PHE Weekly National Influenza Report



Summary of UK surveillance of influenza and other seasonal respiratory illnesses

27 March 2014 – Week 13 report (up to week 12 data)

This report is published weekly on the <u>website</u>. For further information on the surveillance schemes mentioned in this report, please see the <u>website</u> and the <u>related links</u> at the end of this document.

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Summary

Influenza continues to circulate as evidenced by ongoing influenza-confirmed ICU/HDU and hospital admissions, with indicators suggesting activity is decreasing. A <u>letter</u> has been issued recommending the use of antivirals where appropriate.

- Overall weekly influenza GP consultation rates across the UK
 - In week 12 (ending 23 March 2014), overall weekly influenza GP consultations remained low in England (1.2 per 100,000), Wales (7.9 per 100,000), Scotland (13.7 per 100,000) and Northern Ireland (20.6 per 100,000)).
 - In week 12 syndromic surveillance indicators for influenza remain similar to seasonally expected levels.
 - One new acute respiratory influenza outbreak has been reported in the past seven days across the UK (one in a hospital (one A(H1N1)pdm09)).
- Virology
 - In week 12 2014, 71 influenza positive detections were recorded through the DataMart scheme (44 A(H1N1)pdm09, eight A(H3), 15 A(not subtyped) and four B, a positivity of 8.4% compared to 15.7% in week 11), with the highest positivity reported in 15-44 year olds (16.4%).
 - Seven samples were positive for influenza through the English GP sentinel schemes (seven A(H1N1)pdm09, positivity of 16%).
- Disease severity and mortality
 - 42 new admissions to ICU/HDU with confirmed influenza (20 A(H1N1)pdm09, two A(H3N2), 19 A (unknown subtype) and one influenza B) and two confirmed influenza deaths were reported through the USISS mandatory ICU surveillance scheme across the UK (136 Trusts in England) in week 12.
 40 new hospitalised confirmed influenza cases were reported through the USISS sentinel hospital network across England (26 Trusts).
 - In week 12 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 <u>composition</u> 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 activity remains at a moderate to low-intensity level with a stable or decreasing trend in the majority of the Member States.

1-4 y ears

45-64 years

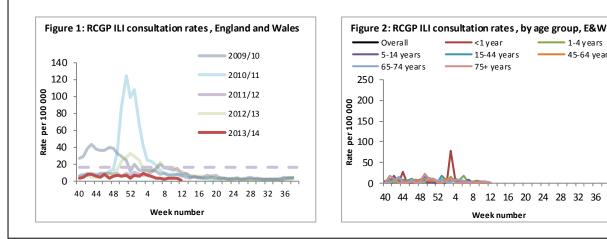
In week 12 (ending 23 March 2014), overall weekly influenza GP consultations remained low in England, Wales, Scotland and Northern Ireland.

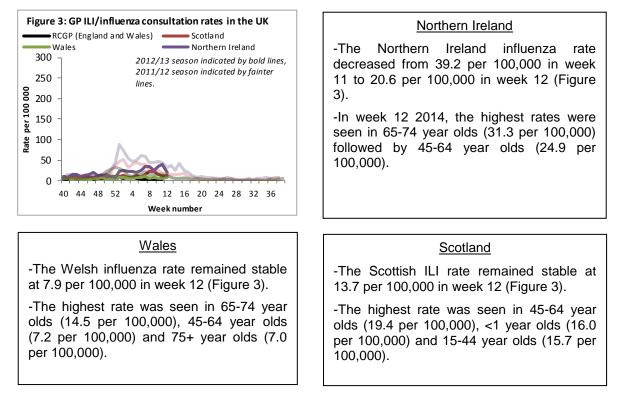
Influenza/Influenza-Like-Illness (ILI)

RCGP (England and Wales)

-The overall ILI consultation rate from RCGP for England and Wales remained stable at 1.2 per 100,000 in week 12 (Figure 1*). ILI rates remained stable in the North at 0.0 per 100,000, Central at 0.9 per 100,000) and South region at 1.9 per 100,000.

-In week 12 2014, ILI consultations were highest in 75+ year olds (1.7 per 100,000), 65-74 year olds (rate of 1.4 per 100,000 and 15-44 year olds (1.4 per 100,000).



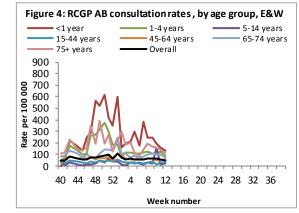


*The Moving Epidemic Method has been adopted by the European Centre for Disease Prevention and Control to calculate thresholds for GP ILI consultations for the start of influenza activity in a standardised approach across Europe. The threshold calculated for RCGP ILI consultation rates for 2013/14 is 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 decreased from 59.5 per 100,000 in week 11 to 50.0 per 100,000 in week 12 (Figure 4). The highest rates were seen in <1 year olds (136.4 per 100,000) and 75+ year olds (117.4 per 100,000).



Community surveillance

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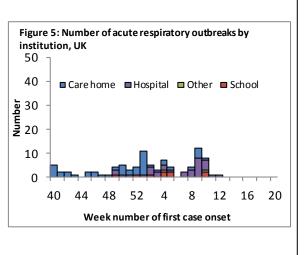
In week 11 influenza syndromic indicators remained stable and five new acute respiratory outbreak has been reported in the last seven days.

• PHE Real-time Syndromic Surveillance

-In week 12 syndromic surveillance indicators for influenza remain similar to seasonally expected levels. -For further information, please see the syndromic surveillance <u>webpage</u>.

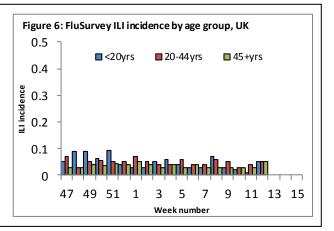
• Acute respiratory disease outbreaks

-One new acute respiratory outbreak was reported in the last seven days from a hospital in Scotland (one influenza A(H1N1)pdm09). So far this season, 48 outbreaks have been reported in care homes, 32 in hospitals, nine in schools, one in a nursery and one in a travelling community (where tested, 22 influenza A(H1N1)pdm09, 14 influenza A (not subtyped), three influenza A(H3), nine RSV, nine rhinovirus, three parainfluenza, five mixed infections of parainfluenza along with other viruses (one each of influenza A and influenza B, RSV, rhinovirus, hMPV and seasonal coronavirus), and one influenza A(H1N1)pdm09/hMPV -Outbreaks should be recorded on HPZone and reported to the local Health Protection Teams and Respcidsc@phe.gov.uk.



FluSurvey

-Internet-based surveillance of influenza in the general population is undertaken through the FluSurvey project (<u>http://flusurvey.org.uk</u>) run by the London School of Hygiene and Tropical Medicine. Please see the website for information on how to register. In week 12, the incidence of ILI reports was similar across age groups (Figure 6).



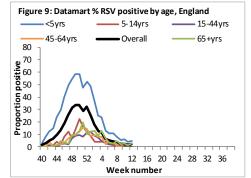
Microbiological surveillance

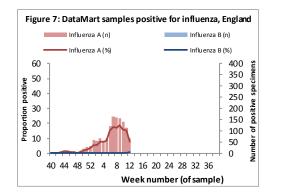
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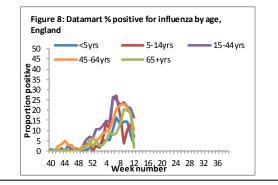
In week 12 2014, 71 influenza positive detections were recorded through the DataMart scheme (44 A(H1N1)pdm09, eight A(H3), 15 A(not subtyped) and four B), with the highest positivity reported in 15-44 year olds. Seven samples were positive for influenza through the English sentinel schemes (seven A(H1N1)pdm09).

Respiratory DataMart System (England)

In week 12 2014, out of the 849 respiratory specimens reported through the Respiratory Datamart System, 44 (5.2%) were positive for flu A (H1N1)pdm09, eight (0.9%) positive for influenza A(H3), 15 (1.8%) positive for influenza A (not subtyped) and four samples were positive for influenza B (Figure 7), with the highest influenza positivity in 15-44 year olds (16.4%, Figure 8). The overall positivity for RSV remaining low (2.2%) in week 12 with the highest positivity remained in the <5 years (4.3%, Figure 9). Slight increases were seen for rhinovirus positivity (from 10.9% to 12.7%) and hMPV positivity (from 3.5% to 4.2%). Other respiratory viruses remained at low levels: adenovirus 5.4% and parainfluenza 2.0%.







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

-In week 12, seven samples from England were positive for influenza A(H1N1)pdm09. Four samples from Scotland were positive for influenza A(H1N1)pdm09, no samples from Northern Ireland and Welsh scheme were positive for flu (Table 1).

Table 1: Sentinel influenza surveillance in the UK						
Week	England	Scotland	Northern Ireland	Wales		
09	19/67 (28.4%)	14/54 (25.9%)	2/5 (-)	2/3 (-)		
10	18/43 (41.9%)	16/50 (32%)	7/10 (70%)	1/2 (-)		
11	25/59 (42.4%)	13/43 (30.2%)	5/10 (50%)	0/3 (-)		
12	7/44 (15.9%)	4/24 (16.7%)	0/4 (-)	0/2 (-)		
NB. Proportion positive omitted when fewer than 10 specimens tested						

• 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.

• Antiviral susceptibility Since week 40 2013, 688 and 101 influenza viruses have been tested for Osetamivir and Zanamivir susceptibility, respectively, in the UK. Twelve (1.8%) of 676 flu A(H1N1)pdm09 and one (4.5%) of 22 flu A(H3) viruses have been found to be resistant to Oseltamivir. No viruses were found to be resistant to Zanamivir.

Antimicrobial susceptibility

-In the 12 weeks up to 16 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 2: Antimicrobial susceptibility surveillance in lower respiratory tract isolates, 23 weeks up to 16 March 2014, E&W

	Tetracyclines		Co-amoxiclav		
Organism	Specimens tested (N)	Specimens susceptible (%)	Specimens tested (N)	Specimens susceptible (%)	
S. aureus	3,240	92	240	87	
S. pneumoniae	2,511	84	2673*	92*	
H. influenzae	10,326	99	9,837	94	
* S. pneumoniae isolates are not routinely tested for susceptibility to co-amoxiclav, how ever					

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

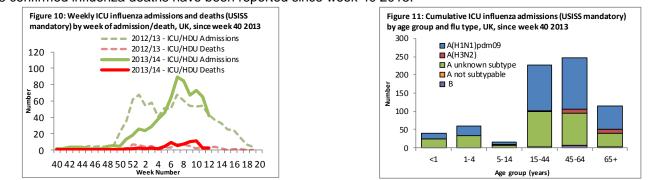
Influenza confirmed hospitalisations

In week 12, 42 new admissions of confirmed influenza cases to ICU/HDU (20 A(H1N1)pdm09, two A(H3N2), 19 A (unknown subtype) and one influenza B) and two confirmed influenza deaths in ICU/HDU have been reported through the national USISS mandatory ICU scheme across the UK (136 Trusts in England). 40 new hospitalised confirmed influenza cases have been reported through the USISS sentinel hospital network across England (26 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 <u>website</u>. Please note data in previously reported weeks are updated and so may vary by week of reporting.

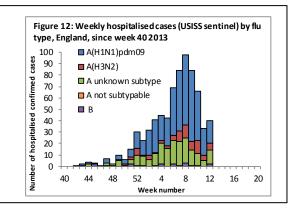
 Number of new admissions and fatal confirmed influenza cases in ICU/HDU (USISS mandatory ICU scheme), UK (week 12)

-In week 12, 42 new admissions to ICU/HDU with confirmed influenza infection (20 A(H1N1)pdm09, two A(H3N2), 19 A (unknown subtype) and one influenza B) were reported across the UK (136/156 Trusts in England) through the USISS mandatory ICU scheme (Figures 10 and 11) compared to 65 in week 11. Two new confirmed influenza deaths were reported in week 12 2014. A total of 703 admissions (377 A(H1N1)pdm09, 286 A(unknown), 27 A(H3N2) and 13 B) and 58 confirmed influenza deaths have been reported since week 40 2013.



• USISS sentinel weekly hospitalised confirmed influenza cases, England (week 12)

-In week 12, 40 new hospitalised confirmed influenza case were reported through the USISS sentinel hospital network from 26 NHS Trusts across England (Figure 12) compared to 33 in week 11. A total of 738 hospitalised confirmed influenza admissions (453 A(H1N1)pdm09, 187 A unknown, 77 A(H3N2) and 21 B) have been reported since week 40 2013.



All-cause mortality data

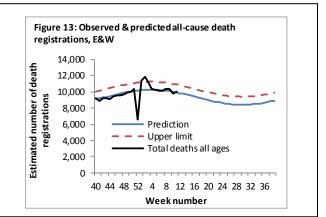
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In week 12 2014, no excess all-cause mortality by week of death was seen in England through the EuroMOMO algorithm and none has been reported since week 40 2013.

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 11 2014, an estimated 10,005 all-cause deaths were registered in England and Wales (source: Office for National Statistics). This is slightly more than the 9,828 estimated death registrations in week 10 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 12 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 11 (Table 4).

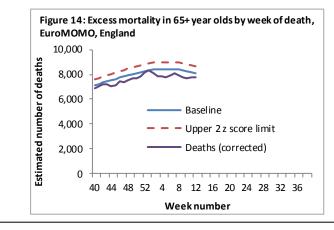


Table 3: E	ble 3: Excess mortality by age group,England*			
Age group (years)	Excess detected in week 12 2014?	Weeks with excess in 2013/14		
<5	×	NA		
5-14	×	NA		
15-64	×	NA		
65+	×	NA		
* 5,0000 mor	hality in an low lated on th	a chaorinad minus the		

Table 4: Excess mortality by UK country*

Country	Excess detected in week 12 2014?	Weeks with excess in 2013/14			
England	×	NA			
Wales	×	NA			
Scotland	×	NA			
Northern Ireland	×	NA			
* 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					

Vaccination

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- 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 Area 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 activity remains at a moderate to low-intensity level with a stable or decreasing trend in the majority of the Member States.

• <u>Europe</u> 21 March 2014 (European Centre for Disease Prevention and Control report)

No country reported high-intensity influenza activity, 11 countries and the UK (Northern-Ireland) 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 nine countries; regional activity by nine countries and the UK (England and Scotland), and local activity by Bulgaria, Norway and Poland. Sporadic activity was reported from Latvia, Lithuania, Malta, Portugal, Slovakia, Spain and the UK (Northern Ireland). Cyprus and the UK (Wales) reported no influenza activity.Increasing trends were reported by Austria, Croatia, the Netherlands, Poland, Romania and the UK (Northern Ireland). Thirteen countries and the UK (England) reported stable trends, while 10 countries and UK (Scotland) experienced decreasing trends.

For week 11/2014, 787 sentinel specimens were tested across 22 countries and 281 (36%) were positive for influenza virus. Of these, 275 (98%) were type A and six (2%) were type B. Since week 40/2013, of 6 005 sentinel specimens testing positive for influenza virus, 5 883 (98%) were type A and 122 (2%) were type B. Of the 5 485 subtyped influenza viruses, 3 090 (56%) were A(H1)pdm09 and 2 395 (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 in the same range as the last three weeks.

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 918 antigenically characterised viruses have differed significantly from the current vaccine viruses recommended by WHO. A total of two viruses were reported as non-attributable 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, 657 A(H1)pdm09, 176 A(H3) and 35 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 zanamivir. One A(H3N2) virus carried the NA-E119V amino acid substitution and showed reduced inhibition by oseltamivir and normal inhibition by zanamivir.

For week 11/2014, 15 countries reported 450 respiratory syncytial virus detections, maintaining the downward trend and indicating that the epidemic peak for the reporting countries occurred in week 1/2014.

For week 11/2014, 152 hospitalised, laboratory-confirmed influenza cases were reported by six countries (France, Ireland, Romania, Spain, Sweden and the UK). Influenza A virus was detected in 150 cases and influenza B virus in two patients. Of those hospitalised cases, 71 were admitted to intensive care units (ICU).

Since week 40/2013, seven countries have reported 3 945 hospitalised, laboratory-confirmed influenza cases: 3 904 (99%) were related to influenza virus type A infection and 41 (1%) to type B virus infection. Of 2 654 subtyped influenza A viruses, 1 982 (75%) were A(H1)pdm09 and 672 (25%) were A(H3). A higher proportion of A(H1)pdm09 viruses has been detected in patients in ICUs (1 111 out of 1 300 subtyped, 86%) than in patients in other wards (871 out of 1 354 subtyped, 64%). The reasons behind the different distribution of (sub)types in various ward types are currently unknown.

Of the 3 292 hospitalised cases with reported age, 1 235 (38%) were 40–64 years and 1 194 (36%) were over 64 years, the same distribution as in the previous week.

Five countries reported a total of 324 fatal cases. Of these, 321 (99%) cases were associated with influenza virus type A infection and three (1%) with type B virus. Of 247 influenza A viruses subtyped from fatal cases, 200 (81%) were A(H1)pdm09 and 47 (19%) were A(H3). The age was reported for 321 of the fatal cases: 180 (56%) were 65 years and above.

• <u>United States of America</u> 21 March 2014 (Centre for Disease Control report)

During week 11 (March 9-15, 2014), influenza activity continued to decrease in the United States.

Nationwide during week 11, 1.7% 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 11, 7.1% of all deaths reported through the 122 Cities Mortality Reporting System were due to P&I. This percentage was below the epidemic threshold of 7.4% for week 11. Seven influenza-associated pediatric deaths were reported to CDC during week 11. One death was associated with a 2009 H1N1 virus and occurred during week 10 (week ending March 8, 2014) and five deaths were associated with an influenza A virus for which no subtyping was performed and occurred during weeks 49, 8, and 9 (weeks ending December 7, 2013, February 22 and March 1, 2014). One death was associated with an influenza B virus and occurred during week 10 (week ending March 8, 2014). A total of 75 influenza-associated pediatric deaths have been reported during the 2013-2014 season from Chicago [1], New York City [1] 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 [2]; SC [2]; TN [4]; TX [14]; UT [2]; VA [1]; WI [2]; and WV [2]).

Of 5,650 specimens tested and reported during week 11 by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories, 495 (8.8%) were positive for influenza. By type, 341 (68.9%) were influenza A (146 (42.8%) A(H1N1)pdm09, 149 subtyping not performed and 46 (13.5%) A(H3)) and 154 (31.3%) were influenza B.

• <u>Canada</u> 21 March 2014 (Public Health Agency report)

In week 11, influenza activity levels increased slightly. One region in Quebec reported widespread activity and nine regions (BC(1), ON(5), and QC(3)) reported localized activity. The national influenza-like-illness (ILI) consultation rate decreased from 36.9/1,000 in week 10 to 31.2/1,000 in week 11; and was below the expected range for week 11. In week 11, 22 new laboratory-confirmed influenza-associated paediatric (\leq 16 years of age) hospitalizations were reported by the Immunization Monitoring Program Active (IMPACT) network, compared to 38 in week 10. In keeping with the increased circulation of influenza B, influenza B was reported in 12 of the 22 cases in week 11. 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. In week 11, one ICU admission was reported in a child 6-23 months of age with influenza A(unsubtyped). No deaths were reported in week 11.

• <u>Global influenza update</u> 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, despit 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 Februrary. 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 20 March 2014 (WHO website)

Influenza A(H7N9)

In the past week, five new hospitalised cases of human infection with influenza A(H7N9) in China have been reported by <u>WHO</u>. 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 <u>WHO</u> from 15 countries, of which 385 (59%) died.

• Novel coronavirus 26 March 2014

Up to 26 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 <u>200 cases</u>, 85 of which have died (case fatality ratio=43%). 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 <u>online</u>.

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

- <u>Sentinel schemes operating across the UK</u>
- <u>RCGP scheme</u>
- Northern Ireland surveillance (Public Health Agency)
- Scotland surveillance (<u>Health Protection Scotland</u>)
- Wales surveillance (<u>Public Health Wales</u>)
- Real time syndromic surveillance
- MEM threshold paper

Community surveillance

- Outbreak reporting
- FluSurvey
- <u>MOSA</u>

Disease severity and mortality data

- USISS system
- <u>EuroMOMO</u> mortality project

Vaccination

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

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