

Summary

- Pandemic influenza activity is decreasing across the UK.
- In week 53 (ending 03 January), the weekly influenza/influenza-like illness (ILI) consultation rate decreased in England and Scotland and increased slightly in Northern Ireland and Wales
- The [National Pandemic Flu Service](#) (NPFS) continues to issue antiviral drugs to people in England with an influenza-like illness who call or log onto the internet site. The number of assessments and antiviral collections through this service have remained stable over the past two weeks.
- The increase in respiratory syncytial virus detections observed in recent weeks has slowed and may be declining.
- The main influenza virus circulating in the UK continues to be the pandemic (H1N1) 2009 strain, with few influenza H1 (non-pandemic), H3 and B viruses detected. Thirty-three of 4,640 pandemic viruses tested have been confirmed to carry a mutation which confers resistance to the antiviral drug oseltamivir; three are phenotypically resistant to the drug but retain sensitivity to zanamivir.
- The majority of pandemic influenza cases continue to be mild. The cumulative number of deaths reported due to pandemic (H1N1) 2009 in the UK is 355. There were a total of 584 new patients hospitalised in England with suspected pandemic influenza in the week from 31 December to 06 January. The weekly hospitalisation rates have decreased in most age groups.
- The UK pandemic influenza vaccination programme continues for people at high risk for severe disease, health-care workers and healthy children aged between 6 months and 5 years. For further information see the [Department of Health website](#).
- According to the European Centre for Disease Prevention and Control, by 05 January, 13,324 deaths due to pandemic influenza had been reported globally. According to the World Health Organisation (30 December), pandemic influenza transmission continues in many parts of the world though is declining and has passed its peak except in some focal areas.

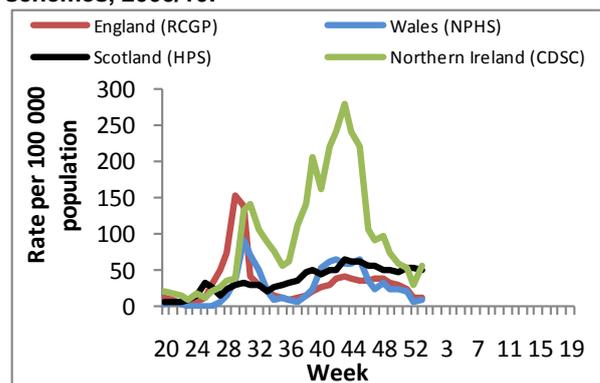
Weekly consultation rates in national sentinel influenza schemes

The National Pandemic Flu Service (NPFS) became operational in England on Thursday 23 July at 15.00. The service issues antiviral drugs to people with an influenza-like illness who do not fall into a specified risk group (e.g. aged less than 1 year, pregnant or with a high-risk underlying medical condition). According to [FluSurvey](#), an internet-based monitoring system for influenza surveillance which relies on members of the public reporting their health status weekly, the proportion of participants with influenza-like illness who reported that they contacted their GP fell after NPFS was launched. This will have affected GP consultation rates from week 30 onwards. The under 1 year olds are the only age group that are not assessed by NPFS and will always be referred to the health service. NPFS is currently not operational in Northern Ireland, Scotland and Wales.

In week 53 (ending 03 January), the weekly influenza/influenza-like illness (ILI) consultation rate decreased in England and Scotland and increased slightly in Northern Ireland and Wales (table 1, figures 1 and 2).

The overall RCGP (England and Wales) ILI consultation rate decreased to 11.2 per 100,000, which is below the winter baseline activity threshold of 30 per 100,000. The rate has decreased in the south, though increased slightly in the northern and central regions.

Figure 1: GP weekly consultation rates for influenza/ILI in the UK national sentinel influenza schemes, 2009/10.



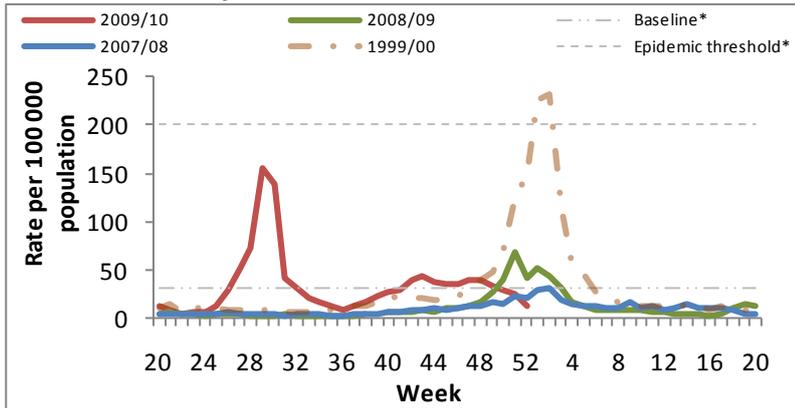
The combined influenza/ILI rate in Northern Ireland has increased though remains below the threshold of 70 per 100,000. The ILI rate in Scotland has decreased slightly to just above the baseline threshold of 50 per 100,000. The Welsh influenza rate has increased slightly but stays below the baseline threshold of 25 per 100,000. The weekly ILI QSurveillance rate decreased.

Table 1: UK GP weekly consultation rates for influenza/ILI

Week Number	Week-ending date	Clinical rate per 100,000				
		Baseline	50	51	52	53
RCGP (E & W)		30	29.7	24.7	12.7	11.2
RCGP North		30	19.8	16.8	5.0	9.1
RCGP Central		30	33.1	33.3	9.1	15.1
RCGP South		30	31.0	22.6	17.6	9.5
Northern Ireland		70*	60.3	54.2	30.6	57.2
Scotland		50	48.7	53.9	52.3	51.4
Wales		25	22.7	20.28	7.5	9.9
QSurveillance® (UK**)		N/A	33.8	29.3	16.4	13.3

*Provisional threshold defined in September 2009; ** based on data from 43% of England's population, 10% of the population in Wales, 17% in Northern Ireland and 0% in Scotland.

Figure 2: RCGP weekly consultation rate for influenza-like illness 2009/10 and recent years

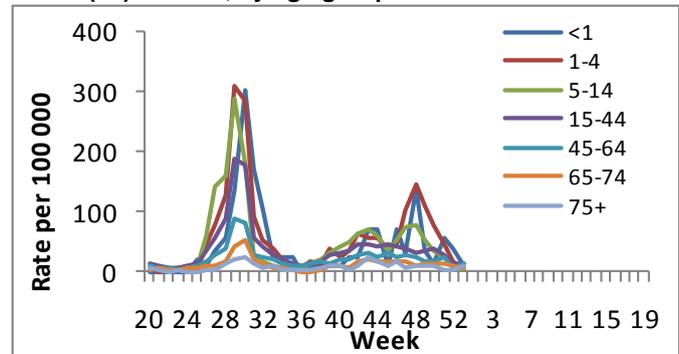


* Baseline threshold: under 30 per 100,000; epidemic threshold: over 200 per 100,000. NB. As week 53 appears in 2009 but not in previous years the figure for week 52 in this graph is an average of week 52 and week 53 data.

The consultation rates in the RCGP scheme have decreased in many age groups; the highest rates were in the 15-44 age group (13.3 per 100,000) and the 45-64 year age group (13 per 100,000). Rates decreased in most age groups in the QSurveillance® scheme with the highest rate in the <1 year group (decreased from 40.1 to 26.4 per 100,000), followed by the 1-4 year group (decreased from 45.6 to 22.2 per 100,000). In Wales, the rates decreased in some age groups. The highest rate was in adults aged 25-34 years at 18.8 per 100,000,

followed by the 45-64 year age group at 13.6 per 100,000. In Northern Ireland, the rates increased in almost all age groups with the greatest increase, and highest rate, in the 1-4 year olds. In Scotland, the rates increased in children and adults aged over 75 years. The highest rates were in under-1 year olds and 1-4 year olds (188.5 per 100,000 and 175.7 per 100,000 respectively).

Figure 3: RCGP weekly consultation rate for influenza-like illness (ILI) 2009/10, by age group



For further information on the different schemes, including why differences are seen between the four countries, please see [Interpreting the HPA National Weekly report](#).

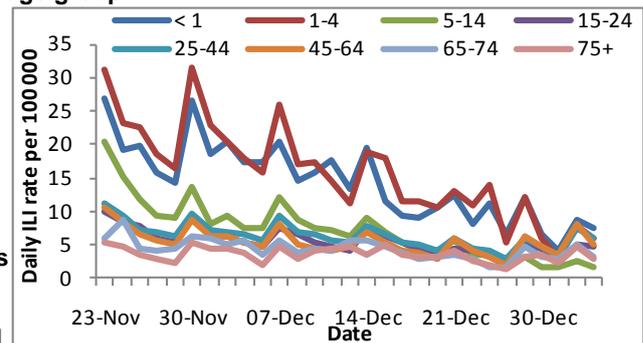
Enhanced Daily & Weekly Syndromic Surveillance (<http://www.hpa.org.uk/hpr/infections/primarycare.htm>)

QSurveillance®

The GP consultation rates are likely to have been affected by the introduction of the National Pandemic Flu Service on 23 July.

The daily GP ILI consultation rate on Tuesday 05 January was 4.6 per 100,000, a decrease from 5.6 per 100,000 on Tuesday 29 December. The highest rates are still in children; <1 year-olds (7.6 per 100,000) and 1-4 year-olds (5.9 per 100,000) (figure 4).

Figure 4: Daily consultation rates for influenza-like illness from QSurveillance®, November 2009 – January 2010, by age group

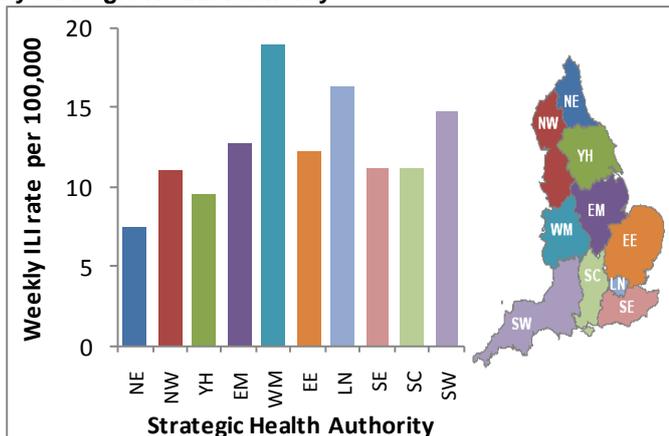


*Based on data from 43% of England's population, 10% if the population in Wales, 17% in Northern Ireland and 0% in Scotland.

Daily rates in all English SHAs are at levels equivalent to estimated rates corresponding to 'baseline activity' or 'normal seasonal influenza' activity. The highest weekly rates are in the West Midlands, London and South West SHAs (figure 5).

Daily consultation rates for pneumonia from QSurveillance® are at slightly higher levels than in recent weeks but are within expected levels for this time of year.

Figure 5: Weekly consultation rates for influenza-like illness (ILI) from QSurveillance®, Week 53 (ending 03 January 10) by Strategic Health Authority



National Pandemic Flu Service (NPFS)

[The National Pandemic Flu Service \(NPFS\)](#) became operational in England at 15.00 on 23 July 2009. In the last week, the overall number of collections of antivirals has stayed stable. (figure 6).

There was an increase in some regions, with the largest increases in Yorkshire and the Humber and the North east region (figure 7). Decreases were observed in children aged under 14 years and slight increases in older age groups (figure 8).

Figure 6: Weekly number of assessments and antivirals issued and collected, through NPFS (England)

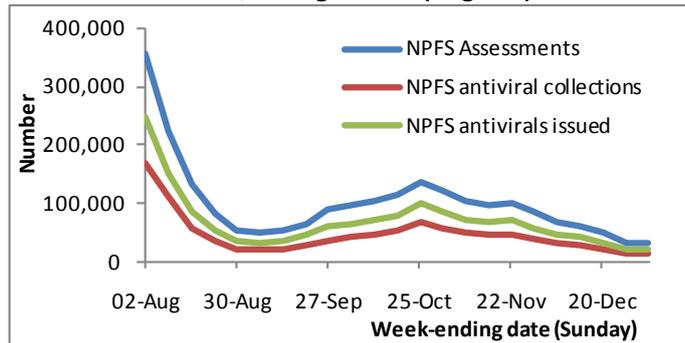


Figure 7: Weekly rate (per 100,000) of antivirals collected through NPFS, by SHA

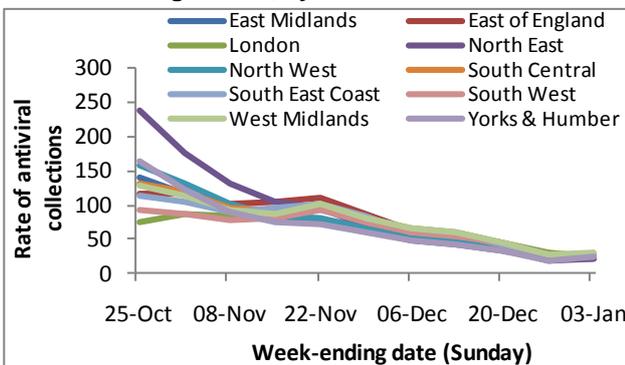
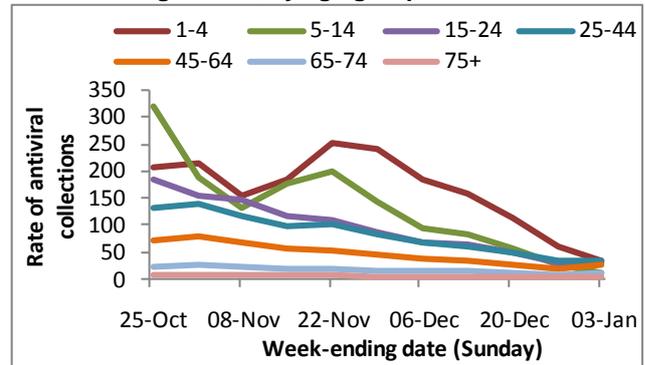


Figure 8: Weekly rate (per 100,000) of antivirals collected through NPFS, by age group



Microbiological surveillance

The predominant influenza strain circulating is still the pandemic H1N1 2009. Detection of respiratory syncytial virus (RSV) through sentinel and non-sentinel surveillance has decreased or remained stable in the last week (table 2 and figure 10). In the last two weeks, 17 other (non-influenza) viruses have been detected through the HPA/RMN GP-based sentinel surveillance scheme; six RSV, three rhinovirus, five adenovirus and three hMPV.

Eight seasonal influenza A (H3) viruses received between 01 September and 11 October have been characterised at the Respiratory Virus Unit (RVU), as A/Perth/16/2009-like, which is not one of the northern hemisphere 2009/10 seasonal influenza vaccination strains (it is a component of the 2010 southern hemisphere influenza vaccine). Two further H3 viruses were detected in December 2009.

Table 2: Number of other respiratory viruses reported from HPA and NHS laboratories in England and Wales by week of report

	Week 50	Week 51	Week 52	Week 53
Week-ending	13-Dec	20-Dec	27-Dec	04-Jan
Influenza B	0	0	2	2
Adenovirus	51	36	74	34
Parainfluenza	37	24	28	19
Rhinovirus	173	116	159	153
RSV	807	761	1004	744

Table 3: Number of laboratory confirmed cases of pandemic influenza A (H1N1) 2009 in the UK

Country	Number of lab-confirmed cases
England	19,995
Northern Ireland	1,355
Scotland	6,450
Wales	656
Total UK	28,456

There have now been 28,456 laboratory confirmed cases of pandemic (H1N1) 2009 in the UK since the beginning of the pandemic (table 3). There has been a decrease in the number of laboratory confirmed cases since the UK went to treatment only phase on 02 July.

In addition, there have been 722 cumulative confirmed cases reported from the UK Overseas Territories and Crown Dependencies: Anguilla (14), Bermuda (10), British Virgin Islands (25), Cayman Islands (121 – and one death), The Falklands (7 – and one death), Gibraltar (62), Guernsey (17), Isle of Man (75), Jersey (234), Montserrat (21), Sovereign Base Area Cyprus (92), Turks and Caicos Islands (44).

Enhanced Virological Community and Primary Care Surveillance

In England three schemes for virological surveillance of influenza are being used: two GP-based (RCGP/HPA and HPA/RMN) and one through NPFS (previous through NHS Direct). Schemes through primary care are also used in Wales, Scotland and Northern Ireland. It is important to note that samples taken in recent weeks may still be awaiting processing so these data should be treated with caution. More details on these schemes can be read at ['Interpreting the HPA National Weekly Influenza Report'](#).

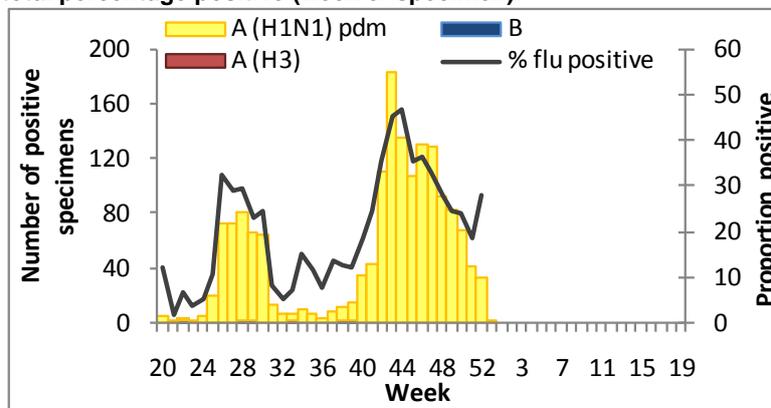
Fewer specimens were tested in weeks 52 and 53 and during the holiday period consultation behaviour may change, so comments on trend are inappropriate (table 4, figure 9). The highest rates continue to be in children and young adults (table 5).

Table 4: Total number of samples tested and positive for pandemic influenza A (H1N1) 2009 from sentinel virological schemes in England (GP and NPFS), Wales, Scotland and Northern Ireland by week*

Week	England (GP)			England (NPFS)			Wales (GP)			Scotland (GP)			N. Ireland (GP)		
	Total tested	Pandemic n	%	Total tested	Pandemic n	%	Total tested	Pandemic n	%	Total tested	Pandemic n	%	Total tested	Pandemic n	%
44	290	136	46.9	522	169	32.4	25	10	40.0	446	192	43.0	41	34	82.9
45	306	108	35.3	692	185	26.7	8	2	25.0	508	236	46.5	59	27	45.8
46	358	131	36.6	728	213	29.3	14	4	28.6	513	197	38.4	62	27	43.5
47	392	129	32.9	790	183	23.2	12	3	25.0	520	210	40.4	42	12	28.6
48	333	93	27.9	754	112	14.9	10	1	10.0	393	112	28.5	41	11	26.8
49	342	83	24.3	699	76	10.9	14	2	14.3	315	72	22.9	11	2	18.2
50	279	67	24.0	662	58	8.8	3	0	0.0	242	51	21.1	51	3	5.9
51	224	41	18.3	415	26	6.3	17	1	5.9	175	21	12.0	25	1	4.0
52	115	32	27.8	17	0	0.0	4	1	25.0	66	16	24.2	8	1	12.5
53	6	2	---	---	---	---	0	0	0.0	31	6	19.4	13	1	7.7

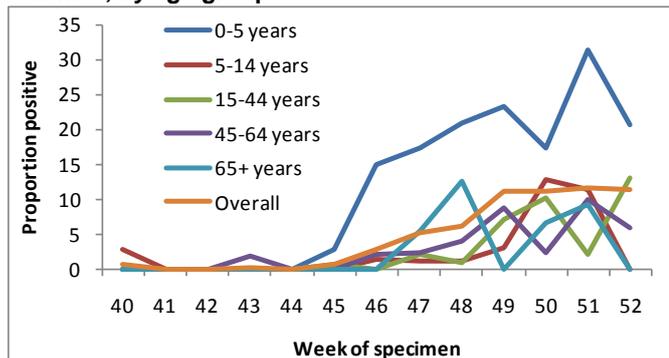
* All data are based on week of specimen, except for Northern Ireland which is by week of report; sampling of 5-15 year-olds through NPFS started in week 46.

Figure 9: The number of samples testing positive for influenza in the two GP-based English sentinel virological schemes by subtype and week, with the total percentage positive (week of specimen)



NB. Data for the most recent weeks are subject to change due to reporting lag; proportion positive omitted if fewer than 10 specimens tested in one week.

Figure 10: Proportion of samples testing positive for RSV through the two GP-based England sentinel virological schemes, by age group



NB. Data for most recent week omitted due to reporting lag

Table 5: Total number of samples tested and positive for pandemic influenza A (H1N1) 2009 from England sentinel virological schemes for the latest four weeks by age group

Age Group	England (GP)		England (NPFS)*	
	Total tested	Pandemic n %	Total tested	Pandemic n %
<5	159	25 15.7	not tested	
5-14	117	44 37.6	831	125 15.0
15-24	72	24 33.3	215	9 4.2
25-44	159	33 20.8	436	16 3.7
45-56	82	14 17.1	267	10 3.7
65+	31	1 3.2	44	0 0.0

NB. Children aged under 5 are not sampled through the NPFS scheme; NPFS data are for weeks 49-52 as no data are available for week 53.

Antiviral susceptibility

Testing for antiviral susceptibility is carried out at the Respiratory Virus Unit, Centre for Infections, Colindale. Since the beginning of the pandemic a total of 4,640 pandemic influenza viruses have been analysed for the marker commonly associated with resistance to oseltamivir in seasonal influenza (H275Y); a total

of 33 samples have been found to carry this mutation in the UK. Of these 4,640 viruses, 293 have been fully tested for susceptibility; 3 of the 33 viruses carrying the H275Y mutation have been confirmed to be phenotypically resistant to oseltamivir whilst retaining sensitivity to zanamivir. Information on medical history was available for 25 cases, 23 of whom had an underlying medical condition: 18 were immunosuppressed and five had another underlying illnesses. Probable person to person transmission has occurred in an outbreak in a hospital ward. Pandemic influenza samples have been tested for resistance from all regions and age groups in the UK (tables 6 and 7).

Table 6: Pandemic influenza tested for antiviral susceptibility at RVU, by test method, source and age group

Age Group	Samples tested for Resistance				Proportion resistant
	Screened for H275Y mutation		Fully tested		
	Hospital	Community	Hospital	Community	
<1	196	7	8	1	0%
1-4	360	34	11	1	1.02%
5-14	944	268	62	27	0%
15-44	789	153	60	9	0.21%
45-64	882	182	58	7	0.47%
65-74	563	65	26	4	2.07%
75+	118	3	5	0	4%
Unknown	74	2	13	1	1%
Total	3926	714	243	50	0.71%

NB. Figures may fluctuate due to de-duplication and correction of database.

Table 7: Pandemic influenza samples tested for antiviral susceptibility at RVU, by test method, source and region

Region	Samples tested for Resistance				Proportion resistant
	Screened for H275Y mutation		Fully tested		
	Hospital	Community	Hospital	Community	
East of England	87	56	21	3	1%
East Midlands	468	53	11	4	0.77%
London	320	257	47	19	0.69%
North East	103	22	7	1	1%
North West	504	30	17	1	0.75%
South East	153	93	54	10	0%
South West	505	50	6	1	0%
West Midlands	136	99	42	7	0.43%
Yorkshire and Humber	608	31	15	1	0%
Ireland	8	0	7	0	0%
Northern Ireland	58	0	0	0	0%
Scotland	819	18	14	1	0.84%
Wales	44	0	0	0	18%
Unknown Region	113	5	2	2	0%
Total	3926	714	243	50	0.71%

NB. Figures may fluctuate due to de-duplication and correction of the database.

Antimicrobial susceptibility

Bacterial susceptibility to antimicrobial agents is monitored by the HPA for lower respiratory tract isolates of *Staphylococcus aureus*, *Streptococcus pneumoniae* and *Haemophilus influenzae*. Guidelines for clinical management of patients with an influenza-like illness during an influenza pandemic (W S Lim, Thorax 2007;62;1-46, section 8.1.3) recommend co-amoxiclav or a tetracycline for treating bacterial pneumonia in a primary care setting. There have been no significant changes to susceptibility trends for these two antibiotics in recent years and no appreciable changes in resistant patterns in the twelve weeks before 27 December 2009. Over 89% of all isolates of the three organisms are susceptible to tetracyclines (table 8).

Table 8: Bacterial specimens tested for susceptibility to tetracyclines and co-amoxiclav in HPA/NHS labs in England, Wales and Northern Ireland for 12 weeks up to 27 December 2009

Organism	Tetracyclines		Co-amoxiclav	
	Specimens tested (N)	Specimens susceptible (%)	Specimens tested (N)	Specimens susceptible (%)
S. aureus	2,120	93	382	81
S. pneumoniae	1,742	89	1616*	94*
H. influenzae	5,533	99	5,111	92

* *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 β -lactams such as co-amoxiclav.

Disease severity and mortality data

Disease severity continues to be monitored. HPA receives data on hospitalisation and deaths due to pandemic influenza in England from the Department of Health; it should be noted that the hospitalisations are current, not cumulative, and are for suspected pandemic influenza rather than virologically confirmed infection. Historical data for hospitalisation for influenza-like illness are not available for comparison. Data are also provided by the relevant bodies in Scotland, Wales and Northern Ireland.

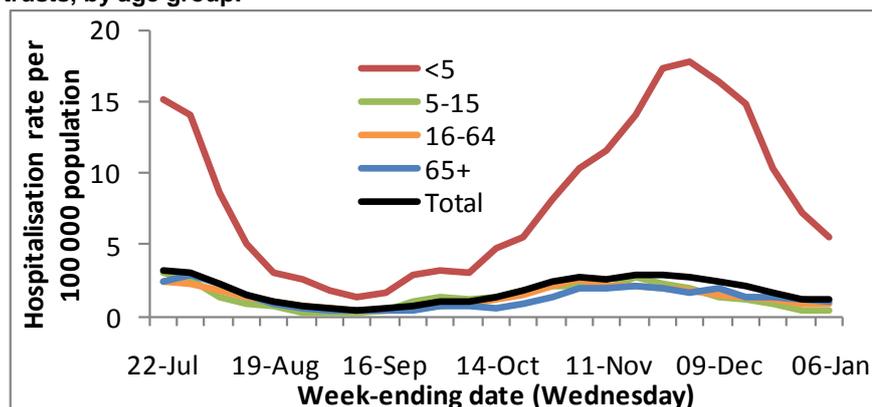
In England, on 06 January 2010 there were 393 hospitalised patients with suspected pandemic influenza, which has decreased from 496, seven days previously. Of the 393, 103 (26.2%) were in intensive care and 96 were newly hospitalised in the 24 hours up to 8am. In the week from Thursday 31 December to Wednesday 06 January, 584 new patients were hospitalised with suspected pandemic influenza corresponding to a rate of 1.2 per 100,000 population, which is similar to the previous week (table 9).

Table 9: Inpatients with suspected pandemic influenza in England, up to 06 January 2009.

Patients hospitalised	Number (rate per 100,000* population)				Total
	<5	5-15	16-64	65+	
Currently as at 8am 06 Jan	78 (2.6)	12 (0.2)	225 (0.7)	78 (1)	393 (0.8)
Currently in ICU (8am 06 Jan)	13 (0.4)	1 (0)	63 (0.2)	26 (0.3)	103 (0.2)
New in 24 hrs up to 8am 06 Jan	29 (1)	3 (0)	46 (0.1)	18 (0.2)	96 (0.2)
New in week 17 Dec - 23 Dec	304 (10.3)	62 (0.9)	371 (1.1)	115 (1.4)	852 (1.7)
New in week 24 Dec - 30 Dec	213 (7.2)	29 (0.4)	275 (0.8)	91 (1.1)	608 (1.2)
New in week 31 Dec - 06 Jan	164 (5.5)	26 (0.4)	305 (0.9)	89 (1.1)	584 (1.2)

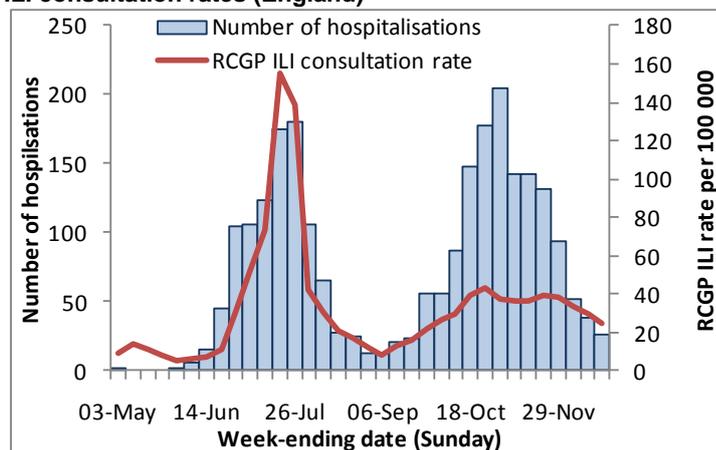
The highest hospitalisation rate has consistently been in those aged under 5 years; though the weekly rate has decreased in this age group in the last few weeks. The rate has remained stable in the 5-15 and 65+ year-olds in the last week, and increased slightly in the 16-64 year-olds (figure 11).

Figure 11: Weekly (up to 8am Wednesday) rates (per 100,000) of new admissions to hospital with suspected pandemic influenza in all English NHS trusts, by age group.



A web-based surveillance system for confirmed cases of pandemic (H1N1) 2009 influenza in England was established by HPA/DH after the end of the first wave in August 2009 to collect data prospectively on all cases hospitalised with confirmed pandemic influenza. All cases reported during the first wave were also retrospectively added to the database. As this is a voluntary scheme, ascertainment of cases may not be complete.

Figure 12: Hospitalised cases with confirmed pandemic (H1N1) 2009 influenza infection by week of admission* and weekly GP ILI consultation rates (England)



* Most recent weeks omitted due to reporting lag

A total of 2,427 laboratory confirmed cases have been reported as hospitalised in England to 05 January 2010 (figure 12). The majority (60%) of cases were aged 5 to 44 years and 52% of cases were female.

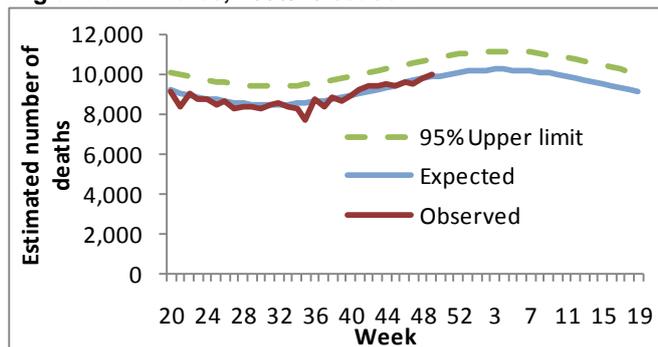
In Scotland there have been 1,482 cumulative hospitalisations of patients with confirmed pandemic influenza, 444 in Wales and 577 in Northern Ireland.

Three hundred and fifty-five deaths (251 in England, 60 in Scotland, 16 in Northern Ireland and 28 in Wales) have been reported in the UK in people with pandemic (H1N1) 2009 infection.

HPA receives weekly death registrations from the Office for National Statistics. In week 50, an estimated 9,962 all-cause deaths were registered, which is a slight increase compared to 9,794 in week 49 (figure 13).

The weekly number is in the expected range for this time of year and no excess all-cause death registrations have been observed since February 2009. It should be noted that these deaths are due to all causes, so any excess cannot necessarily be attributed to influenza.

Figure 13: Estimated weekly all-cause death registrations in England and Wales, 2009/10 season



International Situation

WHO reported on 30 December that for:

- **North America:** influenza transmission remains widespread in North America but has declined substantially in all countries.
- **Europe:** the most active areas of pandemic influenza transmission are in central and eastern Europe. There is a high intensity of respiratory diseases with concurrent circulation of pandemic influenza persisting in parts of southern and eastern Europe, while in western Europe, influenza transmission remains active and widespread, but overall disease activity has peaked.
- **Central and western Asia:** In central Asia, limited data suggest that influenza virus circulation remains active, but transmission may have recently peaked in some places. In western Asia, Israel, Iran, Iraq, Oman, and Afghanistan also appear to have passed their peak period of transmission within the past month, though both areas continue to have some active transmission and levels of respiratory disease activity have not yet returned to baseline levels.
- **Eastern and southern Asia:** In eastern Asia, influenza transmission remains active but appears to be declining overall. Influenza/ILI activity continues to decline in Japan, in northern and southern China, Chinese Taipei, and Hong Kong SAR (China). Slight increases in ILI were reported in Mongolia after weeks of declining activity following a large peak of activity over one month ago. In southern Asia, influenza activity continues to be intense, particularly in northern India, Nepal, and Sri Lanka. Seasonal influenza A (H3N2) viruses are still being detected in very small numbers in China (approx 2.5% of influenza A viruses detected).
- **Tropical regions:** In the tropical regions of Central and South America and the Caribbean, influenza transmission remains geographically widespread but overall disease activity has been declining or remains unchanged, except for focal increases in respiratory disease activity in a few countries.
- **Temperate southern hemisphere region:** sporadic cases of pandemic influenza continue to be reported without evidence of sustained community transmission.

Virology

Pandemic (H1N1) influenza virus accounted for 87% of all influenza detections worldwide in the week 13 – 19 December 09 (compared to 91% reported in the previous week). Other influenza viruses detected worldwide during this week included: influenza A H3 (1.6%), seasonal A H1 (0.2%), A not subtyped (7.7%), and B (3.4%). Worldwide, more than 15,000 clinical specimens (samples and isolates) of the pandemic H1N1 virus have been tested and found to be sensitive to oseltamivir. One hundred and sixty eight isolates of oseltamivir resistant influenza virus have been reported to the WHO, all of which carry the same H275Y mutation that confers resistance to the antiviral oseltamivir but not to the antiviral zanamivir. WHO, through the Global Influenza Surveillance Network (GISN), continues to monitor the evolution and global circulation of influenza viruses, including pandemic, seasonal and other influenza viruses infecting, or with the potential to infect humans.

Source: WHO http://www.who.int/csr/don/2009_12_30/en/index.html

Confirmed global deaths

The total number of deaths attributed to pandemic influenza continues to increase. As of 5 January 2010, 13,324 deaths have been reported globally, an increase of 4.3% compared to last week (12,776 reported on 29 December 2009).

Source: ECDC update 5 January 2010:

http://ecdc.europa.eu/en/healthtopics/Documents/100105_Influenza_AH1N1_Situation_Report_0900hrs.pdf

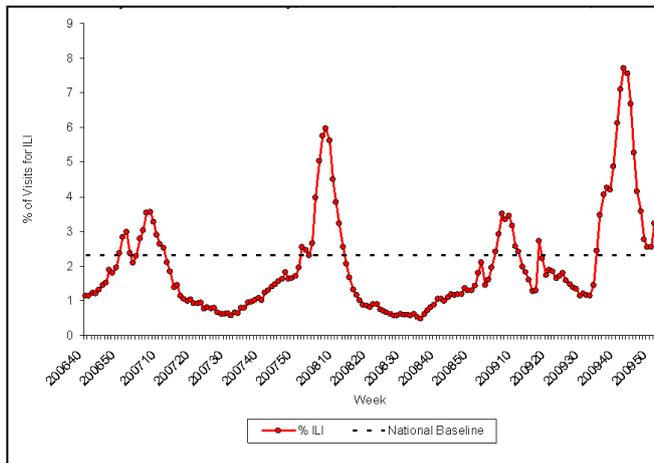
USA

During week 51 (20 - 26 December 2009), the proportion of outpatient visits for influenza-like illness (ILI) was 3.2%, a slight increase compared to the previous week. Two out of 10 regions reported ILI below region-specific baseline levels. Four states reported geographically widespread influenza activity, 13 states reported regional influenza activity, 19 states, the District of Columbia and Puerto Rico reported local influenza activity, 13 states and Guam reported sporadic influenza activity, and one state reported no influenza activity; the U.S. Virgin Islands did not report.

The proportion of deaths attributed to pneumonia and influenza (7.7%) was above the epidemic threshold for week 51 (7.4%). Four influenza-associated paediatric deaths were reported in week 51, two associated with 2009 influenza A (H1N1) and two with influenza A with subtype undetermined.

All subtyped influenza A viruses being reported to CDC in week 51 were 2009 influenza A (H1N1) viruses. Fifty cases of oseltamivir resistant 2009 influenza A (H1N1) have been detected in the US (four in week 51) since April 2009, all of which remained sensitive to zanamivir. Thirty-four were known to have had oseltamivir prophylaxis or treatment, two patients had no documented oseltamivir exposure, and 14 cases are still under investigation.

Figure 14: Percentage of visits for influenza-like illness (ILI) reported by the US Outpatient Influenza-like Illness Surveillance Network (ILINet), weekly national summary, 1 October 2006 – 26 December 2009.



CDC has antigenically characterised 658 influenza A (H1N1) 2009 viruses collected since September 1, 2009. Six hundred and fifty-six (99.7%) of the 658 influenza A (H1N1) 2009 viruses tested are related to the A/California/07/2009 (H1N1) reference virus selected by WHO as the 2009 H1N1 vaccine virus and two viruses (0.3%) tested showed a reduced titre with antiserum produced against A/California/07/2009.

Source: CDC <http://www.cdc.gov/flu/weekly/>

Canada

Latest data available from Canada is for week 50 (13 - 19 December 2009). During this week overall influenza activity continued to decrease for the fifth consecutive week. The national ILI consultation rate was 20 consultations per 1,000, below the expected range for this time of year. This week saw a continued reduction in the number of hospitalisations (79 vs. 159) and deaths (11 vs. 21) compared to week 49. The pandemic H1N1 2009 strain still accounted for nearly 100% of positive influenza A subtyped specimens during week 50.

Source: Public Health Agency of Canada <http://www.phac-aspc.gc.ca/fluwatch/09-10/index-eng.php>

Europe

As of week 52 (21 - 27 December 09), clinical respiratory disease activity declined over the past three weeks in 16 countries in the WHO European Region. However four of these 16 countries (Poland, Portugal, Switzerland, and UK) tested at least 20 sentinel specimens for influenza during this week 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. The increase in clinical consultation rates reported during week 51/2009 in Georgia and Montenegro have not continued. 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.

Pandemic (H1N1) influenza virus accounted for 96% of all influenza detections in Europe in week 52 (compared to 94% reported in the previous week). Antigenic characterisation has been carried out for 799 influenza viruses reported from week 40 to week 51/2009, of which 792 were pandemic A (H1N1), A/California/7/2009-like, two were A(H3) A/Brisbane/10/2007 (H3N2)-like, three were A/Perth/16/2009 (H3N2)-like, one was A/Brisbane/59/2007 (H1N1)-like and one was B/Brisbane/60/2008-like. 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) have been found to be zanamivir-sensitive and all viruses tested for resistance to adamantanes (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.

Source: EuroFlu Weekly Electronic Bulletin, week 52, 21 - 27 December 09 http://www.euroflu.org/cgi-files/bulletin_v2.cgi

China (Hong Kong)

The Centre for Health Protection of the Department of Health, Hong Kong, China is investigating a case of influenza caused by the avian strain of influenza A H9N2. The case is a 35 month girl who became ill in November with cough, later developing a fever. She was clinically diagnosed with pneumonia and an ear infection until laboratory testing confirmed avian influenza A H9N2 on 23 December 2009. Tests were negative for influenza A H1N1 2009. So far no contact with birds has been ascertained but epidemiological investigations are continuing.

This is the seventh time that H9 viruses have been found in humans in Hong Kong. Five females and one male were confirmed to have suffered from H9 infection in 1999, 2003, 2007, 2008 and 2009. Influenza A (H9) is an avian influenza virus which has been isolated from ducks and chickens for many years. Infection in humans is rare, and appears to present as a mild disease.

Source: World Health Organization and Centre for Health Protection of the Department for Health, Hong Kong, China <http://www.dh.gov.hk/textonly/english/press/2009/091223-3.html>.

Acknowledgements

This report was prepared by Estelle McLean, Jo Lawrence and Richard Pebody. We are grateful to all who provided data for this report including the RCGP Research and Surveillance Centre, the HPA Real-time Syndromic Surveillance team, the HPA Respiratory Virus Unit, the HPA Modelling and Statistics unit, the HPA Travel and Migrant Health section, regional microbiology laboratories, QSurveillance®, NPFS, ONS, the Department of Health, Health Protection Scotland, National Public Health Service (Wales) and the CDSC Northern Ireland.

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