

SURVEILLANCE REPORT



Bi-weekly influenza surveillance overview

7 October 2011

Main surveillance developments in weeks 38–39/2011 (19 Sep–2 Oct 2011)

This first page contains the main developments of these weeks and can be printed separately or together with the more detailed information following.

- During the last two weeks (38-39/2011) of the off-season period, low influenza activity was notified by 19 reporting countries.
- No influenza viruses were detected in sentinel specimens. Three influenza A viruses were detected in non-sentinel specimens. Two of these were subtyped as A(H1)2009 influenza viruses.
- Two SARI cases unrelated to influenza were reported by Slovakia.

Sentinel surveillance of influenza-like illness (ILI)/ acute respiratory infection (ARI): During weeks 38–39/2011, low influenza activity was notified by all 19 countries reporting. For more information, [click here](#).

Virological surveillance: None of 161 sentinel specimens were positive for influenza. In non-sentinel specimens, three influenza A viruses were detected. For more information, [click here](#).

Hospital surveillance of severe acute respiratory infection (SARI): Two SARI cases not related to influenza were reported by Slovakia. For more information, [click here](#).

Sentinel surveillance (ILI/ARI)

Weekly analysis – epidemiology

During weeks 38–39/2011, all 19 reporting countries experienced low intensity of influenza activity (Table 1, Map 1).

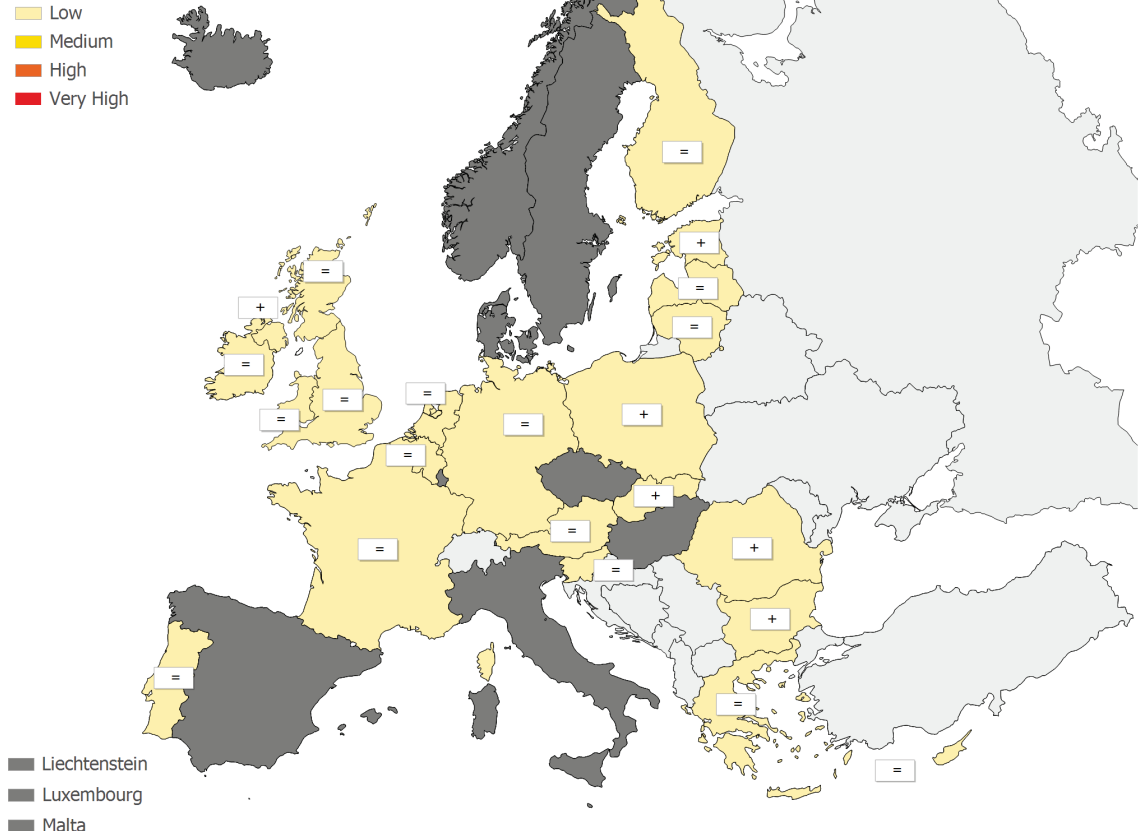
Absence of geographic spread was reported by 19 countries. Cyprus reported sporadic activity, while no activity was reported by the remaining 18 countries (Table 1, Map 2).

Stable trends were reported by 13 countries and the UK (England, Scotland and Wales). Five countries and the UK (Northern Ireland) reported increasing trends (Table 1, Map 2).

Map 1: Intensity for weeks 38–39/2011*

Intensity

- No report
- Low
- Medium
- High
- Very High



(C) ECDC/Dundas/TESSy

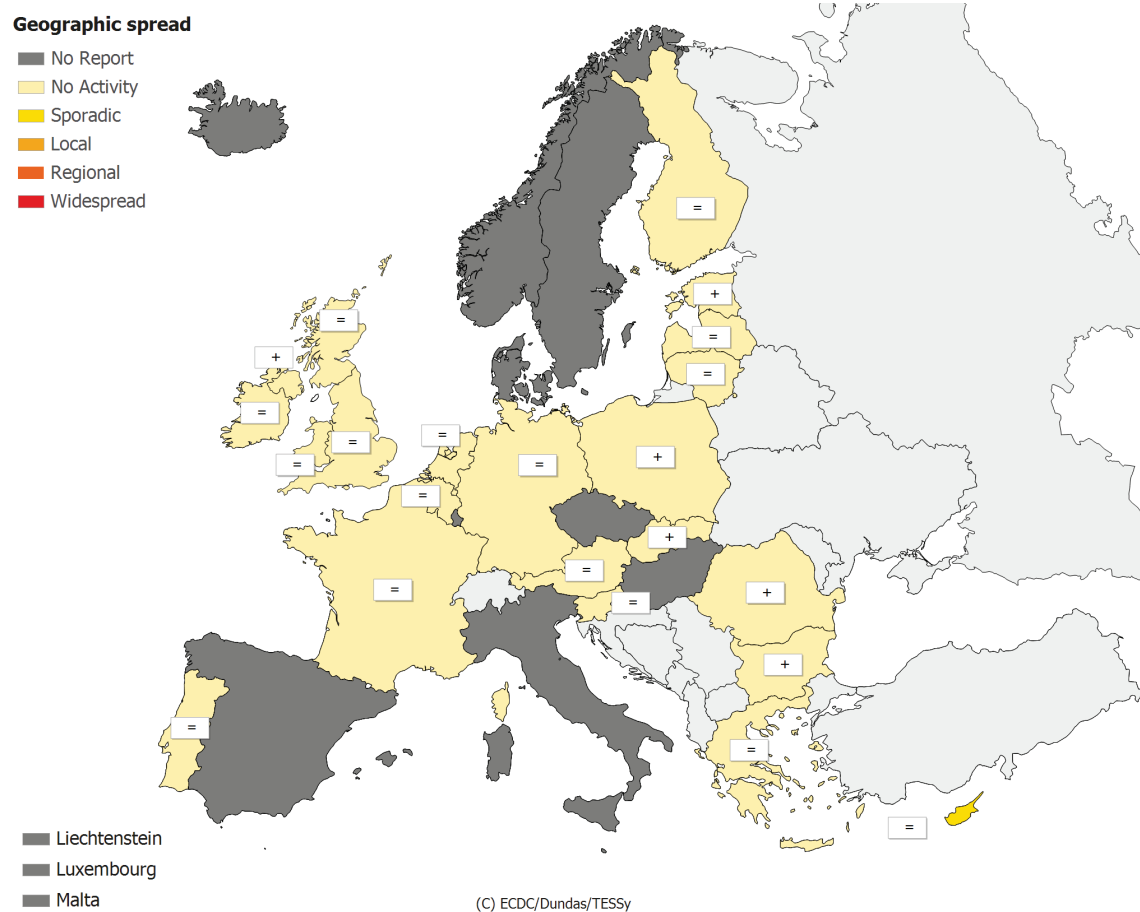
* A type/subtype is reported as dominant when > 40 % of all samples are positive for the type/subtype.

Legend:

| | | | |
|------------------|---|---|------------------------------|
| No report | Intensity level was not reported | + | Increasing clinical activity |
| Low | No influenza activity or influenza at baseline levels | - | Decreasing clinical activity |
| Medium | Usual levels of influenza activity | = | Stable clinical activity |
| High | Higher than usual levels of influenza activity | | |
| Very high | Particularly severe levels of influenza activity | | |

**The map only displays data for the most recent reported week of the two-week surveillance period. For information on the other week, please consult the weekly "Influenza activity maps" [here](#).*

Map 2: Geographic spread for weeks 38–39 2011*



* A type/subtype is reported as dominant when at least ten samples have been detected as influenza positive in the country and of those > 40 % are positive for the type/subtype.

Legend:

| | | | |
|--------------------------|---|---|------------------------------|
| No report | Activity level was not reported | + | Increasing clinical activity |
| No activity | No evidence of influenza virus activity (clinical activity remains at baseline levels) | - | Decreasing clinical activity |
| Sporadic | Isolated cases of laboratory confirmed influenza infection | = | Stable clinical activity |
| 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) | | |

*The map only displays data for the most recent reported week of the two-week surveillance period. For information on the other week, please consult the weekly "Influenza activity maps" [here](#).

Table 1: Epidemiological and virological overview by country, weeks 38–39/2011*

| Country | Intensity | Geographic spread | Trend | No. of sentinel swabs | Dominant type | Percentage positive* | ILI per 100 000 | ARI per 100 000 | Epidemiological overview | Virological overview |
|-----------------------|-----------|-------------------|------------|-----------------------|---------------|----------------------|-----------------|-----------------|--------------------------|----------------------|
| Austria | Low | No activity | Stable | 0 | None | 0.0 | - | - | Graphs | Graphs |
| Belgium | Low | No activity | Stable | 1 | None | 0.0 | 47.7 | 1528.3 | Graphs | Graphs |
| Bulgaria | Low | No activity | Increasing | 8 | None | 0.0 | - | 335.3 | Graphs | Graphs |
| Cyprus | Low | Sporadic | Stable | - | - | 0.0 | -* | -* | Graphs | Graphs |
| Czech Republic | | | | - | - | 0.0 | - | - | | |
| Denmark | | | | - | - | 0.0 | - | - | | |
| Estonia | Low | No activity | Increasing | 1 | None | 0.0 | 5.3 | 273.4 | Graphs | Graphs |
| Finland | Low | No activity | Stable | 65 | None | 0.0 | - | - | Graphs | Graphs |
| France | Low | No activity | Stable | 11 | - | 0.0 | - | 1645.1 | Graphs | Graphs |
| Germany | Low | No activity | Stable | 27 | None | 0.0 | - | 727.5 | Graphs | Graphs |
| Greece | Low | No activity | Stable | - | - | 0.0 | 36.3 | - | Graphs | Graphs |
| Hungary | | | | - | - | 0.0 | - | - | | |
| Iceland | | | | 0 | - | 0.0 | - | - | Graphs | Graphs |
| Ireland | Low | No activity | Stable | 1 | None | 0.0 | 2.6 | - | Graphs | Graphs |
| Italy | | | | - | - | 0.0 | - | - | | |
| Latvia | Low | No activity | Stable | 0 | None | 0.0 | 0.0 | 881.1 | Graphs | Graphs |
| Lithuania | Low | No activity | Stable | 3 | None | 0.0 | 0.2 | 401.0 | Graphs | Graphs |
| Luxembourg | | | | - | - | 0.0 | - | - | | |
| Malta | | | | - | - | 0.0 | - | - | | |
| Netherlands | Low | No activity | Stable | 10 | None | 0.0 | 29.9 | - | Graphs | Graphs |
| Norway | | | | 2 | None | 0.0 | - | - | Graphs | Graphs |
| Poland | Low | No activity | Increasing | 4 | None | 0.0 | 32.3 | - | Graphs | Graphs |
| Portugal | Low | No activity | Stable | - | - | 0.0 | 0.0 | - | Graphs | Graphs |
| Romania | Low | No activity | Increasing | 0 | None | 0.0 | 0.0 | 682.4 | Graphs | Graphs |
| Slovakia | Low | No activity | Increasing | 0 | None | 0.0 | 90.4 | 1074.8 | Graphs | Graphs |
| Slovenia | Low | No activity | Stable | 6 | None | 0.0 | 0.0 | 943.5 | Graphs | Graphs |
| Spain | | | | - | - | 0.0 | - | - | | |
| Sweden | | | | - | - | 0.0 | - | - | | |
| UK - England | Low | No activity | Stable | 20 | None | 0.0 | 4.0 | 301.7 | Graphs | Graphs |
| UK - Northern Ireland | Low | No activity | Increasing | 1 | - | 0.0 | 11.6 | 303.8 | Graphs | Graphs |
| UK - Scotland | Low | No activity | Stable | 0 | None | 0.0 | 4.7 | 260.9 | Graphs | Graphs |
| UK - Wales | Low | No activity | Stable | 1 | - | 0.0 | 4.7 | - | Graphs | Graphs |
| Europe | | | | 161 | | 0.0 | | | | Graphs |

*Incidence per 100 000 is not calculated for these countries as no population denominator is provided.

Liechtenstein is not reporting to the European Influenza Surveillance Network.

For intensity, geographic spread and trend, the table displays data for the most recently reported week only of the two-week surveillance period.

Description of the system

Surveillance is based on nationally organised sentinel networks of physicians, mostly general practitioners (GPs), covering at least 1–5% of the population in their countries. All EU/EEA Member States (except Liechtenstein) are participating. Depending on their country's choice, each sentinel physician reports the weekly number of patients seen with influenza-like illness (ILI), acute respiratory infection (ARI), or both to a national focal point. From the national level, both numerator and denominator data are then reported to the European Surveillance System (TESSy) database. Additional semi-quantitative indicators of intensity, geographic spread, and trend of influenza activity at the national level are also reported.

Virological surveillance

Weekly analysis – virology

In weeks 38–39/2011, 18 countries reported virological data. None of the 161 sentinel specimens tested were positive for influenza virus. Of the non-sentinel source specimens, i.e. specimens collected for diagnostic purposes in hospitals, three specimens were positive for influenza type A, of which two were subtyped as A(H1)2009.

Of the 58 953 influenza viruses detected since week 40/2010 in sentinel and non-sentinel specimens, 38 983 (66.1%) were influenza A and 19 970 (33.9%) were influenza B viruses. Of 28 025 influenza A viruses subtyped, 27 239 (97.2%) were A(H1)2009 and 786 (2.8%) were A(H3) viruses (Table 2).

Since week 40/2010, 4 725 influenza viruses from sentinel and non-sentinel specimens have been characterised antigenically (Figure 1): 2 358 as A/California/7/2009 (H1N1)-like; 2 017 as B/Brisbane/60/2008-like (Victoria lineage), 186 as B/Florida/4/2006-like (Yamagata lineage), 150 as A/Perth/16/2009 (H3N2)-like and 14 as B/Bangladesh/3333/2007-like (Yamagata lineage).

More details on circulating viruses can be found in the [August–September](#) report prepared by the Community Network of Reference Laboratories (CNRL) coordination team. The viruses circulating this season remain well-matched with the 2010/11 seasonal vaccine viruses.

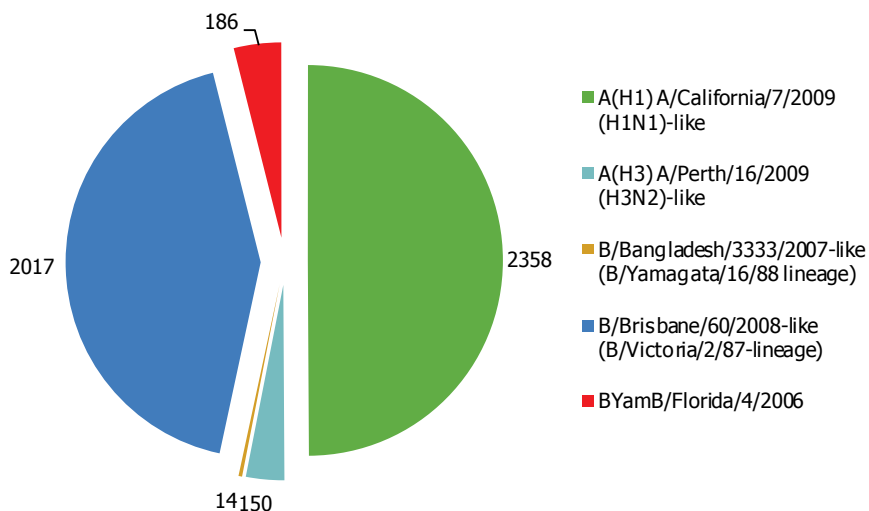
Overall, since week 40/2010, 2522 A(H1)2009, 117 A(H3) and 579 influenza B viruses have been screened for oseltamivir resistance. Of these, 114 A(H1)2009 viruses were resistant, with the bulk being detected in the UK (58), Denmark (27) and France (12). All viruses tested remained sensitive to zanamivir. In terms of adamantane sensitivity, all A(H1)2009 and A(H3) viruses (285 and 76 screened, respectively) were resistant.

Table 2: Weekly and cumulative influenza virus detections by type, subtype and surveillance system, weeks 40/2010–39/2011

| Virus type/subtype | Current Period | | Season | |
|-----------------------------|----------------|--------------|--------------|--------------|
| | Sentinel | Non-Sentinel | Sentinel | Non-Sentinel |
| Influenza A | 0 | 3 | 8447 | 30536 |
| A (H1) 2009 | 0 | 2 | 7591 | 19648 |
| A (subtyping not performed) | 0 | 1 | 593 | 10365 |
| A (not subtypable) | 0 | 0 | 0 | 0 |
| A (H3) | 0 | 0 | 263 | 523 |
| A (H1) | 0 | 0 | 0 | 0 |
| Influenza B | 0 | 0 | 5741 | 14229 |
| Total Influenza | 0 | 3 | 14188 | 44765 |

Note: A(H1)2009, A(H3) and A(H1) includes both N-subtyped and non-N-subtyped viruses

Figure 1: Results of antigenic characterisations of sentinel and non-sentinel influenza virus isolates, weeks 40/2010–39/2011



Description of the system

According to the nationally defined sampling strategy, sentinel physicians take nasal or pharyngeal swabs from patients with influenza-like illness (ILI), acute respiratory infection (ARI) or both and send the specimens to influenza-specific reference laboratories for virus detection, (sub-)typing, antigenic or genetic characterisation and antiviral susceptibility testing.

For details on the current virus strains recommended by WHO for vaccine preparation [click here](#).

Hospital surveillance – severe acute respiratory infection (SARI)

Weekly analysis – SARI

During weeks 38–39/2011, two SARI cases unrelated to influenza infection were reported by Slovakia.

Since week 40/2010, 5 242 SARI cases and 513 related fatalities have been reported by 10 countries (Table 3). Of the 3 843 hospitalised cases with confirmed influenza virus infection, 3 527 (91.8%) were type A and 316 (8.2%) were type B. Of the 3 119 subtyped influenza A viruses, 3 096 (99.3%) were A(H1)2009 and 23 (0.7%) were A(H3) (Table 4). Since week 40/2010, of 2 062 SARI cases admitted to ICU, at least 1 042 (50.5%) required ventilation (Table 5).

Table 3: Cumulative number of SARI cases, weeks 40/2010– week 39/2011

| Country | Number of cases | Incidence of SARI cases per 100 000 population | Number of fatal cases reported | Incidence of fatal cases per 100 000 population | Estimated population covered |
|----------|-----------------|--|--------------------------------|---|------------------------------|
| Austria | 505 | | 26 | | |
| Belgium | 952 | | | | |
| Spain | 1621 | | 192 | | |
| Finland | 94 | | 30 | | |
| France | 790 | | 144 | | |
| Ireland | 122 | | 23 | | |
| Malta | 110 | 26.6 | 1 | 0.24 | 413609 |
| Portugal | 418 | | 45 | | |
| Romania | 449 | 7 | 30 | 0.47 | 6413821 |
| Slovakia | 236 | 4.34 | 22 | 0.4 | 5435273 |
| Total | 5242 | | 513 | | |

Table 4: Number of SARI cases by influenza type and subtype, week 39/2011 and cumulative for the season

| Pathogen | Number of cases during current week | Cumulative number of cases since the start of the season |
|----------------------------|-------------------------------------|--|
| Influenza A | | 3527 |
| A(H1)2009 | | 3096 |
| A(subtyping not performed) | | 408 |
| A(H3) | | 23 |
| Influenza B | | 316 |
| Other Pathogen | | 39 |
| Unknown | 2 | 1360 |
| Total | 2 | 5242 |

Table 5: Number of SARI cases by level of care and respiratory support, weeks 40/2010–39/2011

| Respiratory support | ICU | Inpatient ward | Other | Unknown |
|-----------------------------------|------|----------------|-------|---------|
| No respiratory support necessary | 178 | 573 | 449 | |
| Oxygen therapy | 144 | 205 | 395 | |
| Respiratory support given unknown | 698 | 341 | 882 | 253 |
| Ventilator | 1042 | 22 | 6 | 54 |

This report was written by an editorial team at the European Centre for Disease Prevention and Control (ECDC): Eeva Broberg, Flaviu Plata, Julien Beauté and René Snacken. The bulletin text was reviewed by the Community Network of Reference Laboratories for Human Influenza in Europe (CNRL) coordination team: Adam Meijer, Rod Daniels, John McCauley and Maria Zambon. On behalf of the EISN members, the bulletin text was reviewed by Bianca Snijders (RIVM Bilthoven, Netherlands) and Thedi Ziegler (National Institute for Health and Welfare, Finland). In addition, the report is reviewed by experts of WHO Regional Office for Europe.

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All data published in the WISO are up-to-date on the day of publication. Past this date, however, published data should not be used for longitudinal comparisons as countries tend to retrospectively update their database.

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