Summary

Influenza continues to circulate as evidenced by ongoing influenza-confirmed ICU/HDU and hospital admissions which are gradually deceasing. A letter has been issued recommending the use of antivirals where appropriate.

- Overall weekly influenza GP consultation rates across the UK
  - In week 13 (ending 30 March 2014), overall weekly influenza GP consultations remained low in England (1.1 per 100,000), Wales (4.1 per 100,000), Scotland (13.1 per 100,000) and Northern Ireland (32.6 per 100,000).
  - In week 13 syndromic surveillance indicators for influenza remain similar to seasonally expected levels.
  - Nine new acute respiratory outbreaks have been reported in the past seven days across the UK (five in hospitals (two influenza A(H1N1)pdm09 and three influenza A(not subtyped)), one in a school (influenza A(not subtyped)), two in care homes (one influenza A(not subtyped) and one test result not available) and one in a prison (H. influenzae and S. pneumoniae).

- Virology
  - In week 13 2014, 90 influenza positive detections were recorded through the DataMart scheme (41 A(H1N1)pdm09, 22 A(H3), 25 A(not subtyped) and two B, a positivity of 9.8% compared to 7.9% in week 12), with the highest positivity reported in 15-44 year olds (14.5%).
  - Eight samples were positive for influenza through the English GP sentinel schemes (five A(H1N1)pdm09 and three A(H3), positivity of 20%).

- Disease severity and mortality
  - 34 new admissions to ICU/HDU with confirmed influenza (15 A(H1N1)pdm09, one A(H3N2), 17 A unknown subtype and one B) and seven confirmed influenza death were reported through the USISS mandatory ICU surveillance scheme across the UK (128 Trusts in England) in week 13. 25 new hospitalised confirmed influenza cases were reported through the USISS sentinel hospital network across England (27 Trusts).
  - In week 13 2014, no excess all-cause mortality by week of death was seen across the UK through the EuroMOMO algorithm.

- Vaccination
  - In the final monthly collection up to 31 January 2014, provisional cumulative seasonal influenza vaccine uptake from 99.8% of GP practices was 73.2% in 65 years and over (73.4% in 2012/13), 52.3% in under 65 year olds at risk (51.3% in 2012/13), 39.8% in all pregnant women (40.3% in 2012/13), 42.6% in all 2 year olds and 39.6% in all 3 year olds.
  - Provisional data from the final monthly collection of influenza vaccine uptake by frontline healthcare workers show 54.8% were vaccinated by 31 January 2014 from 99.3% of Trusts, compared to 45.9% in 2012/13.
  - WHO has published recommendations for the composition of influenza virus vaccines for use in the 2014/15 northern hemisphere influenza season.

- International situation
  - Overall influenza activity in North America continues to decrease.
  - Across Europe, influenza continues to circulate, with a higher proportion of influenza subtype A(H3) detected than A(H1)pdm09, however activity is declining.
In week 13 (ending 30 March 2014), overall weekly influenza GP consultations remained low in England, Wales, Scotland and Northern Ireland.

- Influenza/Influenza-Like-Illness (ILI)

**RCGP (England and Wales)**

- The overall ILI consultation rate from RCGP for England and Wales remained stable at 1.1 per 100,000 in week 13 (Figure 1*). ILI rates remained stable in the North at 1.6 per 100,000, Central at 2.0 per 100,000 and South region at 0.5 per 100,000.

- In week 13 2014, ILI consultations were highest in 45-64 year olds (1.9 per 100,000) and 75+ year olds (1.6 per 100,000).

**Northern Ireland**

- The Northern Ireland influenza rate increased from 20.6 per 100,000 in week 12 to 32.6 per 100,000 in week 13 (Figure 3).

- In week 13 2014, the highest rates were seen in 15-44 year olds (43.5 per 100,000) followed by 75+ year olds (38.2 per 100,000).

**Wales**

- The Welsh influenza rate decreased from 7.8 to 4.1 per 100,000 in week 13 (Figure 3).

- The highest rate was seen in 45-64 year olds (9.2 per 100,000), 65-74 year olds (6.3 per 100,000) and 15-44 year olds (2.7 per 100,000).

**Scotland**

- The Scottish ILI rate remained stable at 13.1 per 100,000 in week 13 (Figure 3).

- The highest rate was seen in 15-44 year olds (15.9 per 100,000) and 45-64 year olds (15.5 per 100,000).

*The Moving Epidemic Method has been adopted by the European Centre for Disease Prevention and Control to calculate thresholds for GP ILI consultations for the start of influenza activity in a standardised approach across Europe. The threshold calculated for RCGP ILI consultation rates for 2013/14 is 15.6 per 100,000.*
Other respiratory indicators

**Acute bronchitis (AB)**
The overall weekly consultation rate for acute bronchitis (AB) in England and Wales through the RCGP scheme increased from 50.0 per 100,000 in week 12 to 61.4 per 100,000 in week 13 (Figure 4). The highest rates were seen in <1 year olds (232.0 per 100,000) and 75+ year olds (158.9 per 100,000).

**Community surveillance**

In week 13 influenza syndromic indicators remained stable and nine new acute respiratory outbreak has been reported in the last seven days.

**Acute respiratory disease outbreaks**

-Nine new acute respiratory outbreaks were reported in the last seven days: two from Midlands and East of England (one in a hospital and one in a care home, both influenza A(not subtyped)), one from a hospital in North of England (influenza A(H1N1)pdm09), one from a school in London (influenza A(not subtyped)), two from the South of England (one in a hospital (influenza A(not subtyped) and one in a care home (no test result available)), one from a hospital in Scotland (influenza A(H1N1)pdm09), one from a hospital in Northern Ireland (influenza A(not subtyped) and one from a prison in Wales (H. influenzae and S. pneumoniae).

-So far this season, 50 outbreaks have been reported in care homes, 37 in hospitals, 10 in schools and three in other settings (where tested, 25 influenza A(H1N1)pdm09, 17 influenza A (not subtyped), four influenza A(H3), nine RSV, nine rhinovirus, three parainfluenza, and seven mixed infections of various pathogens.

-Outbreaks should be recorded on HPZone and reported to the local Health Protection Teams and Resp cidsc@phe.gov.uk.

**FluSurvey**

-Internet-based surveillance of influenza in the general population is undertaken through the FluSurvey project (http://flusurvey.org.uk) run by the London School of Hygiene and Tropical Medicine. Please see the website for information on how to register.

-In week 13, the incidence of ILI reports was low across age groups (Figure 6).
Microbiological surveillance

In week 12 2014, 90 influenza positive detections were recorded through the DataMart scheme (41 A(H1N1)pdm09, 22 A(H3), 25 A(not subtyped) and two B), with the highest positivity reported in 15-44 year olds. Eight samples were positive for influenza through the English sentinel schemes (five A(H1N1)pdm09 and three A(H3)).

- Respiratory DataMart System (England)

In week 13 2014, out of the 914 respiratory specimens reported through the Respiratory DataMart System, 41 (4.5%) were positive for flu A(H1N1)pdm09, 22 (2.4%) for influenza A(H3), 25 (2.7%) for flu A(not subtyped) and two for influenza B (Figure 7), with the highest influenza positivity in 15-44 year olds (14.5%, Figure 8). The overall positivity for RSV remained low in week 13 (1.4%, Figure 9). Positivity increased slightly for rhinovirus (from 11.9% to 13.9%) and parainfluenza (from 2.7% to 3.8%), remained at a slightly increased level for hMPV (4.6%) and remained low for adenovirus (3.8%).

- Sentinel swabbing schemes in England (RCGP/SMN) and the Devolved Administrations

In week 13, eight samples from England were positive for influenza (5 A(H1N1)pdm09 and three A(H3)). One sample from Scotland was positive for influenza A(H1N1)pdm09, two samples from Northern Ireland were positive for influenza A(subtyped) and no sample from Welsh scheme was positive for flu (Table 1).

- Virus characterisation

Since week 40 2013, the PHE Respiratory Virus Unit (RVU) has isolated and antigenically characterised 59 influenza A(H3N2) viruses, all similar to the A/Texas/50/2012 H3N2 2013/14 vaccine strain, and 193 influenza A(H1N1)pdm09 viruses similar to the A/California/07/2009 vaccine strain for 2013/14. Of the few influenza B viruses isolated and characterised, 4 belong to the B-Yamagata lineage as does the 2013/14 influenza B vaccine strain, whilst 6 belong to the B-Victoria lineage.

- Antimicrobial susceptibility

In the 12 weeks up to 23 March 2014, 84% or greater of all lower respiratory tract isolates of Staphylococcus aureus, Streptococcus pneumoniae and Haemophilus influenzae reported as tested were susceptible to the antibiotics tetracycline and co-amoxiclav (Table 2). There have been no significant changes in susceptibility in recent years.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Tetracyclines</th>
<th>Co-amoxiclav</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Specimens tested (N)</td>
<td>Specimens susceptible (%)</td>
</tr>
<tr>
<td>S. aureus</td>
<td>3,281</td>
<td>92</td>
</tr>
<tr>
<td>S. pneumoniae</td>
<td>2,604</td>
<td>84</td>
</tr>
<tr>
<td>H. influenza</td>
<td>10,859</td>
<td>99</td>
</tr>
</tbody>
</table>

* S. pneumoniae isolates are not routinely tested for susceptibility to co-amoxiclav, however laboratory results for benzyl-penicillin are extrapolated to determine sensitivity to other betalactams such as co-amoxiclav.

Table 2: Antimicrobial susceptibility surveillance in lower respiratory tract isolates, 23 weeks up to 23 March 2014, E&W
In week 13, 34 new admissions of confirmed influenza cases to ICU/HDU (15 A(H1N1)pdm09, one A(H3N2), 17 A unknown subtype and one B) and seven confirmed influenza death in ICU/HDU have been reported through the national USISS mandatory ICU scheme across the UK (128 Trusts in England). 25 new hospitalised confirmed influenza cases have been reported through the USISS sentinel hospital network across England (27 Trusts).

A national mandatory collection (USISS mandatory ICU scheme) is operating in cooperation with the Department of Health to report the number of confirmed influenza cases admitted to Intensive Care Units (ICU) and High Dependency Units (HDU) and number of confirmed influenza deaths in ICU/HDU across the UK. A confirmed case is defined as an individual with a laboratory confirmed influenza infection admitted to ICU/HDU. In addition a sentinel network (USISS sentinel hospital network) of acute NHS trusts has been established in England to report weekly laboratory confirmed hospital admissions. Further information on these systems is available through the website. Please note data in previously reported weeks are updated and so may vary by week of reporting.

- Number of new admissions and fatal confirmed influenza cases in ICU/HDU (USISS mandatory ICU scheme), UK (week 13)

In week 13, 34 new admissions to ICU/HDU with confirmed influenza infection (15 A(H1N1)pdm09, one A(H3N2), 17 A unknown subtype and one B) were reported across the UK (128/156 Trusts in England) through the USISS mandatory ICU scheme (Figures 10 and 11) compared to 58 in week 12. Seven new confirmed influenza death was reported in week 13 2014. A total of 757 admissions (408 A(H1N1)pdm09, 305 A(unknown), 30 A(H3N2) and 14 B) and 66 confirmed influenza deaths have been reported since week 40 2013.

- USISS sentinel weekly hospitalised confirmed influenza cases, England (week 13)

In week 13, 25 new hospitalised confirmed influenza case were reported through the USISS sentinel hospital network from 27 NHS Trusts across England (Figure 12) compared to 51 in week 12. A total of 783 hospitalised confirmed influenza admissions (477 A(H1N1)pdm09, 197 A unknown, 86 A(H3N2) and 23 B) have been reported since week 40 2013.

All-cause mortality data

In week 13 2014, no excess all-cause mortality by week of death was seen in England through the EuroMOMO algorithm and none has been reported since week 40 2013.

Seasonal mortality is seen each year in the UK, with a higher number of deaths in winter months compared to the summer. Additionally, peaks of mortality above this expected higher level typically occur in winter, most commonly the result of factors such as cold snaps and increased circulation of respiratory viruses, in particular influenza. Weekly mortality surveillance presented here aims to detect and report acute significant weekly excess mortality above normal seasonal levels in a timely fashion. Excess mortality is defined as a significant number of deaths reported over that expected for a given point in the year, allowing for weekly variation in the number of deaths. The aim is not to assess general mortality trends or precisely estimate the excess attributable to different factors, although some end-of-winter estimates and more in-depth analyses (by age, geography etc.) are undertaken.
- Excess overall all-cause mortality, England and Wales

In week 12 2014, an estimated 9,832 all-cause deaths were registered in England and Wales (source: Office for National Statistics). This is slightly less than the 10,005 estimated death registrations in week 11 and remains below the 95% upper limit of expected death registrations for this time of year as calculated by PHE (Figure 13). The sharp drop in number of deaths correspond to weeks when there were bank holidays and fewer days when deaths were registered and so is likely to be artificial.

- Excess all-cause mortality by age group and PHE region, England, Wales, Scotland and Northern Ireland

In week 13 2014, no excess mortality by date of death above the upper 2 z-score threshold was seen in 65+ year olds in England after correcting ONS disaggregate data for reporting delay with the standardised EuroMOMO algorithm (Figure 14, Table 3), in other age groups or subnationally. This data is provisional due to the time delay in registration; numbers may vary from week to week.

No excess mortality above the threshold through the same standardised algorithm was seen across Wales, Scotland or Northern Ireland in week 13 (Table 4).

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### Table 3: Excess mortality by age group, England*

<table>
<thead>
<tr>
<th>Age group (years)</th>
<th>Excess detected in week 13 2014?</th>
<th>Weeks with excess in 2013/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;5</td>
<td>•</td>
<td>NA</td>
</tr>
<tr>
<td>5-14</td>
<td>•</td>
<td>NA</td>
</tr>
<tr>
<td>15-64</td>
<td>•</td>
<td>NA</td>
</tr>
<tr>
<td>65+</td>
<td>•</td>
<td>NA</td>
</tr>
</tbody>
</table>

* Excess mortality is calculated as the observed minus the expected number of deaths in weeks above threshold

### Table 4: Excess mortality by UK country*

<table>
<thead>
<tr>
<th>Country</th>
<th>Excess detected in week 13 2014?</th>
<th>Weeks with excess in 2013/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>England</td>
<td>•</td>
<td>NA</td>
</tr>
<tr>
<td>Wales</td>
<td>•</td>
<td>NA</td>
</tr>
<tr>
<td>Scotland</td>
<td>•</td>
<td>NA</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>•</td>
<td>NA</td>
</tr>
</tbody>
</table>

* Excess mortality is calculated as the observed minus the expected number of deaths in weeks above threshold

NB. Separate total and age-specific models are run for England which may lead to discrepancies between Tables 3 + 4

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### Vaccination

- In the final monthly collection up to 31 January 2014, provisional cumulative seasonal influenza vaccine uptake from 99.8% of GP practices was 73.2% in 65 years and over (73.4% in 2012/13), 52.3% in under 65 year olds at risk (51.3% in 2012/13), 39.8% in all pregnant women (40.3% in 2012/13), 42.6% in all 2 year olds and 39.6% in all 3 year olds. The report provides uptake to Team level, CCG level and in key targeted groups.

- Provisional data from the final monthly collection of influenza vaccine uptake by frontline healthcare workers show 54.8% were vaccinated by 31 January 2014 from 99.3% of Trusts, compared to 45.9% in 2012/13. The report provides uptake to Trust level.

- WHO has recommended the composition of influenza virus vaccines for use in the 2014/15 northern hemisphere influenza season. The same viruses are recommended as for the 2013-2014 northern hemisphere influenza season and 2014 southern hemisphere season (an A/California/7/2009 (H1N1)pdm09-like virus; an A/Texas/50/2012 (H3N2)-like virus; a B/Massachusetts/2/2012-like virus (Yamagata lineage) and for quadrivalent vaccines containing two influenza B viruses, to additionally include a B/Brisbane/60/2008-like virus (Victoria lineage). For further information, please see the full report.
Overall influenza activity in North America continues to decrease. Across Europe, influenza continues to circulate, with a higher proportion of influenza subtype A(H3) detected than A(H1)pdm09, however activity is declining.

- **Europe** 28 March 2014  (European Centre for Disease Prevention and Control report)

No country reported high intensity of influenza activity. Estonia, Greece and Romania reported medium intensity and all other countries low intensity, the lowest category of reporting. Geographic patterns of influenza activity varied across Europe: widespread activity was reported by five countries, (Austria, Croatia, Estonia, Greece and Ireland) and regional activity by eight countries and the UK (England and Scotland). Local activity was reported by Finland, France, Lithuania, Luxemburg and Norway, sporadic activity from nine countries and the UK (Northern Ireland and Wales). Cyprus reported no influenza activity. Increasing trends were reported by Lithuania and the UK (Wales). Eleven countries and the UK (Scotland) reported stable trends, 16 countries and the UK (England and Northern Ireland) decreasing trends. The number of countries reporting low intensity, local or sporadic spread and decreasing trends has increased substantially over the previous three weeks. ILI and ARI rates are low or decreasing in the countries reporting.

For week 12/2014, 662 sentinel specimens were tested across 23 countries, 207 (31%) were positive for influenza virus (Tables 1–2, Figures 1–2). Of these, 198 (96%) were type A, 118 subtyped as A(H3) and 47 A(H1)pdm09, and nine (4%) were type B. Since week 40/2013, of 6 100 sentinel specimens testing positive for influenza virus, 5 970 (98%) were type A and 130 (2%) were type B. Of the 5 590 subtyped influenza viruses, 3 133 (56%) were A(H1)pdm09 and 2 457 (44%) were A(H3). Countries have reported variable patterns of A(H1)pdm09 and A(H3) as the dominant subtype. The proportion of sentinel specimens testing positive for influenza virus is decreasing.

The results of antigenic and genetic characterisation of sentinel and non-sentinel viruses are displayed in Tables 3 and 4. Since week 40/2013, none of the 1 015 antigenically characterised viruses have differed significantly from the current vaccine viruses recommended by WHO. Nine were reported to be unattributable to a category. More details on viruses circulating since September 2013 can be found in the WHO CC Report, February 2014.

Since week 40/2013, 721 A(H1)pdm09, 196 A(H3) and 38 type B viruses have been tested for susceptibility to the neuraminidase inhibitors oseltamivir and zanamivir by genetic and/or phenotypic methods. Eight A(H1N1)pdm09 viruses carried the NA-H275Y amino acid substitution associated with highly reduced inhibition by oseltamivir. One of these viruses showed phenotypic highly reduced inhibition by oseltamivir and normal inhibition by zanamivir. One A(H3N2) virus carrying the NA-E119V amino acid substitution showed reduced inhibition by oseltamivir in phenotypic testing and normal inhibition by zanamivir. None of the test results of the other viruses showed evidence for reduced or highly reduced inhibition by NAIs.

For week 12/2014, 16 countries reported 400 respiratory syncytial virus detections, maintaining the downward trend since week 1/2014.

For week 12/2014, 117 hospitalised laboratory-confirmed influenza cases were reported by six countries (France, Ireland, Romania, Spain, Sweden and the UK). Influenza A virus was detected in 113 cases and influenza B virus in four patients. Of those hospitalised cases, 67 were admitted to intensive care units (ICU).

Since week 40/2013, seven countries have reported 4 232 hospitalised, laboratory-confirmed influenza cases: 4 184 (99%) were related to influenza virus type A infection and 48 (1%) to type B virus infection (Tables 5 and 6). Of 2 853 subtyped influenza A viruses, 2 138 (75%) were A(H1)pdm09 and 715 (25%) were A(H3) (Table 5). A higher proportion of A(H1)pdm09 viruses has been detected in patients in ICU (1 212 out of 1 420 subtyped, 85%) than in patients in other wards (926 out of 1 433 subtyped, 65%). The reasons behind the different distribution of (sub)types in different ward types are currently unknown.

Of the 3 511 hospitalised cases with reported age, 1 318 (38%) were 40–64 years old and 1 288 (37%) were over 64 years of age.

Five countries reported a total of 351 fatal cases (Table 6), with 348 (99%) cases associated with influenza virus type A infection and three (1%) with type B virus. Of 258 influenza A viruses subtyped from fatal cases, 209 (81%) were A(H1)pdm09 and 49 (19%) were A(H3). The age was reported for 347 of the fatal cases: 192 (55%) were over 65 years of age.
• **United States of America** 28 March 2014  (Centre for Disease Control report)

During week 12 (March 16-22, 2014), influenza activity continued to decrease in the United States. Nationwide during week 12, 1.6% of patient visits reported through the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet) were due to influenza-like illness (ILI). This percentage is below the national baseline of 2.0%.

During week 12, 7.2% of all deaths reported through the 122 Cities Mortality Reporting System were due to P&I. This percentage was below the epidemic threshold of 7.3% for week 12. Four influenza-associated pediatric deaths were reported to CDC during week 12. One death was associated with a 2009 H1N1 virus and occurred during week 5 (week ending February 1, 2014) and two deaths were associated with influenza A viruses for which no subtyping was performed and occurred during weeks 6 and 12 (weeks ending February 8 and March 22, 2014). One death was associated with an influenza B virus and occurred during week 10 (week ending March 8, 2014). A total of 79 influenza-associated pediatric deaths have been reported during the 2013-2014 season from Chicago [1], New York City [2] and 28 states (AR [4]; AZ [1]; CA [7]; FL [4]; GA [1]; IA [1]; IL [1]; KS [2]; KY [1]; LA [5]; MA [2]; MD [1]; ME [1]; MI [2]; MS [1]; NC [5]; NE [1]; NV [1]; OK [2]; OR [1]; PA [3]; SC [2]; TN [4]; TX [16]; UT [2]; VA [1]; WI [2]; and WV [2]).

Of 4,977 specimens tested and reported during week 12 by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories, 571 (11.5%) were positive for influenza. By type, 348 (60.9%) were influenza A (101 (29.0%) A(H1N1)pdm09, 179 subtyping not performed and 68 (19.5%) A(H3)) and 223 (39.1%) were influenza B.

• **Canada** 28 March 2014  (Public Health Agency report)

In week 12, influenza activity in Canada continued to decrease slowly. The number of regions reporting localized or widespread influenza activity has been stable in recent weeks, with the majority of activity reported in Eastern Canada. In week 12, no regions reported widespread activity and eight regions (BC(1), ON(5), and QC(2)) reported localized activity. The national influenza-like-illness (ILI) consultation rate increased from 27.4/1,000 in week 11 to 37.7/1,000 in week 12, which was within the expected range for week 12. In week 12, 12 new laboratory-confirmed influenza-associated paediatric (≤16 years of age) hospitalizations were reported by the Immunization Monitoring Program Active (IMPACT) network, compared to 22 in week 11; however, two centres did not report in week 12. In keeping with the increased circulation of influenza B, influenza B was reported in 5 of the 12 cases in week 12. Although the number of cases is small, a greater proportion of cases with influenza B this season have been children between 2 and 10 years of age compared to A(H1N1)pdm09. No ICU admissions or deaths were reported in week 12.

• **Global influenza update** 24 March 2014  (WHO website)

Globally overall influenza activity continued declining, although an increase in influenza B activity was observed in parts of the world with less intensity compared to the earlier influenza A activity.

In North America, influenza activity continued its decreasing trend, with indicators suggesting the influenza season is coming to a close, despite that a small increase in detections of influenza B was noted in the region. In Europe, influenza activity was variable among countries. In general activity increased in the eastern regions but decreased in the southwestern and northern regions. Influenza A(H1N1)pdm09 and A(H3N2) continued circulating with variable predominance among countries.

In Eastern Asia, overall activity declined with a slight increase of influenza B activity observed. In China, influenza activity remained stable after a decrease late February. Influenza activity in Mongolia remained elevated.

In Tropical Asia, influenza activity largely continued to decline, except Thailand where sustained elevated activity of influenza A(H1N1)pdm09 and an increased proportion of influenza B were reported.

In Northern Africa and Western Asia, influenza activity decreased overall, however the proportion of influenza B positive samples has begun to increase.

Based on FluNet reporting (as of 20 March 2014, 13:20 UTC), during weeks 9 to 10 (23 February 2014 to 8 March 2014), National Influenza Centres (NICs) and other national influenza laboratories from 96 countries, areas or territories reported data. The WHO GISRS laboratories tested more than 74 758 specimens. 13 548 were positive for influenza viruses, of which 10 289 (75.9%) were typed as influenza A and 3259 (24.1%) as influenza B. Of the sub-typed influenza A viruses, 4470 (65%) were influenza A(H1N1)pdm09 and 2410
(35%) were influenza A(H3N2). Of the characterized B viruses, 222 (87.4%) belonged to the B-Yamagata lineage and 32 (12.6%) to the B-Victoria lineage.

- **Avian Influenza** 27 March 2014 (WHO website)

### Influenza A(H7N9)

In the past week, seven new hospitalised cases of human infection with influenza A(H7N9) in China have been reported by WHO. The source of infection is still under investigation. So far, there is no evidence of sustained human-to-human transmission. WHO does not advise special screening at points of entry with regard to this event, nor does it currently recommend any travel or trade restrictions.

### Influenza A(H5N1)

From 2003 through to 20 December 2013, 649 human cases of H5N1 avian influenza have been officially reported to WHO from 15 countries, of which 385 (59%) died.

- **Novel coronavirus** 27 March 2014

Up to 27 March 2014, a total of four cases of Middle East respiratory syndrome coronavirus, MERS-CoV, (two imported and two linked cases) have been confirmed in England. On-going surveillance has identified 133 suspect cases in the UK that have been investigated for MERS-CoV and tested negative. A further 196 confirmed cases have been reported internationally. This results in a current global total of 206 cases, 86 of which have died (case fatality ratio=42%). Two recent fatal cases were reported from Saudi Arabia and Jordan, both with underlying health conditions. Further information on management and guidance of possible cases is available online.

### Acknowledgements

This report was prepared by the Influenza section, Respiratory Diseases Department, Centre for Infectious Disease Surveillance and Control, Public Health England. We are grateful to all who provided data for this report including the RCGP Research and Surveillance Centre, the PHE Real-time Syndromic Surveillance team, the PHE Respiratory Virus Unit, the PHE Modelling and Statistics unit, the PHE Dept. of Healthcare Associated Infection & Antimicrobial Resistance, PHE regional microbiology laboratories, NHS Direct, Office for National Statistics, the Department of Health, Health Protection Scotland, National Public Health Service (Wales), the Public Health Agency Northern Ireland, the Northern Ireland Statistics and Research Agency, QSurveillance® and EMIS and EMIS practices contributing to the QSurveillance® database.

### Related links

- Weekly consultation rates in national sentinel schemes
  - Sentinel schemes operating across the UK
  - RCGP scheme
  - Northern Ireland surveillance (Public Health Agency)
  - Scotland surveillance (Health Protection Scotland)
  - Wales surveillance (Public Health Wales)
  - Real time syndromic surveillance
  - MEM threshold paper

- Community surveillance
  - Outbreak reporting
  - FluSurvey
  - MOSA

- Disease severity and mortality data
  - USISS system
  - EuroMOMO mortality project

- Vaccination
  - 2012/13 seasonal influenza vaccine programme (Department of Health Book)
  - Childhood flu programme Q&A for healthcare professionals (Public Health England)
  - 2013/14 Northern Hemisphere seasonal influenza vaccine recommendations (WHO)