or more regions with a population comprising less than 50% of the country's total population. Laboratory confirmed.
Widespread = influenza activity above baseline levels in one or more regions with a population comprising 50% or more of the country's population. Laboratory confirmed.

Country comments (where available)

Malta
situation stable

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Albania	Low	None	Low	Decreasing					338.1 (graphs)	Click here
Armenia	Low	Sporadic	Low	Decreasing				(graphs)	38.8 (graphs)	Click here
Austria					0	0%	None	(graphs)		Click here
Belarus	Low	None	Low	Decreasing			None		(graphs)	Click here
Belgium	Low	None		Stable				23.0 (graphs)	391.8 (graphs)	Click here
Bulgaria	Low	None		Stable	0	0%	None	(graphs)	301.5 (graphs)	Click here
Czech Republic	Low	None		Stable				8.9 (graphs)	550.8 (graphs)	Click here
Denmark					0	0%	None	(graphs)		Click here
England	Low	None		Stable	6	0%	None	1.6 (graphs)	344.4 (graphs)	Click here

Estonia	Low	None	Low	Stable	1	0%	None	1.1 (graphs)	70.3 (graphs)	Click here
Georgia	Low	None	Low	Stable	37	0%	None	102.6 (graphs)		Click here
Germany	Low	None	Low	Stable	14	0%	None	(graphs)	496.6 (graphs)	Click here
Greece	Low	None		Stable				21.2 (graphs)	(graphs)	Click here
Hungary	Low	None	Low	Stable	7	0%	None	10.2 (graphs)	(graphs)	Click here
Ireland	Low	None	Low	Stable	1	0%	None	1.3 (graphs)	(graphs)	Click here
Israel	Low	None	Low	Stable				3.1 (graphs)		Click here
Italy					0	0%	Type A, Subtype pH1N1	(graphs)		Click here
Kyrgyzstan					0	0%	None		(graphs)	Click here
Latvia	Low	None		Stable	0	0%	None	0.0 (graphs)	162.3 (graphs)	Click here
Malta	Low	None	Low	Stable				(graphs)	(graphs)	Click here
Netherlands	Low	None		Stable				13.3 (graphs)	(graphs)	Click here
Northern Ireland	Low	None		Stable	1	0%	None	11.2 (graphs)	279.9 (graphs)	Click here
Norway	Low	None		Stable	0	0%	Type B	12.0 (graphs)	(graphs)	Click here
Poland	Low	None	Low	Stable	1	0%	None	16.8 (graphs)	(graphs)	Click here
Portugal	Low	None	Low	Stable	0	0%	None	0.0 (graphs)	(graphs)	Click here
Republic of Moldova	Low	None	Low	Stable	1	0%	None	(graphs)	60.8 (graphs)	Click here
Romania	Low	None	Low	Decreasing	0	0%	None	0.0 (graphs)	483.9 (graphs)	Click here
Russian Federation	Low	Sporadic		Stable	39	0%	None		248.6 (graphs)	Click here
Scotland	Low	None	Low	Stable	4	0%	Type A, Subtype pH1N1	0.0 (graphs)	153.2 (graphs)	Click here
Serbia	Low	None	Low	Stable	2	0%	None	9.0 (graphs)		Click here
Slovakia	Low	None	Low	Decreasing				(graphs)		Click here
Slovenia	Low	None		Stable	1	0%	None	0.0 (graphs)	434.8 (graphs)	Click here
Sweden					0	0%	None	(graphs)		Click here
Switzerland								10.7 (graphs)		Click here
Turkey					2	0%	None	(graphs)		Click here
Ukraine	Low	Sporadic	Low	Decreasing	6	0%	None		215.1 (graphs)	Click here
Uzbekistan	Low	None	Low	Decreasing			None		12.1 (graphs)	Click here
Wales	Low	Sporadic	Low	Stable				1.1 (graphs)	(graphs)	Click here
Europe					123	0%				Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
***:** the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Very little influenza activity in the WHO European Region

During weeks 22–39/2010, the EuroFlu bulletin will be published biweekly, and report available data.

- This issue is based on data reported in week 27/2010 by 26 Member States in the WHO European Region.
- It also includes information on current influenza activity in the temperate regions of the southern hemisphere.
- In the WHO European Region, 1 out of 24 of specimens collected from sentinel sources tested positive for influenza.

Current situation: week 27/2010

Clinical consultation rates for influenza-like illness (ILI) and acute respiratory infection (ARI) have reached low levels throughout the WHO European Region. 28 countries reported low levels of clinical incidence. There was only one virologically confirmed influenza case from sentinel sources and there is no significant influenza activity in the Region.

Virological update: week 27/2010

Sentinel physicians collected 24 respiratory specimens, of which 1 (4.2%) tested positive for influenza virus B. Specimens from non-sentinel sources yielded 3 detections of influenza A unsubtyped viruses.

Cumulative virological data from week 22/2010

From week 22/2010 to week 27/2010, 99 influenza virus detections were reported: 26 were influenza A (26.3%) and 73 (73.7%) were influenza B. Of the influenza A viruses, 15 (57.7%) were subtyped, with 9 being pandemic A(H1) and 6 seasonal A(H1).

Comment

Influenza activity is at very low levels throughout the European Region. Virological surveillance at sentinel sites yielded only one influenza-positive specimen. The viruses characterized to date are similar to those recommended as components of influenza vaccines for use in the 2010–2011 northern hemisphere influenza season.

Influenza activity in the temperate regions of the southern hemisphere

Monitoring influenza virus circulation in the temperate regions of the southern hemisphere, where it is currently winter, can inform planning in advance of the influenza season in the northern hemisphere. The following section provides a brief update of the current situation in the southern hemisphere where detections of pandemic (H1N1) 2009 influenza, influenza A(H3N2) and influenza B are being reported amid the circulation of other respiratory viruses.

Australia, as of 15July 2010

ILI presentations in Western Australia have increased gradually over the past three weeks. Of nine influenza viruses detected from sentinel and non-sentinel surveillance systems eight were identified as pandemic (H1N1) 2009 viruses and one as an influenza A(H3N2) virus. Click here for further information.

In the State of Victoria most viruses detected through routine testing this week were picornavirus and respiratory syncytial viruses (RSV), with one pandemic (H1N1) 2009. Of the 17 influenza viruses detected so far this year, 9 have been pandemic (H1N1) 2009, 3 have been influenza A(H3N2) and 5 have been untyped (not pandemic (H1N1) 2009). Click here for further information.

South America, as of 12 July 2010

In South America, a low-to-moderate intensity of acute respiratory disease activity is being reported. In Argentina and Chile there is a strong predominance of RSV, although influenza A (seasonal A(H3) and pandemic A(H1)) and B viruses are being detected. Of the few influenza viruses detected, most are influenza type B in Argentina and pandemic (H1N1) 2009 in Paraguay, Colombia and Chile. Click here for further information.

South Africa, as of 13 July 2010

Of 801 ILI specimens collected from sentinel providers in South Africa, 78 have tested positive for influenza B viruses, 55 for influenza A(H3N2) viruses and 7 for pandemic (H1N1) 2009 viruses. Among 2263 hospitalized SARI cases, 32 have tested positive for influenza B and 15 for influenza A (H3N2). Click here for further information.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites. In addition, the bulletin will continue to provide updates on other regions, as the situation evolves during the winter influenza season in the southern hemisphere.

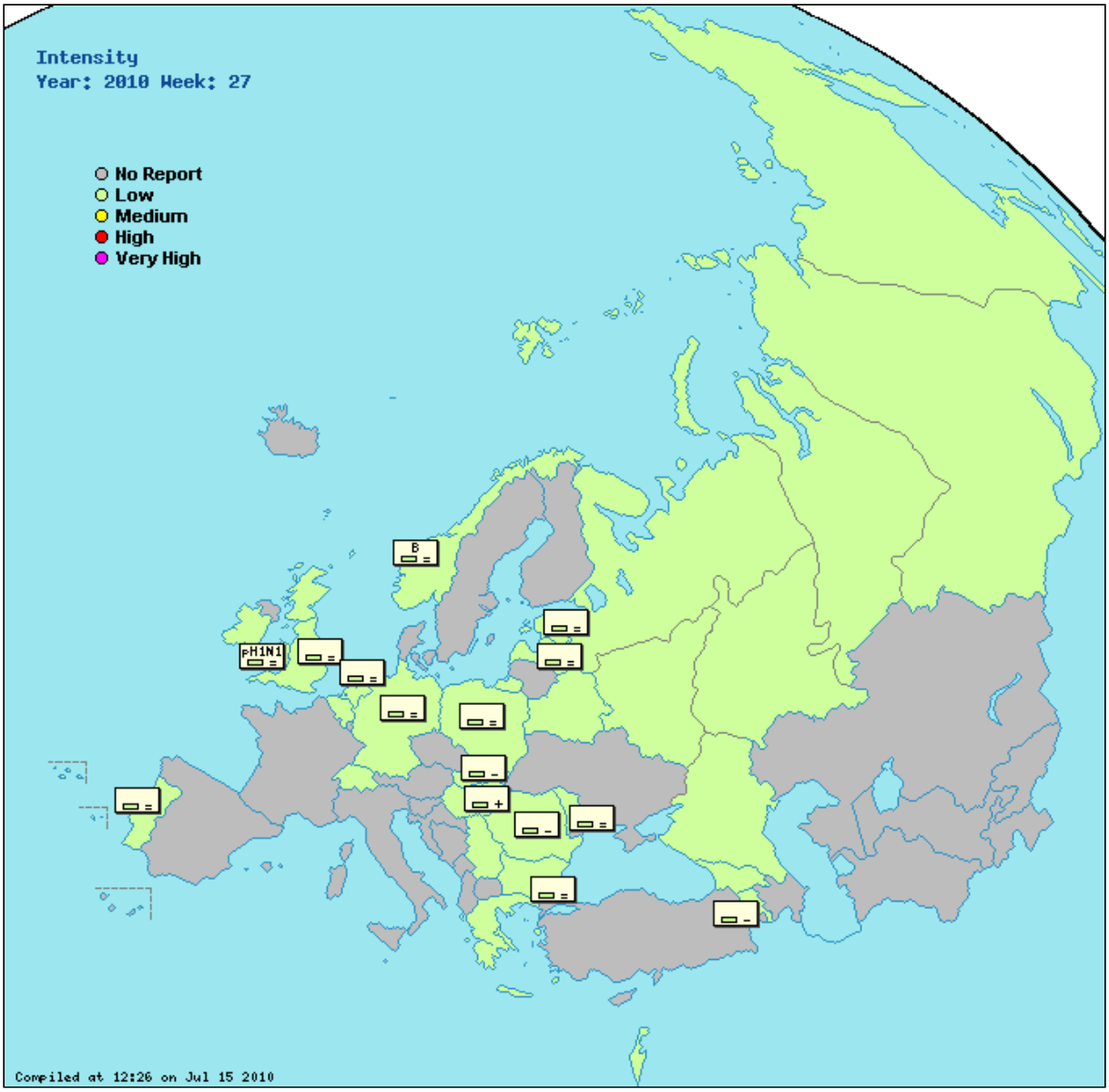
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no evidence of influenza virus activity (clinical activity remains at baseline levels)
Sporadic = isolated cases of laboratory confirmed influenza infection
Local outbreak = increased influenza activity in local areas (e.g. a city) within a region, or outbreaks in two or more institutions (e.g. schools) within a region. Laboratory confirmed.
Regional activity = influenza activity above baseline levels in one or more regions with a population comprising less than 50% of the country's total population. Laboratory confirmed.
Widespread = influenza activity above baseline levels in one or more regions with a population comprising 50% or more of the country's population. Laboratory confirmed.

Country comments (where available)

Latvia
0

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Armenia	Low	Sporadic	Low	Decreasing	0	0%	None	(graphs)	25.1 (graphs)	Click here
Belarus	Low	None	Low	Decreasing					359.8 (graphs)	Click here
Belgium	Low	None		Stable				16.2 (graphs)	296.6 (graphs)	Click here
Bulgaria	Low	None		Stable	0	0%	None	(graphs)	280.5 (graphs)	Click here
England	Low	None		Stable	8	0%	None	2.0 (graphs)	261.4 (graphs)	Click here
Estonia	Low	Sporadic	Low	Stable	0	0%	None	1.5 (graphs)	60.9 (graphs)	Click here
Georgia	Low		Low	Stable				81.1 (graphs)		Click here
Germany	Low	None	Low	Stable	2	0%	None	(graphs)	410.2 (graphs)	Click here
Greece	Low	None		Stable				19.3 (graphs)	(graphs)	Click here
Hungary	Low	None	Low	Increasing	4	0%	None	12.7 (graphs)	(graphs)	Click here
Ireland	Low	None	Low	Stable				0.9 (graphs)	(graphs)	Click here
Israel	Low	None	Low	Stable				1.8 (graphs)		Click here
Italy					0	0%	None	(graphs)		Click here
Kyrgyzstan					0	0%	None		(graphs)	Click here
Latvia	Low	None		Stable	0	0%	None	0.0 (graphs)	215.0 (graphs)	Click here
Netherlands	Low	None		Stable	0	0%	None	11.7 (graphs)	(graphs)	Click here
Norway	Low	Sporadic		Stable	2	50.0%	Type B	10.5 (graphs)	(graphs)	Click here
Poland	Low	None	Low	Stable	0	0%	None	10.1 (graphs)	(graphs)	Click here
Portugal	Low	None	Low	Stable	0	0%	None	0.0 (graphs)	(graphs)	Click here
Republic of Moldova	Low	None	Low	Stable	1	0%	None	(graphs)	44.8 (graphs)	Click here
Romania	Low	None	Low	Decreasing	0	0%	None	0.0 (graphs)	401.4 (graphs)	Click here
Russian Federation	Low	Sporadic		Decreasing					199.7 (graphs)	Click here
Scotland	Low	None	Low	Stable				0.0 (graphs)	130.2 (graphs)	Click here
Serbia	Low	None	Low	Stable				4.8 (graphs)		Click here
Slovakia	Low	None	Low	Decreasing	0	0%	None	(graphs)		Click here
Slovenia					0	0%	None	(graphs)		Click here
Switzerland	Low	None	Low	Stable				0.8 (graphs)		Click here
Wales	Low	Sporadic	Low	Stable	7	0%	Type A, Subtype pH1N1	1.4 (graphs)	(graphs)	Click here
Europe					24	4.2%				Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
***:** the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Virtually no influenza activity in the WHO European Region

During weeks 22–39/2010, the EuroFlu bulletin will be published biweekly, and report available data.

- This issue is based on data reported in week 29/2010 by 34 Member States in the WHO European Region.
- It also includes information on current influenza activity in the temperate regions of the southern hemisphere.
- In the WHO European Region, none of the 32 specimens collected from sentinel sources tested positive for influenza.

Current situation: week 29/2010

Clinical consultation rates for influenza-like illness (ILI) and acute respiratory infection (ARI) are at low levels throughout the WHO European Region. In 24 countries there were no laboratory-confirmed detections of influenza in sentinel practices, indicating insignificant influenza activity in the Region.

Virological update: week 29/2010

Sentinel physicians collected 32 respiratory specimens, none of which tested positive for influenza virus. Specimens from non-sentinel sources yielded 3 detections, of which 2 were influenza A (not subtyped) and 1 was influenza B.

Cumulative virological data from week 22/2010

From week 22/2010 to week 29/2010, 155 influenza virus detections were reported: 29 were influenza A (19%) and 126 (81%) were influenza B. Of the influenza A viruses, 11 (38%) were subtyped, with 3 being pandemic A(H1) and 8 seasonal A(H3N2).

Comment

There is virtually no influenza activity throughout the European Region. The viruses characterized to date are similar to those recommended as components of influenza vaccines for use in the 2010–2011 northern hemisphere influenza season.

Influenza activity in the temperate regions of the southern hemisphere

Monitoring influenza virus circulation in the temperate regions of the southern hemisphere, where it is currently winter, can inform planning in advance of the influenza season in the northern hemisphere. The following section provides a brief update of the current situation in the southern hemisphere, where detections of pandemic (H1N1) 2009 influenza, influenza A(H3N2) and influenza B are reported amid the circulation of other respiratory viruses.

Australia, as of 25 July 2010

ILI presentations in Western Australia have stabilized at a rate of 12 per 1000 consultations. In the week ending 25/07/10, 18 influenza viruses were detected from sentinel and non-sentinel surveillance systems, of which 16 were identified as pandemic (H1N1) 2009 viruses, 1 as A-H3 virus and 1 as influenza A type unknown. Further information is available from Virus WAtch .

The number of ILI presentations in the State of Victoria had declined from the previous week. Most viruses detected through routine testing were adenovirus, picornavirus and respiratory syncytial viruses (RSV), with 2 pandemic (H1N1) 2009 detections. Of the 19 influenza viruses detected so far in 2010, 11 were pandemic (H1N1) 2009, 3 influenza A(H3N2) and 5 untyped (not pandemic (H1N1) 2009). See the 2010 Victorian Influenza Vaccine Effectiveness Audit Report for further information.

South America, as of 26 July 2010

In South America, the intensity of acute respiratory disease activity was low to moderate. The trends in acute respiratory disease were decreasing in Argentina, and unchanged in Brazil and Chile. In Argentina and Chile there was a strong predominance of RSV, although samples positive for pandemic influenza and influenza B had been reported in Chile in the previous week. Further information is available from the Pan American Health Organization (PAHO).

South Africa, as of 25 July 2010

Of the 934 ILI specimens collected from sentinel care providers in South Africa, 102 had tested positive for influenza B viruses, 90 for influenza A(H3N2) viruses and 7 for pandemic (H1N1) 2009 viruses. Among 2365 hospitalized SARI cases reported since 1 January 2010, 57 had tested positive for influenza B and 26 for influenza A (H3N2). Further information is available from the National Institute for Communicable Diseases (NICD) in South Africa.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites. In addition, the bulletin will continue to provide updates on other regions, as the situation evolves during the winter influenza season in the southern hemisphere.

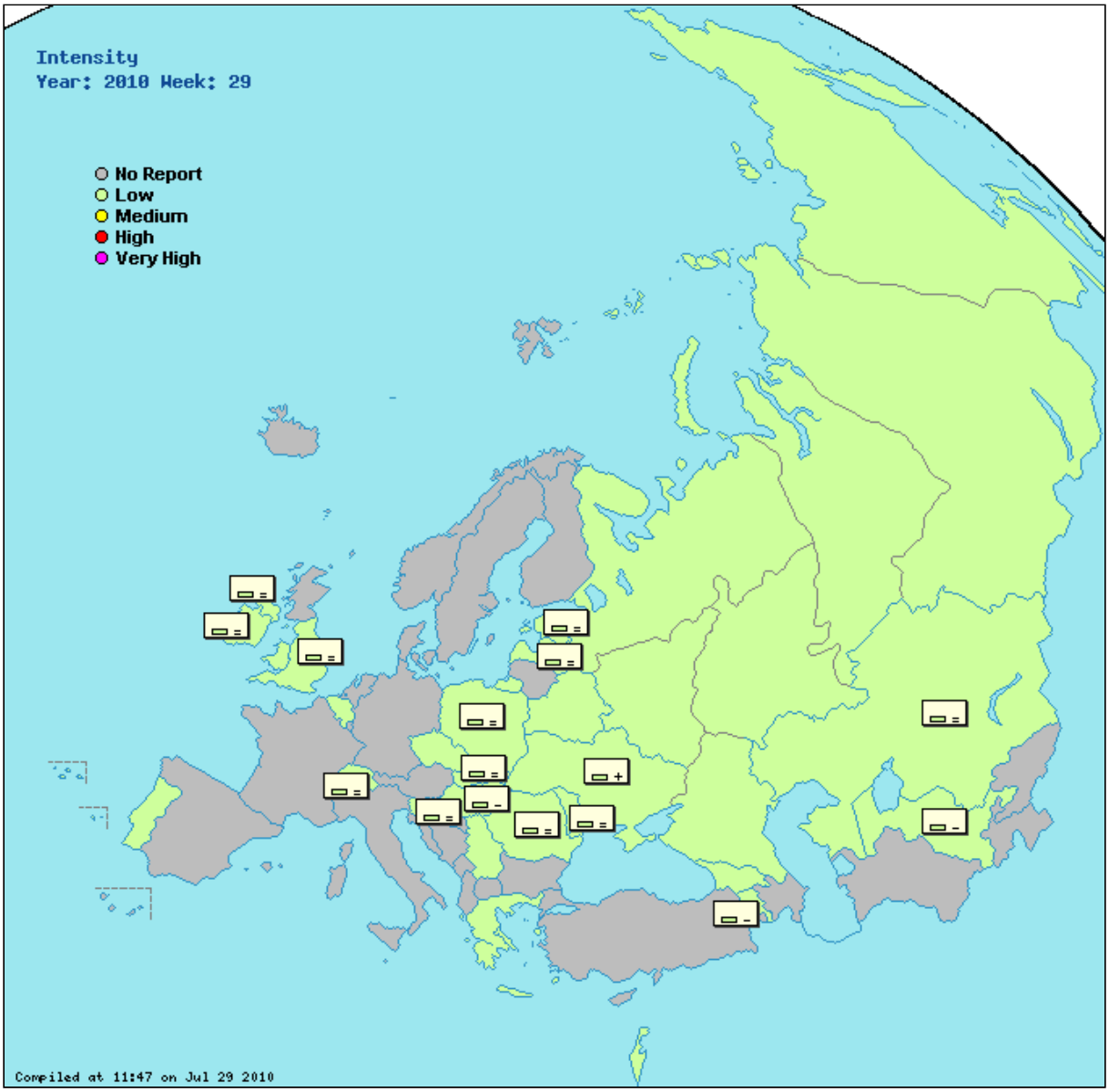
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no evidence of influenza virus activity (clinical activity remains at baseline levels)
Sporadic = isolated cases of laboratory confirmed influenza infection
Local outbreak = increased influenza activity in local areas (e.g. a city) within a region, or outbreaks in two or more institutions (e.g. schools) within a region. Laboratory confirmed.
Regional activity = influenza activity above baseline levels in one or more regions with a population comprising less than 50% of the country's total population. Laboratory confirmed.
Widespread = influenza activity above baseline levels in one or more regions with a population comprising 50% or more of the country's population. Laboratory confirmed.

Country comments **(where available)**

Kazakhstan
На другие не гриппозные инфекции всего исследовано -31 проб, в том числе 5 положительных, из них 4-аденовирусы, 1-РС.

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Armenia	Low	Sporadic	Low	Decreasing	0	0%	None	(graphs)	27.5 (graphs)	Click here
Austria					0	0%	None	(graphs)		Click here
Belarus	Low	Sporadic	Low	Stable					356.5 (graphs)	Click here
Belgium	Low	None		Stable				6.6 (graphs)	208.4 (graphs)	Click here
Bosnia and Herzegovina							None	(graphs)		Click here
Bulgaria					6	0%	None		(graphs)	Click here
Czech Republic	Low	None		Stable				4.7 (graphs)	369.0 (graphs)	Click here
Denmark					0	0%	None	(graphs)		Click here
England	Low	None		Stable	5	0%	None	1.6 (graphs)	222.2 (graphs)	Click here
Estonia	Low	None	Low	Stable	1	0%	None	0.8 (graphs)	50.3 (graphs)	Click here
Georgia	Low		Low	Stable				66.0 (graphs)		Click here
Germany					2	0%	None	(graphs)	341.1 (graphs)	Click here
Greece	Low	None		Stable				17.6 (graphs)	(graphs)	Click here
Hungary	Low	None	Low	Decreasing	2	0%	None	6.6 (graphs)	(graphs)	Click here
Ireland	Low	None	Low	Stable	0	0%	None	1.3 (graphs)	(graphs)	Click here
Israel	Low	None	Low	Stable				2.2 (graphs)		Click here
Kazakhstan	Low	None	Low	Stable	5	0%	None		(graphs)	Click here
Kyrgyzstan					5	0%	None		(graphs)	Click here
Latvia	Low	None		Stable	0	0%	None	0.0 (graphs)	206.7 (graphs)	Click here
Lithuania					0	0%	None	(graphs)		Click here
Netherlands					1	0%	None	(graphs)		Click here
Northern Ireland	Low	None		Stable	0	0%	None	4.1 (graphs)	216.5 (graphs)	Click here
Norway					0	0%	None	(graphs)		Click here
Poland	Low	None	Low	Stable	0	0%	None	13.6 (graphs)	(graphs)	Click here
Portugal	Low	None		Stable				0.0 (graphs)	(graphs)	Click here
Republic of Moldova	Low	None	Low	Stable	1	0%	None	(graphs)	49.1 (graphs)	Click here
Romania	Low	None	Low	Stable	0	0%	None	0.0 (graphs)	429.7 (graphs)	Click here
Russian Federation	Low	None		Stable					204.8 (graphs)	Click here
Serbia	Low	None	Low	Stable				3.8 (graphs)		Click here
Slovakia	Low	None	Low	Stable	0	0%	None	(graphs)		Click here
Slovenia	Low	None		Stable	1	0%	None	0.0 (graphs)	728.2 (graphs)	Click here
Sweden					0	0%	None	(graphs)		Click here
Switzerland	Low	None	Low	Stable	0	0%	None	0.8 (graphs)		Click here
Ukraine	Low	Sporadic	Low	Increasing	3	0%	None		197.9 (graphs)	Click here
Uzbekistan	Low	None	Low	Decreasing			None		11.1 (graphs)	Click here
Wales	Low	Sporadic	Low	Stable				1.0 (graphs)	(graphs)	Click here
Europe					32	0%				Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
***:** the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Almost no influenza activity in the WHO European Region

During weeks 22–39/2010, the EuroFlu bulletin is being published biweekly, reporting available data.

- This issue is based on data reported in week 31/2010 by 30 Member States of the WHO European Region.
- It also includes information on current influenza activity in the temperate regions of the southern hemisphere.
- On 10 August, 2010, the Director-General of the World Health Organization declared an end to the H1N1 influenza pandemic.
- In the WHO European Region, none of the 11 specimens collected from sentinel sources tested positive for influenza. One influenza B virus was detected from 418 non-sentinel specimens.
- In the southern hemisphere, the detected influenza viruses are represented by a combination of pandemic (H1N1), influenza A(H3N2) and influenza B viruses.

Current situation: week 31/2010

Clinical consultation rates for influenza-like illness (ILI) and acute respiratory infection (ARI) are at low levels throughout the WHO European Region. In 22 countries there were no laboratory-confirmed detections of influenza in sentinel practices, indicating insignificant influenza activity in the Region.

Virological update: week 31/2010

Sentinel physicians collected 11 respiratory specimens, none of which tested positive for influenza virus. Out of 418 specimens collected from non-sentinel sources, one influenza B virus was detected.

Cumulative virological data from week 22/2010

From week 22/2010 to week 31/2010, 156 influenza virus detections were reported: 29 were influenza A (18.6%) and 127 (81.4%) were influenza B. Of the influenza A viruses, 11 (38.0%) were subtyped, with 3 being pandemic A(H1) and 8 seasonal A(H3N2).

Comment

There is virtually no influenza activity throughout the European Region. The viruses characterized to date are similar to those recommended as components of influenza vaccines for use in the 2010–2011 northern hemisphere influenza season.

Influenza activity in the temperate regions of the southern hemisphere

Monitoring influenza virus circulation in the temperate regions of the southern hemisphere, where it is currently winter, can inform planning in advance of the influenza season in the northern hemisphere. The following section provides a brief update of the current situation in the southern hemisphere, where detections of pandemic (H1N1) 2009 influenza, influenza A(H3N2) and influenza B are reported amid the circulation of other respiratory viruses.

Australia, as of 8 August 2010

ILI presentations in Western Australia had decreased, but respiratory viral presentations remained stable and were slightly above baseline level. The number of laboratory-confirmed influenza cases continued to increase. In the week ending 08/08/10, 42 influenza viruses were detected from sentinel and non-sentinel surveillance systems of which 31 (74%) were identified as pandemic A(H1N1) 2009 viruses, 6 (14%) as type B virus, 4 (10%) as A(H3N2) virus and 1 (2%) as influenza A subtype unknown. Further information is available from Virus WAtch .

The number of ILI presentations in the State of Victoria rose by a small amount from the previous week and remained slightly above baseline level. Most viruses detected through routine testing were picornavirus and influenza A virus. Of the 37 influenza viruses detected so far in 2010, 21 (57%) have been pandemic A(H1N1) 2009, 5 (13%) influenza A(H3N2) and 11 (30%) untyped. See the 2010 Victorian Influenza Vaccine Effectiveness Audit Report for further information.

South America, as of 9 August 2010

In South America, the intensity of acute respiratory disease activity was low to moderate. The trends in acute respiratory disease were decreasing in Argentina and remained unchanged in Brazil and Chile. Although respiratory syncytial virus (RSV) continued to predominate in Argentina and Chile, pandemic influenza A(H1N1), seasonal influenza A(H3N2) and influenza B were also isolated. In Chile, 78% of positive specimens were RSV and 5% were pandemic influenza A(H1N1) 2009. Further information is available from the Pan American Health Organization (PAHO).

South Africa, as of 1 August 2010

Of the 1100 ILI specimens collected from sentinel care providers in South Africa, 117 had tested positive for influenza B viruses, 124 for influenza A(H3N2) viruses,14 for pandemic A(H1N1) 2009 viruses and 2 for influenza A unsubtyped. Among 2490 hospitalized cases of severe acute respiratory illness (SARI), 66 had tested positive for influenza B and 31 for influenza A(H3N2). The ILI and SARI counts were higher than the previous week. Further information is available from the National Institute for Communicable Diseases (NICD) in South Africa.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites. In addition, the bulletin will continue to provide updates on other regions, as the situation evolves during the winter influenza season in the southern hemisphere.

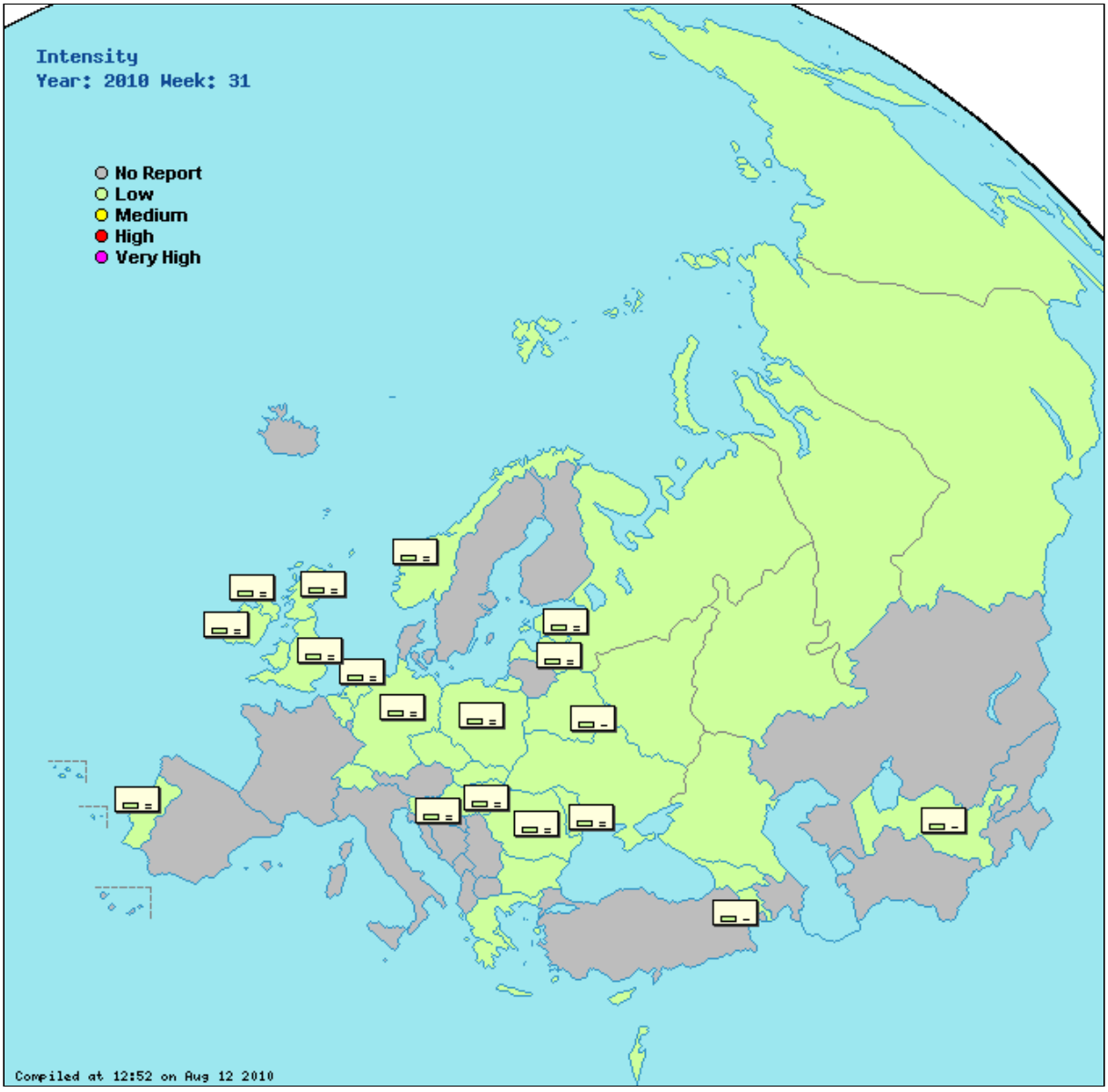
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no laboratory-confirmed case(s) of influenza, or evidence of increased or unusual respiratory disease activity.
Sporadic = isolated cases of laboratory confirmed influenza infection
Localized = limited to one administrative unit of the country (or reporting site) only.
Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites).
Widespread = appearing in ≥50% of the administrative units of the country (or reporting sites).

Country comments (where available)

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Armenia	Low	Sporadic	Low	Decreasing	0	0%	None	(graphs)	24.3 (graphs)	Click here
Austria					0	0%	None	(graphs)		Click here
Belarus	Low	Sporadic	Low	Decreasing			None		365.6 (graphs)	Click here
Belgium	Low	None		Stable				7.6 (graphs)	235.5 (graphs)	Click here
Bosnia and Herzegovina							None	(graphs)		Click here
Bulgaria	Low	None		Stable				(graphs)	272.4 (graphs)	Click here
Cyprus	Low	Sporadic	Low	Stable				(graphs)		Click here
Czech Republic	Low	None		Stable				4.9 (graphs)	333.3 (graphs)	Click here
Denmark					0	0%	None	(graphs)		Click here
England	Low	None		Stable	4	0%	None	1.6 (graphs)	210.7 (graphs)	Click here
Estonia	Low	None	Low	Stable	0	0%	None	0.8 (graphs)	44.4 (graphs)	Click here
Georgia	Low		Low	Stable				56.2 (graphs)		Click here
Germany	Low	None	Low	Stable	2	0%	None	(graphs)	360.9 (graphs)	Click here
Greece	Low	None		Stable				26.8 (graphs)	(graphs)	Click here
Hungary	Low	None	Low	Stable	2	0%	None	5.9 (graphs)	(graphs)	Click here
Ireland	Low	None	Low	Stable	0	0%	None	1.9 (graphs)	(graphs)	Click here
Israel	Low	None	Low	Stable				2.5 (graphs)		Click here
Latvia	Low	None		Stable	0	0%	None	0.0 (graphs)	205.7 (graphs)	Click here
Lithuania					0	0%	None	(graphs)		Click here
Netherlands	Low	None		Stable	0	0%	None	10.4 (graphs)	(graphs)	Click here
Northern Ireland	Low	None		Stable	0	0%	None	10.4 (graphs)	175.4 (graphs)	Click here
Norway	Low	None		Stable	0	0%	None	7.6 (graphs)	(graphs)	Click here
Poland	Low	None	Low	Stable	0	0%	None	8.1 (graphs)	(graphs)	Click here
Portugal	Low	None	Low	Stable	0	0%	None	0.0 (graphs)	(graphs)	Click here
Republic of Moldova	Low	None	Low	Stable	0	0%	None	(graphs)	51.6 (graphs)	Click here
Romania	Low	None	Low	Stable	0	0%	None	0.0 (graphs)	441.7 (graphs)	Click here
Russian Federation	Low	Sporadic		Stable					224.9 (graphs)	Click here
Scotland	Low	None	Low	Stable	3	0%	None	0.7 (graphs)	80.9 (graphs)	Click here
Slovakia	Low	None	Low	Stable				(graphs)		Click here
Slovenia	Low	None		Stable	0	0%	None	0.0 (graphs)	552.7 (graphs)	Click here
Switzerland	Low	None	Low	Stable				2.9 (graphs)		Click here
Ukraine	Low	None	Low	Increasing					226.9 (graphs)	Click here
Uzbekistan	Low	None	Low	Decreasing			None		10.8 (graphs)	Click here
Wales	Low	Sporadic	Low	Stable				1.0 (graphs)	(graphs)	Click here
Europe					11	0%				Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
*: the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Influenza activity is at a very low level in the WHO European Region

During weeks 22–39/2010, the EuroFlu bulletin is being published biweekly, reporting available data.

- This issue is based on data reported in week 33/2010 by 31 Member States in the WHO European Region.
- It also includes information on current influenza activity in the temperate regions of the southern hemisphere.
- On 10 August 2010, the WHO Director-General declared an end to the H1N1 influenza pandemic.
- In the WHO European Region, 2 of 21 specimens collected from sentinel sources tested positive for influenza virus A(H1N1).
- In the southern hemisphere, detected influenza viruses include pandemic (H1N1) 2009, influenza A(H3N2) and influenza B viruses.

Current situation: week 33/2010

Clinical consultation rates for influenza-like illness (ILI) and acute respiratory infection (ARI) are at very low levels throughout the WHO European Region. Only Switzerland reported laboratory-confirmed detections of influenza in sentinel practices.

Virological update: week 33/2010

Sentinel physicians collected 21 respiratory specimens, 2 of which tested positive for pandemic (H1N1) 2009 influenza virus. Out of 236 specimens collected from non-sentinel sources, 5 tested positive: 4 type A viruses (1 A(H3), 1 pandemic A(H1), 2 unsubtyped) and 1 influenza B virus.

Cumulative virological data from week 22/2010

From week 22/2010 to week 33/2010, 158 influenza virus detections were reported from sentinel sources: 31 were influenza A (19.6%) and 127 (80.4%) were influenza B. Of the influenza A viruses, 13 (42.0%) were subtyped, with 5 being pandemic A(H1) and 8 seasonal A(H3).

Comment

Influenza activity is at a very low level throughout the European Region. The viruses characterized to date are similar to those recommended as components of influenza vaccines for use in the 2010–2011 northern hemisphere influenza season.

Influenza activity in the temperate regions of the southern hemisphere

Monitoring influenza virus circulation in the temperate regions of the southern hemisphere, where it is currently winter, can inform planning in advance of the influenza season in the northern hemisphere. The following section provides a brief update of the current situation in selected countries in the southern hemisphere, where detections of pandemic (H1N1) 2009 influenza, influenza A(H3N2) and influenza B are reported amid the circulation of other respiratory viruses.

Australia, as of 15 August 2010

The number of laboratory-confirmed influenza cases in Western Australia continues to increase. In the week ending 15 August 2010, 52 influenza viruses were detected from sentinel and non-sentinel surveillance systems, of which 20 were pandemic (H1N1) 2009 virus, 22 type B virus, 2 A(H3N2) viruses, and 8 influenza A type unknown. Further information is available from Virus WAtch .

ILI presentations in the State of Victoria increased slightly and ILI activity is currently above baseline levels. In the week ending 15 August 2010 most respiratory viruses detected were picornaviruses; only 4 influenza viruses (3 pandemic (H1N1) 2009 and 1 A(H3N2)) were detected. Of the 41 influenza viruses reported by sentinel and non-sentinel surveillance systems this year, 23 have been identified as pandemic A(H1N1) 2009 viruses, 12 as A(H3N2) viruses, and 5 as influenza A subtype unknown. See The 2010 Victorian influenza vaccine effectiveness audit report for further information.

South America, as of 23 August 2010

In South America, the intensity of acute respiratory disease activity is low to moderate. The trends in acute respiratory disease are decreasing in Argentina, and remain unchanged in Brazil and Chile. In Argentina and Chile respiratory syncytial virus (RSV) remains predominant.Further information is available from the Pan American Health Organization (PAHO).

South Africa, as of 1 August 2010

Of the 1100 ILI specimens collected from sentinel care providers in South Africa, 117 have tested positive for influenza B viruses, 124 for influenza A(H3N2) viruses,14 for pandemic A(H1N1) 2009 viruses and 2 for influenza A unsubtyped. Among 2490 hospitalized cases of severe acute respiratory illness (SARI), 66 had tested positive for influenza B and 31 for influenza A(H3N2). Further information is available from the National Institute for Communicable Diseases (NICD) in South Africa.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information

can be obtained from the WHO/Europe and WHO headquarters web sites. In addition, the bulletin will continue to provide updates on other regions, as the situation evolves during the winter influenza season in the southern hemisphere.

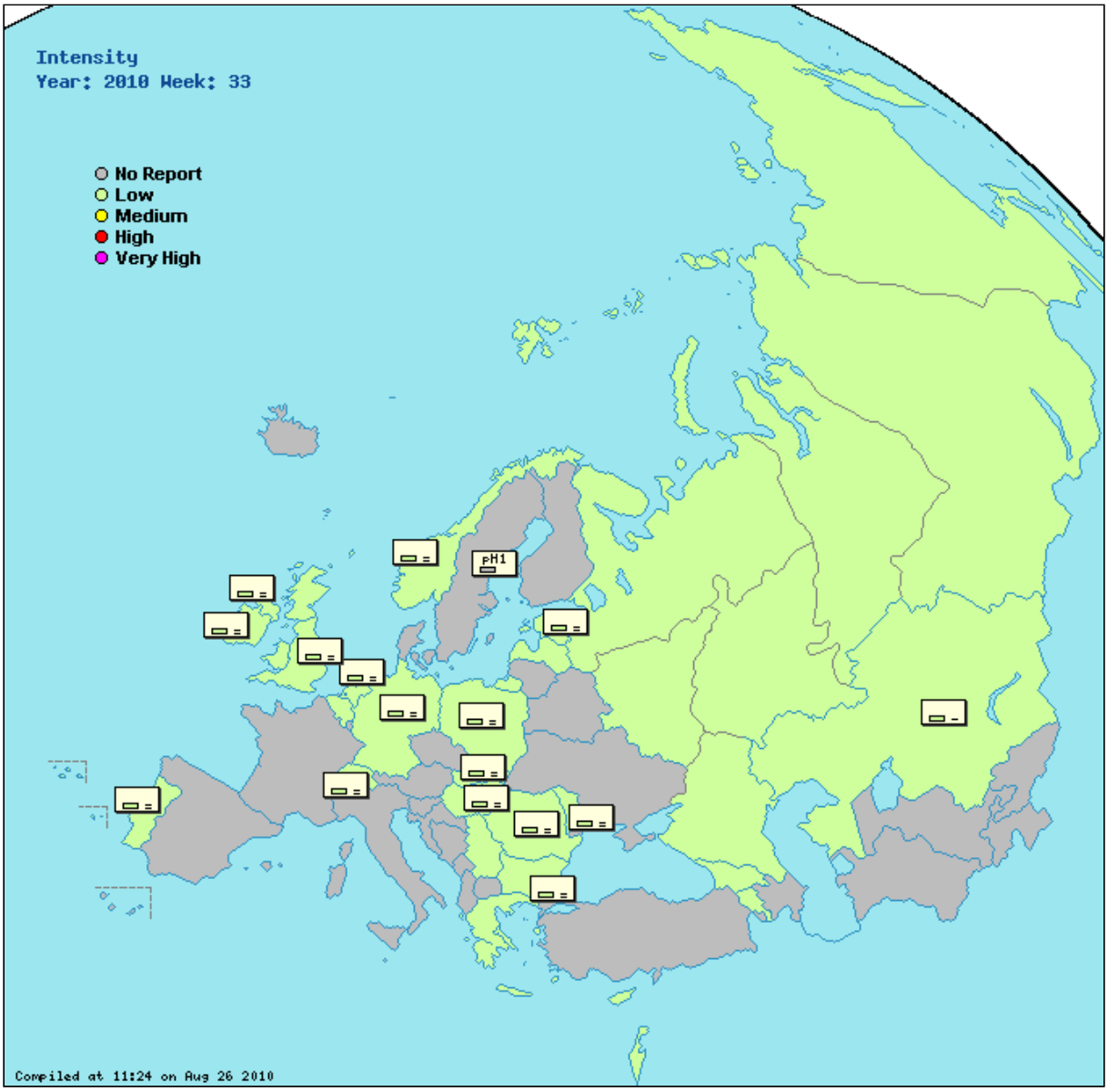
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no laboratory-confirmed case(s) of influenza, or evidence of increased or unusual respiratory disease activity.
Sporadic = isolated cases of laboratory confirmed influenza infection
Localized = limited to one administrative unit of the country (or reporting site) only.
Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites).
Widespread = appearing in ≥50% of the administrative units of the country (or reporting sites).

Country comments **(where available)**

Kazakhstan
Исследовано на другие не гриппозные инфекции всего 61 в том чтсле 6 положительных, из них: Аденовируч 3, РС 3.
Norway
One influenza A(H3) virus was detected in Norway in week 33, in a child for whom we have no information regarding travel abroad.

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Armenia	Low	Sporadic	Low	Decreasing				(graphs)	26.2 (graphs)	Click here
Austria					0	0%	None	(graphs)		Click here
Belarus							None		(graphs)	Click here
Belgium	Low	None		Stable				3.9 (graphs)	325.9 (graphs)	Click here
Bosnia and Herzegovina							None	(graphs)		Click here
Bulgaria	Low	None		Stable	0	0%	None	(graphs)	231.4 (graphs)	Click here
Cyprus	Low	Sporadic	Low	Stable				(graphs)		Click here
Denmark					0	0%	None	(graphs)		Click here
England	Low	Sporadic		Stable	6	0%	None	2.6 (graphs)	207.7 (graphs)	Click here
Estonia	Low	None	Low	Stable	0	0%	None	0.9 (graphs)	52.2 (graphs)	Click here
Georgia	Low		Low	Stable				74.6 (graphs)		Click here
Germany	Low	None	Low	Stable	2	0%	None	(graphs)	387.4 (graphs)	Click here
Greece	Low	None		Stable				30.7 (graphs)	(graphs)	Click here
Hungary	Low	None	Low	Stable	1	0%	None	4.2 (graphs)	(graphs)	Click here
Ireland	Low	None	Low	Stable	0	0%	None	2.6 (graphs)	(graphs)	Click here
Israel	Low	None	Low	Stable				1.7 (graphs)		Click here
Kazakhstan	Low	None	Low	Decreasing	6	0%	None		(graphs)	Click here
Latvia	Low	None		Stable				0.0 (graphs)	225.5 (graphs)	Click here
Netherlands	Low	None		Stable	1	0%	None	7.0 (graphs)	(graphs)	Click here
Northern Ireland	Low	None		Stable	0	0%	None	4.4 (graphs)	164.5 (graphs)	Click here
Norway	Low	None		Stable	1	0%	None	10.6 (graphs)	(graphs)	Click here
Poland	Low	None	Low	Stable	0	0%	None	8.7 (graphs)	(graphs)	Click here
Portugal	Low	None	Low	Stable	0	0%	None	0.0 (graphs)	(graphs)	Click here
Republic of Moldova	Low	None	Low	Stable	0	0%	None	(graphs)	60.4 (graphs)	Click here
Romania	Low	None	Low	Stable	0	0%	None	0.0 (graphs)	504.8 (graphs)	Click here
Russian Federation	Low	Sporadic		Stable					267.3 (graphs)	Click here
Scotland	Low	None	Low	Stable				1.4 (graphs)	129.7 (graphs)	Click here
Serbia	Low	None	Low	Stable				3.5 (graphs)		Click here
Slovakia	Low	None	Low	Stable	0	0%	None	(graphs)		Click here
Slovenia					0	0%	None	(graphs)		Click here
Sweden					0	0%	Type A, Subtype pH1	(graphs)		Click here
Switzerland	Low	Sporadic	Low	Stable	4	50.0%	None	3.5 (graphs)		Click here
Uzbekistan							None		(graphs)	Click here
Wales	Low	Sporadic	Low	Stable				0.7 (graphs)	(graphs)	Click here
Europe					21	9.5%				Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
*: the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Very sporadic influenza detections in the WHO European Region

During weeks 22-39/2010, the EuroFlu bulletin is published biweekly, reporting available data.

- This issue is based on data reported in week 35/2010 by 29 Member States in the WHO European Region.
- It also includes information on current influenza activity in the temperate regions of the southern hemisphere.
- On 10 August 2010, the WHO Director-General declared an end to the H1N1 influenza pandemic.
- In the WHO European Region, 1 of 65 specimens collected from sentinel sources tested positive for influenza B virus during week 35/2010.
- In the southern hemisphere, the influenza viruses detected are represented by a combination of pandemic (H1N1) 2009, influenza A(H3N2) and influenza B.

Current situation: week 35/2010

Clinical consultation rates for influenza-like illness (ILI) and acute respiratory infection (ARI) are at low levels throughout the WHO European Region. Only the Netherlands reported laboratory-confirmed influenza in sentinel practices, indicating insignificant influenza activity in the Region.

Virological update: week 35/2010

Sentinel physicians collected 65 respiratory specimens, 1 of which tested positive for influenza B virus. Out of 1029 specimens collected from non-sentinel sources, 5 tested positive: 5 type A viruses (1 A(H3), 1 A(H1), 1 pandemic A(H1), 2 unsubtyped).

Cumulative virological data from week 22/2010

From week 22/2010 to week 35/2010, 159 influenza virus detections in sentinel specimens were reported: 31 were influenza A (19.5%) and 128 (80.5%) were influenza B. Of the influenza A viruses, 13 (42.0%) were subtyped, with 5 being pandemic A(H1) and 8 seasonal A(H3N2).

Comment

Influenza activity is at a very low level throughout the European Region. The viruses characterized to date are similar to those recommended as components of influenza vaccines for use in the 2010-2011 northern hemisphere influenza season.

Influenza activity in the temperate regions of the southern hemisphere

Monitoring influenza virus circulation in the temperate regions of the southern hemisphere, where it is currently winter, can inform planning in advance of the influenza season in the northern hemisphere. The following section provides a brief update of the current situation in selected countries of the southern hemisphere, where detections of pandemic (H1N1) 2009 influenza, influenza A(H3N2) and influenza B are reported amid circulation of other respiratory viruses.

Australia, as of 29 August 2010

In the week ending 29 August 2010, 69 samples were positive for influenza (sentinel and non-sentinel surveillance). Pandemic (H1N1) 2009 virus was detected in the majority of samples (64%) followed by influenza type B virus (23%). Further information is available from Virus WAtch .

ILI presentations in the State of Victoria are currently slightly above baseline levels. In the week ending 29 August 2010, 25 (59%) of the 44 specimens tested were positive for influenza A (23 pandemic (H1N1) 2009 and 2 unsubtyped). See the 2010 Victorian influenza vaccine effectiveness audit report for further information.

South America, as of 9 August 2010 (no updated information)

In South America, the intensity of acute respiratory disease activity was low to moderate. The trends in acute respiratory disease were decreasing in Argentina and remained unchanged in Brazil and Chile. Although respiratory syncytial virus (RSV) continued to predominate in Argentina and Chile, pandemic (H1N1) 2009 influenza, seasonal influenza A(H3N2) and influenza B were also isolated. In Chile, 78% of positive specimens were RSV and 5% were pandemic (H1N1) 2009 influenza. Further information is available from the Pan American Health Organization (PAHO).

South Africa, as of 1 August 2010

In South Africa, 1820 samples were collected from sentinel sites this year. Of these 381 tested positive for influenza B, 208 influenza for A(H3N2), 115 for pandemic (H1N1) 2009 viruses, and 2 were influenza A unsubtyped. For further information, please check the National Institute for Communicable Diseases web site.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites. In addition, the bulletin will continue to provide updates on other regions, as the situation evolves during the winter influenza season in the southern hemisphere.

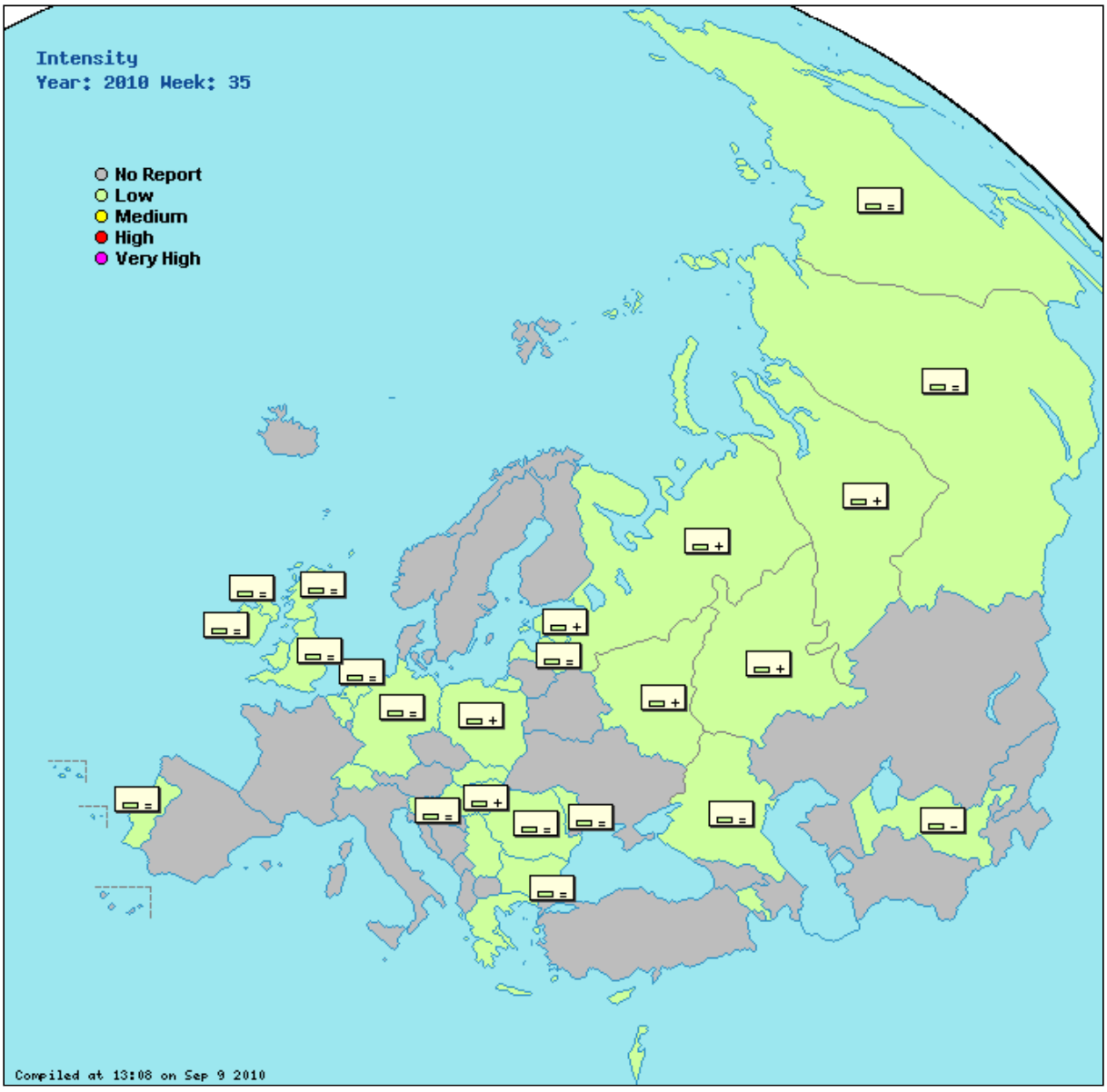
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

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+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no laboratory-confirmed case(s) of influenza, or evidence of increased or unusual respiratory disease activity.
Sporadic = isolated cases of laboratory confirmed influenza infection
Localized = limited to one administrative unit of the country (or reporting site) only.
Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites).
Widespread = appearing in ≥50% of the administrative units of the country (or reporting sites).

Country comments **(where available)**

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Armenia	Low	Sporadic	Low	Stable				(graphs)	26.5 (graphs)	Click here
Austria					0	0%	None	(graphs)		Click here
Belgium	Low	None		Stable				10.7 (graphs)	411.4 (graphs)	Click here
Bulgaria	Low	None		Stable	0	0%	None	(graphs)	231.9 (graphs)	Click here
Cyprus	Low	Sporadic	Low	Stable				(graphs)		Click here
Denmark					0	0%	None	(graphs)		Click here
England	Low	None		Stable	3	0%	None	2.5 (graphs)	198.0 (graphs)	Click here
Estonia	Low	None	Low	Increasing	1	0%	None	1.5 (graphs)	98.9 (graphs)	Click here
Georgia					19	0%	None	127.0 (graphs)		Click here
Germany	Low	None	Low	Stable	3	0%	None	(graphs)	587.5 (graphs)	Click here
Greece	Low	None		Stable				26.3 (graphs)	(graphs)	Click here
Hungary	Low	None	Low	Increasing	0	0%	None	13.8 (graphs)	(graphs)	Click here
Ireland	Low	None	Low	Stable	0	0%	None	2.9 (graphs)	(graphs)	Click here
Israel	Low	None	Low	Stable				2.5 (graphs)		Click here
Kyrgyzstan					0	0%	None		(graphs)	Click here
Latvia	Low	None		Stable	0	0%	None	0.0 (graphs)	342.3 (graphs)	Click here
Netherlands	Low	None		Stable	3	33.3%	None	12.0 (graphs)	(graphs)	Click here
Northern Ireland	Low	None		Stable	0	0%	None	11.4 (graphs)	164.4 (graphs)	Click here
Norway					0	0%	None	(graphs)		Click here
Poland	Low	None	Low	Increasing	0	0%	None	12.0 (graphs)	(graphs)	Click here
Portugal	Low	None	Low	Stable	0	0%	None	4.8 (graphs)	(graphs)	Click here
Republic of Moldova	Low	None	Low	Stable			None	(graphs)	53.2 (graphs)	Click here
Romania	Low	None	Low	Stable	0	0%	None	0.0 (graphs)	475.4 (graphs)	Click here
Russian Federation	Low	Sporadic		Increasing	29	0%	None		335.3 (graphs)	Click here
Scotland	Low	None	Low	Stable	7	0%	None	0.7 (graphs)	197.3 (graphs)	Click here
Serbia	Low	None	Low	Decreasing				1.7 (graphs)		Click here
Slovakia	Low	None	Low	Stable				(graphs)		Click here
Slovenia	Low	None		Stable	0	0%	None	0.0 (graphs)	516.5 (graphs)	Click here
Sweden					0	0%	None	(graphs)		Click here
Switzerland	Low	None		Stable				3.0 (graphs)		Click here
Uzbekistan	Low	None	Low	Decreasing			None		10.3 (graphs)	Click here
Wales	Low	Sporadic	Low	Stable				2.6 (graphs)	(graphs)	Click here
Europe					65	1.5%				Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
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Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
*: the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.

Very limited, sporadic influenza detections in the WHO European Region

During weeks 22-39/2010, the EuroFlu bulletin is published biweekly, reporting available data.

- This issue is based on data reported in week 37/2010 by 25 Member States in the WHO European Region.
- It also includes information on current influenza activity in the temperate regions of the southern hemisphere.
- In the WHO European Region, 2 of 94 specimens collected from sentinel sources tested positive for influenza during week 37/2010.
- In the southern hemisphere, the influenza viruses detected are represented by a combination of pandemic (H1N1) 2009, influenza A(H3N2) and influenza B.

Current situation: week 37/2010

Clinical consultation rates for influenza-like illness (ILI) and acute respiratory infection (ARI) are at low levels throughout the WHO European Region. Only the Russian Federation and the United Kingdom have reported laboratory-confirmed influenza in sentinel practices in recent weeks, indicating insignificant influenza activity in the Region.

Virological update: week 37/2010

Sentinel physicians collected 94 respiratory specimens, 2 of which tested positive for influenza with 1 being pandemic A(H1N1) and the other influenza B virus. Out of 669 specimens collected from non-sentinel sources, 1 influenza A virus (not subtyped) was detected.

Cumulative virological data from week 22/2010

From week 22/2010 to week 37/2010, 161 influenza virus detections in sentinel specimens were reported: 32 were influenza A (19.9%) and 129 (80.1%) were influenza B. Of the influenza A viruses, 14 (43.8%) were subtyped, with 6 being pandemic A(H1) and 8 seasonal A(H3N2).

Comment

Influenza activity is at a very low level throughout the European Region. The viruses characterized to date are similar to those recommended as components of influenza vaccines for use in the 2010–2011 northern hemisphere influenza season.

Influenza activity in the temperate regions of the southern hemisphere

Monitoring influenza virus circulation in the temperate regions of the southern hemisphere, where it is currently winter, can inform planning in advance of the influenza season in the northern hemisphere. The following is a brief update of the current situation in selected countries of the southern hemisphere, where detections of pandemic (H1N1) 2009 influenza, influenza A(H3N2) and influenza B are reported amid circulation of other respiratory viruses.

The most commonly identified influenza virus in Australia is pandemic (H1N1) 2009, though influenza type B is also being detected (report of 12 September 2010). Further information is available at Virus WAtch.

Chile has reported increasing respiratory disease activity for the last two weeks, which is later than usual (report of 10 September 2010). Pandemic (H1N1) 2009 has been the most commonly detected influenza virus so far this season, but in recent weeks there has been a shift towards influenza type B and influenza A(H3N2). Further information is available from the Pan American Health Organization (PAHO) and WHO headquarters.

In South Africa, influenza type B has been the most commonly detected influenza virus throughout this winter season, though in recent weeks the proportion of pandemic (H1N1) 2009 virus has increased and a small and decreasing number of influenza A(H3N2) detections continues. For further information, see the report of 16 September on the National Institute for Communicable Diseases web site.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites. In addition, the bulletin will continue to provide updates on other regions as the situation evolves during the winter influenza season in the southern hemisphere.

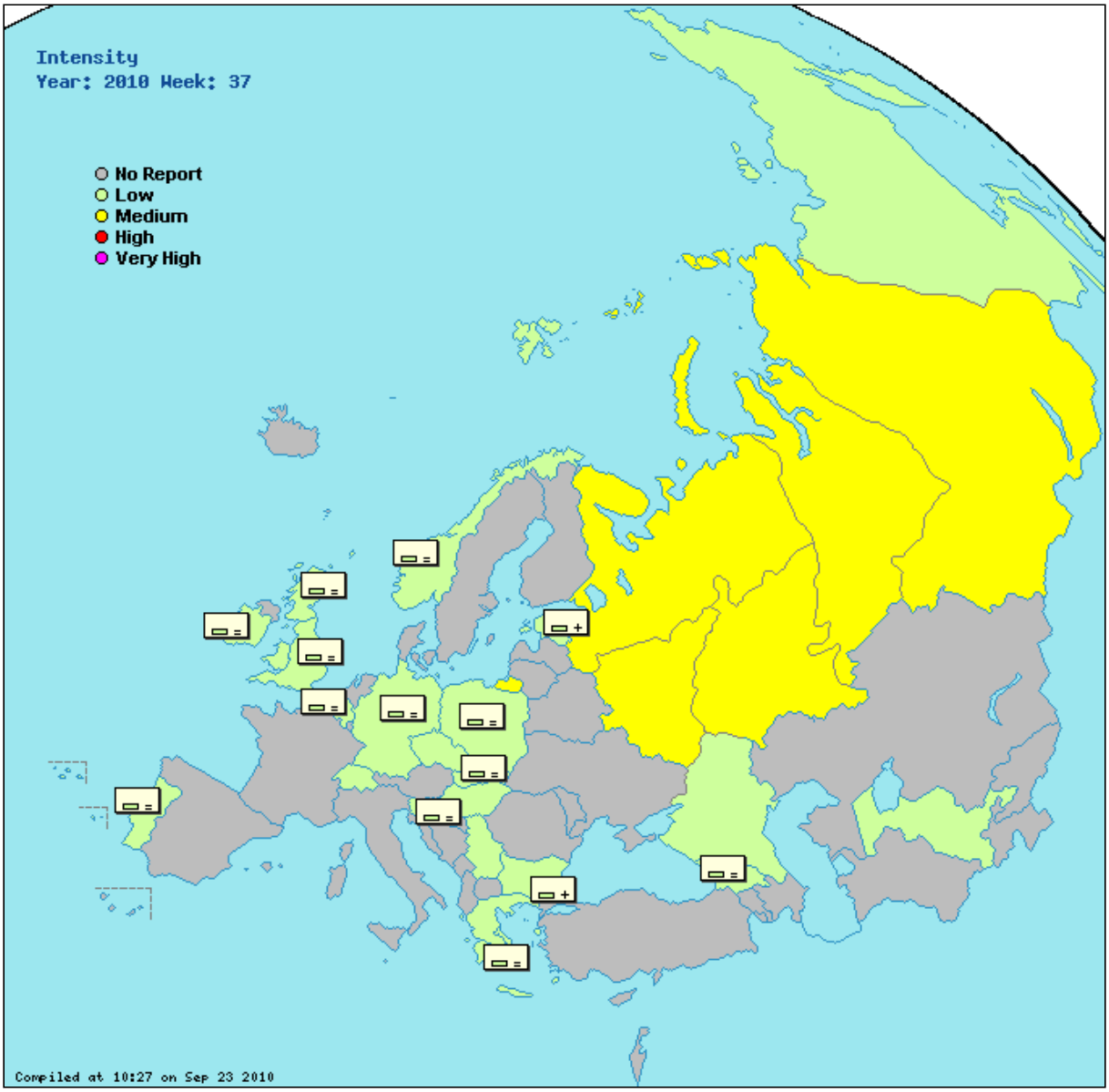
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
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Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
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Very high = particularly severe levels of influenza activity

No activity = no laboratory-confirmed case(s) of influenza, or evidence of increased or unusual respiratory disease activity.
Sporadic = isolated cases of laboratory confirmed influenza infection
Localized = limited to one administrative unit of the country (or reporting site) only.
Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites).
Widespread = appearing in ≥50% of the administrative units of the country (or reporting sites).

Country comments (where available)

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Austria					0	0%	None	(graphs)		Click here
Belarus							None		(graphs)	Click here
Belgium	Low	None		Stable	17	0%	None	34.7 (graphs)	1042.4 (graphs)	Click here
Bulgaria	Low	None		Increasing	0	0%	None	(graphs)	289.0 (graphs)	Click here
Czech Republic	Low	None		Stable				11.9 (graphs)	664.3 (graphs)	Click here
Denmark					0	0%	None	(graphs)		Click here
England	Low	None		Stable	17	5.9%	None	3.2 (graphs)	286.2 (graphs)	Click here
Estonia	Low	None	Low	Increasing	1	0%	None	3.2 (graphs)	311.2 (graphs)	Click here

Georgia	Low	None	Low	Stable	25	0%	None	64.9 (graphs)		Click here
Germany	Low	None	Low	Stable	13	0%	None	(graphs)	832.3 (graphs)	Click here
Greece	Low	None		Stable	0	0%	None	20.2 (graphs)	(graphs)	Click here
Hungary	Low	None	Low	Increasing				38.8 (graphs)	(graphs)	Click here
Ireland	Low	None	Low	Stable	7	0%	None	3.1 (graphs)	(graphs)	Click here
Latvia					0	0%	None	(graphs)		Click here
Norway	Low	None		Stable	0	0%	None	22.2 (graphs)	(graphs)	Click here
Poland	Low	None	Low	Stable	2	0%	None	22.0 (graphs)	(graphs)	Click here
Portugal	Low	None	Low	Stable	0	0%	None	3.5 (graphs)	(graphs)	Click here
Romania					0	0%	None		(graphs)	Click here
Russian Federation	Medium	Sporadic		Increasing					607.5 (graphs)	Click here
Scotland	Low	Sporadic	Low	Stable	6	16.7%	None	4.8 (graphs)	208.6 (graphs)	Click here
Serbia	Low	None	Low	Stable				5.1 (graphs)		Click here
Slovakia	Low	None	Low	Stable	0	0%	None	(graphs)		Click here
Slovenia	Low	None		Stable	4	0%	None	0.0 (graphs)	964.0 (graphs)	Click here
Switzerland	Low	None	Low	Stable				2.1 (graphs)		Click here
Turkey					2	0%	None	(graphs)		Click here
Uzbekistan	Low	None	Low				None		14.6 (graphs)	Click here
Wales	Low	Sporadic	Low	Stable				1.4 (graphs)	(graphs)	Click here
Europe					94	2.1%				Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
***:** the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

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Low levels of influenza activity in Europe

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- This issue is based on data reported in week 39/2010 by 37 Member States in the WHO European Region.
- It also includes information on current influenza activity in the temperate regions of the southern hemisphere.
- In the WHO European Region, 1 of 221 specimens collected from sentinel sources tested positive for influenza during week 39/2010.
- In the southern hemisphere, the influenza viruses detected are represented by a combination of pandemic (H1N1) 2009, influenza B and influenza A(H3N2).
- This is the last issue of the 2010 inter-season Euroflu bulletin. Beginning with week 40/2010, the EuroFlu bulletin will be published weekly and represent data from the WHO European Region for the 2010–2011 season.

Current situation: week 39/2010

Clinical consultation rates for influenza-like illness (ILI) and acute respiratory infection (ARI) are at low levels throughout the WHO European Region. Only Switzerland has reported laboratory-confirmed influenza in sentinel practices last two weeks, indicating a low level of influenza activity in the Region.

Virological update: week 39/2010

Sentinel physicians collected 221 respiratory specimens, 1 of which tested positive for pandemic (H1N1) 2009 influenza virus. Out of 1919 specimens collected from non-sentinel sources, 16 tested positive: 11 type A viruses (8 A unsubtyped, 1 pandemic A (H1N1) and 2 seasonal A(H1) viruses) and 5 influenza B viruses.

Cumulative virological data from week 22/2010

From week 22/2010 to week 39/2010, 162 influenza virus detections in sentinel specimens were reported: 33 were influenza A (20.4%) and 129 (79.6%) were influenza B. Of the influenza A viruses, 15 (45.5%) were subtyped, with 7 being pandemic A(H1) and 8 seasonal A(H3N2).

Comment

Influenza activity is at a low level throughout the European Region. The viruses characterized to date are similar to those recommended as components of influenza vaccines for use in the 2010–2011 northern hemisphere influenza season.

Influenza activity in the temperate regions of the southern hemisphere

During the ongoing influenza season in the temperate zones of the southern hemisphere, detections of pandemic (H1N1) 2009 influenza, influenza B and influenza A(H3N2) and are all being reported, amid circulation of other respiratory viruses. Additional information on influenza circulation in the southern hemisphere is available from WHO headquarters.

Further information

The EuroFlu bulletin describes and comments on influenza activity in the 53 countries in the WHO European Region. Further information can be obtained from the WHO/Europe and WHO headquarters web sites.

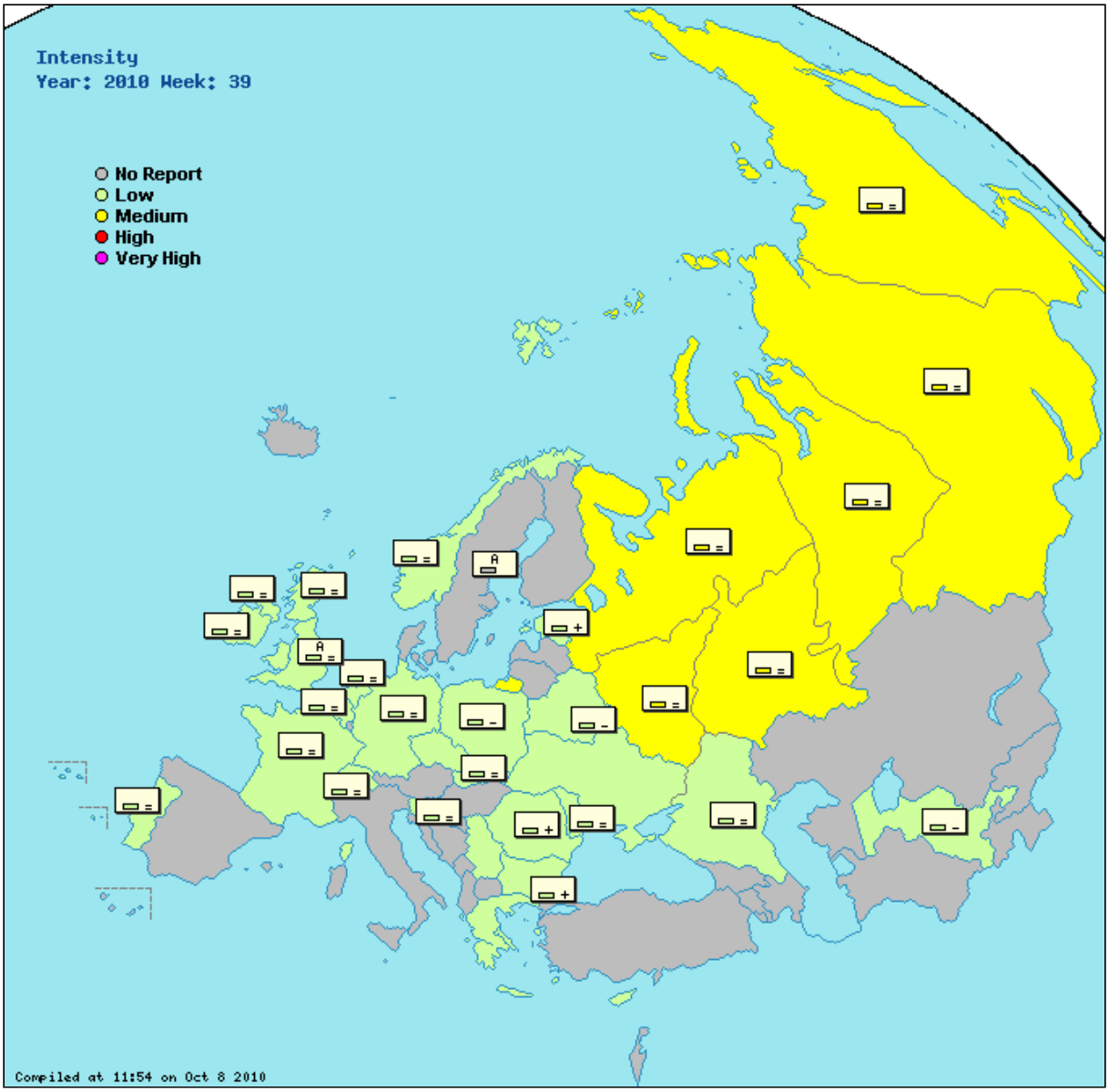
Map

The map presents the qualitative indicators of influenza activity (intensity, trend, geographical spread and impact) and the dominant virus as assessed by each of the countries.

Clicking on the map will, if available, take you through to the national web site. If 'regional' activity is reported, a pop-up text box will appear which describes the activity in greater detail.

Clicking on France, Russian Federation, Turkey and United Kingdom (England) will provide you with regional data.

Type of map : **Intensity** ○ **+ virological** ◉ **Geographical spread** ○ **+ virological** ○ **Impact** ○



A = Dominant virus A
H1N1 = Dominant virus A(H1N1)
H3N2 = Dominant virus A(H3N2)
H1N2 = Dominant virus A(H1N2)
B = Dominant virus B
A & B = Dominant virus A & B

= : stable clinical activity
+ : increasing clinical activity
- : decreasing clinical activity

Low = no influenza activity or influenza at baseline levels
Medium = usual levels of influenza activity
High = higher than usual levels of influenza activity
Very high = particularly severe levels of influenza activity

No activity = no laboratory-confirmed case(s) of influenza, or evidence of increased or unusual respiratory disease activity.
Sporadic = isolated cases of laboratory confirmed influenza infection
Localized = limited to one administrative unit of the country (or reporting site) only.
Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites).
Widespread = appearing in ≥50% of the administrative units of the country (or reporting sites).

Country comments (where available)

Finland
adenovirus outbreaks still continue, 18 of the 28 specimens tested were adenovirus-positive
Kazakhstan
Другие негриппозные инфекции исследовано всего 60 в том числе 9 положительных, из них Аденовирус-4, РС-5. Серологически исследовано 23, положительных нет.
Latvia
0

Table and graphs (where available)

	Intensity	Geographic Spread	Impact	Trend	Sentinel swabs	Percentage positive	Dominant type	ILI per 100,000	ARI per 100,000	Virology graph and pie chart
Armenia					0	0%	None		(graphs)	Click here
Austria					0	0%	None	(graphs)		Click here
Azerbaijan					0	0%	None	(graphs)		Click here
Belarus	Low	Sporadic	Low	Decreasing			None		1095.5 (graphs)	Click here
Belgium	Low	None		Stable	19	0%	None	36.2 (graphs)		Click here
Bosnia and							None	(graphs)		Click here

Herzegovina											
Bulgaria	Low	None		Increasing	0	0%	None	(graphs)	458.9	(graphs)	Click here
Cyprus	Low	Sporadic	Low	Stable				0.5 * (graphs)			Click here
Czech Republic	Low	None		Stable					732.4	(graphs)	Click here
Denmark					0	0%	None	(graphs)			Click here
England	Low	Sporadic		Stable	21	0%	Type A	4.6 (graphs)			Click here
Estonia	Low	None	Low	Increasing	0	0%	None	3.7 (graphs)			Click here
Finland					28	0%	None	(graphs)			Click here
France	Low	Sporadic	Low	Stable	31	0%	None	(graphs)	1662.9	(graphs)	Click here
Georgia					20	0%	None	(graphs)			Click here
Germany	Low	None	Low	Stable	9	0%	None	(graphs)	917.8	(graphs)	Click here
Greece	Low	None		Stable				63.9 (graphs)			Click here
Hungary					10	0%	None	(graphs)			Click here
Ireland	Low	None	Low	Stable	8	0%	None	8.2 (graphs)			Click here
Kazakhstan					8	0%	None			(graphs)	Click here
Kyrgyzstan					1	0%	None			(graphs)	Click here
Latvia					0	0%	None	(graphs)			Click here
Luxembourg					1	0%	None	(graphs)			Click here
Netherlands	Low	None		Stable	7	0%	None	29.0 (graphs)			Click here
Northern Ireland	Low	None		Stable	1	0%	None	23.9 (graphs)			Click here
Norway	Low	None		Stable	0	0%	None	20.7 (graphs)			Click here
Poland	Low	None	Low	Decreasing	3	0%	None	43.2 (graphs)			Click here
Portugal	Low	None		Stable	0	0%	None	5.9 (graphs)			Click here
Republic of Moldova	Low	None	Low	Stable	0	0%	None	(graphs)	93.6	(graphs)	Click here
Romania	Low	None	Low	Increasing	0	0%	None			(graphs)	Click here
Russian Federation	Low	None		Stable	32	0%	None		636.1	(graphs)	Click here
Scotland	Low	None	Low	Stable	11	0%	None	5.5 (graphs)			Click here
Serbia	Low	None	Low	Stable				6.8 (graphs)			Click here
Slovakia	Low	None	Low	Stable	1	0%	None	(graphs)			Click here
Slovenia	Low	None		Stable	3	0%	None	0.0 (graphs)			Click here
Sweden					0	0%	Type A	(graphs)			Click here
Switzerland	Low	None	Low	Stable	7	14.3%	None	(graphs)			Click here
Ukraine	Low	None	Low	Stable					472.6	(graphs)	Click here
Uzbekistan	Low	None	Low	Decreasing			None		14.7	(graphs)	Click here
Wales	Low	Sporadic	Low	Stable				1.0 (graphs)			Click here
Europe					221	0.5%					Click here

Preliminary data

Intensity: Low = no influenza activity or influenza activity at baseline level; Medium= usual levels of influenza activity; High = higher than usual levels of influenza activity; Very high = particularly severe levels of influenza activity.
Geographical spread: No activity = no laboratory-confirmed cases, or evidence of increased or unusual respiratory disease activity; Sporadic = isolated cases of laboratory-confirmed influenza infection; Localized = limited to one administrative unit in the country (or reporting site) only; Regional = appearing in multiple but <50% of the administrative units of the country (or reporting sites); Widespread = appearing in >=50% of the administrative units of the country (or reporting sites).
Impact: Low = demands on health-care services are not above usual levels; Moderate = demands on health-care services are above the usual demand levels but still below the maximum capacity of those services; Severe = demands on health care services exceed the capacity of those services.
Trend: Increasing = evidence that the level of respiratory disease activity is increasing compared with the previous week; Stable = evidence that the level of respiratory disease activity is unchanged compared with the previous week; Decreasing = evidence that the level of respiratory disease activity is decreasing compared with the previous week.
Percentage positive: percentage of sentinel swabs that tested positive for influenza A or B
Dominant type: this assessment is based on data from sentinel and non-sentinel sources
ARI: acute respiratory infection
ILI: influenza-like illness
Sentinel SARI: severe acute respiratory illness
Population: per 100,000 population
***:** the value in the table for these countries reflects the percent (e.g. from 0.0 to 100.0) of total outpatient encounters that were due to ILI/ARI rather than a consultation rate per 100,000

The bulletin text was written by an editorial team at the WHO Regional Office for Europe (Caroline Brown and Joshua Mott), the Netherlands Institute for Health Services Research (NIVEL; John Paget and Tamara Meerhoff, Temporary Advisers to WHO) and the WHO Collaborating Centre for reference and research on influenza, Mill Hill, United Kingdom (Rod Daniels). The bulletin was reviewed by Douglas Fleming (Royal College of General Practitioners, United Kingdom), Lars Nielsen (Statens Serum Institute, Denmark) and Anne Mosnier (Open Rome, France) on behalf of the data contributors.