

Summary

- In week 29 (week ending 19 July), GP consultation rates for influenza and influenza-like illness continued to increase in all GP sentinel schemes across the UK. Rates in England and Wales are above the baseline threshold for normal seasonal flu activity and are higher than those observed at the peak of the 08/09 winter. Rates in Scotland remain below baseline levels. In Northern Ireland thresholds have not been set though rates remain relatively low compared to winter levels.
- GP consultation rates for ILI are now high in all English regions indicating that influenza activity is widespread.
- Daily calls to NHS Direct relating to colds/flu have decreased but remain at high levels.
- Children and young adults remain those predominately affected, though increases were observed in all age groups.
- 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 through sentinel and non-sentinel surveillance. No antiviral resistant strains have been detected in the UK.
- 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 30. There are currently 80 inpatients in hospitals in England with suspected pandemic influenza.
- [National pandemic flu response](#) telephone and internet service opened on 23 July.
- According to the European Centre for Disease Prevention and Control (ECDC), by 22 July, 146,738 laboratory confirmed cases of pandemic influenza (H1N1) had been reported globally with 850 deaths. In Europe, levels of influenza activity remain low in most countries.

Weekly consultation rates in national sentinel influenza schemes

In week 29 the weekly consultation rates have increased in all GP sentinel schemes across the UK (Table 1, Figures 1 and 2). In England the overall RCGP consultation rate remains above the threshold of 30 per 100,000 and is double the rate seen in the previous week. The influenza rate in Wales has breached the baseline threshold (25 per 100,000) for the first time since the 1999/2000 season. Rates for Scotland remain below threshold levels. The rate in Northern Ireland has increased but remains at low levels compared to the previous winter. The weekly QSurveillance rate has more than doubled to 221.4 per 100,000; thresholds have not yet been set.

In England, rates have increased in all three regions, with the largest increase seen in the north (37.2 per 100,000 in week 28 to 126.1 per 100,000 in week 29). The highest rates in the QSurveillance scheme were in London, West Midlands and East Midlands.

The highest age-specific consultation rates for the RCGP and QSurveillance schemes were in the 1-4 (311.1 per 100,000 and 407.4 per 100,000 respectively) and 5-14 year-olds (290.3 per 100,000 and 541.2 per 100,000 respectively). In Wales the highest rate was in the 15-24 year group (66.7 per 100,000) and in Northern Ireland it was highest in the 45-64 year age group (50.7 per 100,000). Age-specific rates were not available for Scotland.

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

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

Scheme / Country	Baseline Threshold (per 100,000)	Clinical rate per 100,000				
		Week 25	Week 26	Week 27	Week 28	Week 29
RCGP (England & Wales)	30	11.2	29.6	51.9	73.4	155.3
RCGP North	30	6.3	6.8	6.8	37.2	126.1
RCGP Central	30	13.3	27.7	40.9	93.9	171.9
RCGP South	30	12	39.4	77.6	74.9	155.3
Northern Ireland	N/A	12.7	20.5	25.4	34.9	40.1
Scotland	50	32	27	15	25	29.9
Wales	25	1.7	1.43	5.1	15.8	36
QSurveillance® (UK*)	N/A	8.9	17.4	30.4	86.8	221.4

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

HPA Weekly National Influenza Report

23 July 2009 (Week 30)

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

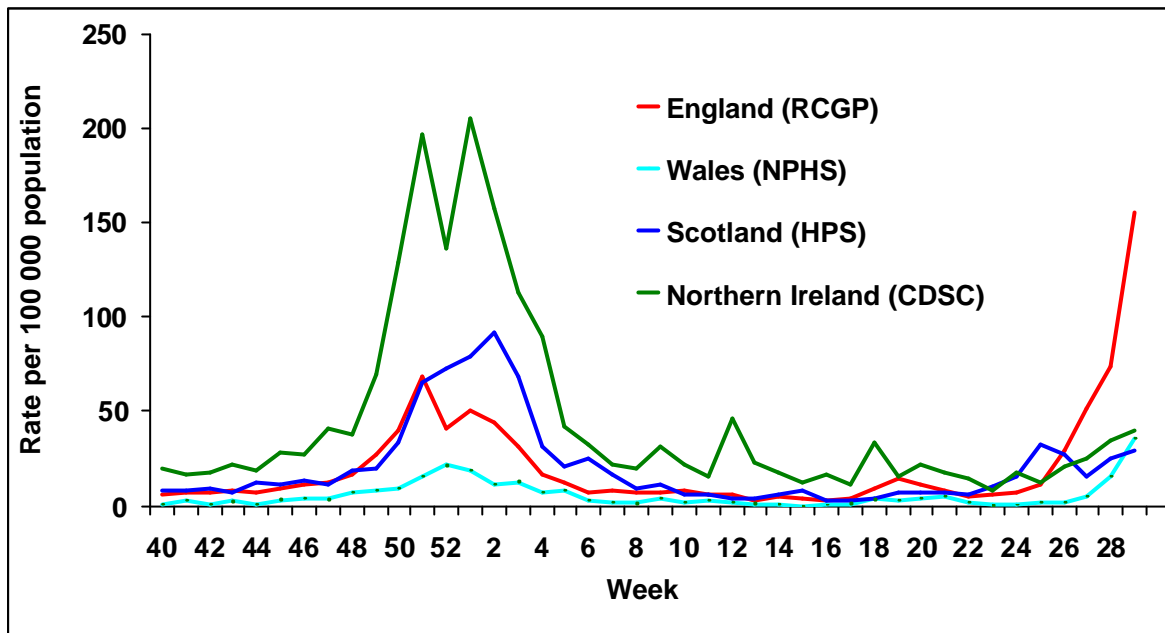
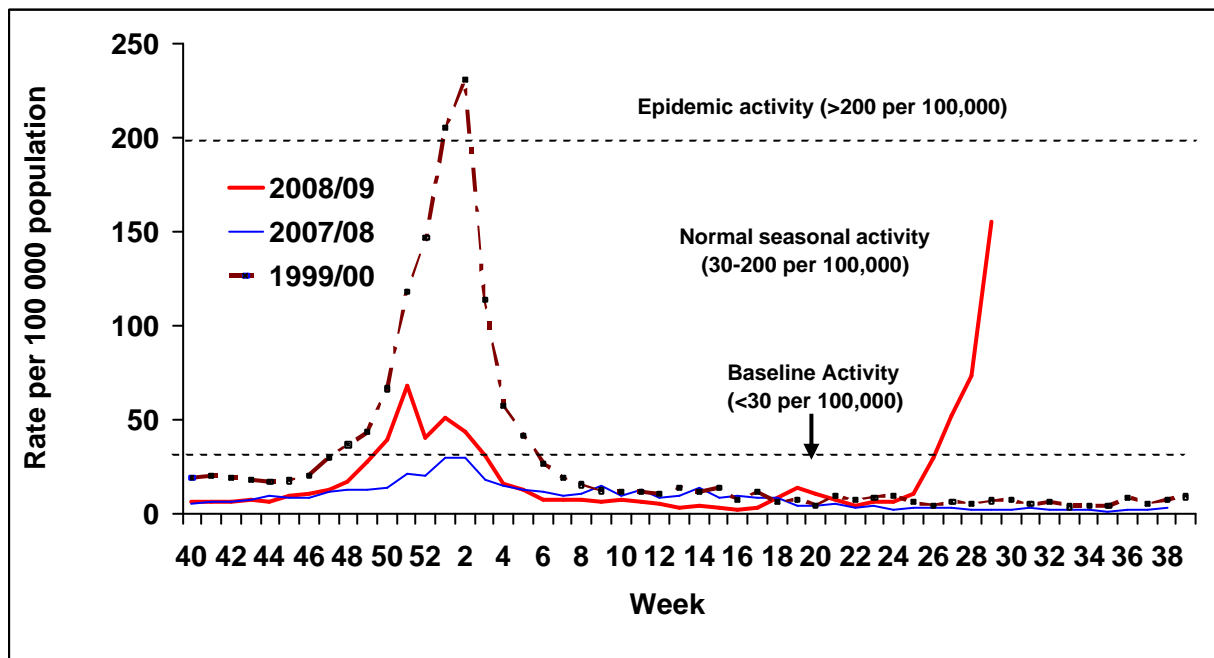


Figure 2: RCGP weekly consultation rate for influenza like illness 2008/09 and recent years.



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

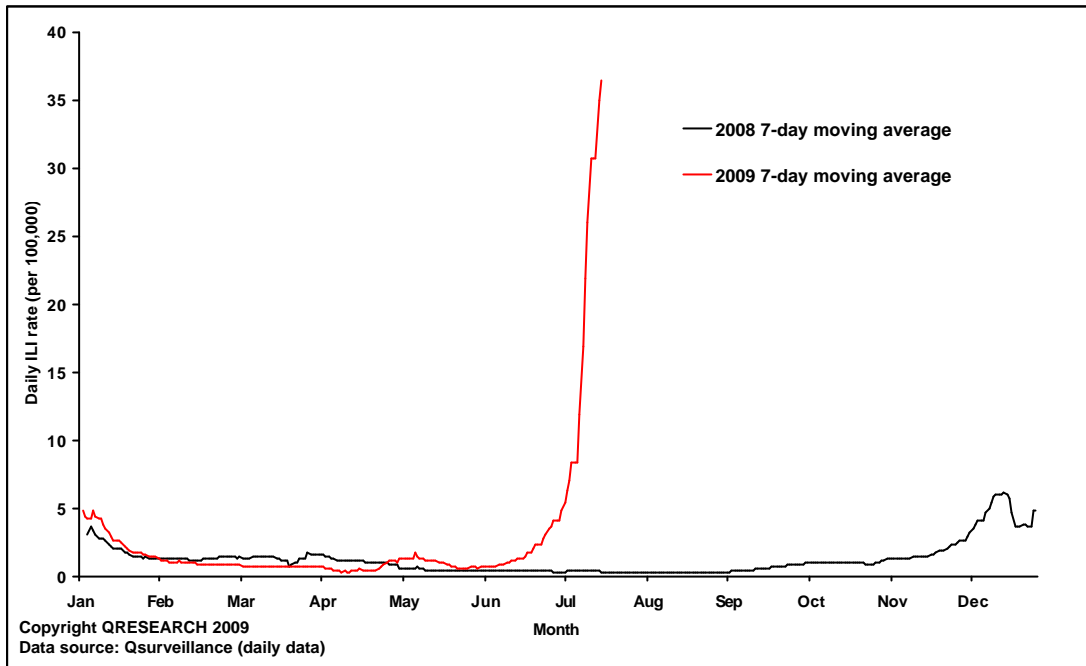
QSurveillance®

The daily GP ILI consultation rates was 67 per 100,000 on Monday 20 July, and decreased to 54.6 per 100,000 on Tuesday 21 July which is the highest daily rate seen on a Tuesday since the start of the outbreak and is equivalent to estimated weekly rates expected when 'exceptional' levels of seasonal influenza is circulating during the winter months (Figure 3). High rates have been observed in all areas. The highest regional rate remains in London (67.7 per 100,000) followed by the North West (65.7 per 100,000) (figure 4). The highest rates are now in the 1-4 year age band (122 per 100,000) and in the under one-year-olds (106.7 per 100,000) (figure 5).

HPA Weekly National Influenza Report

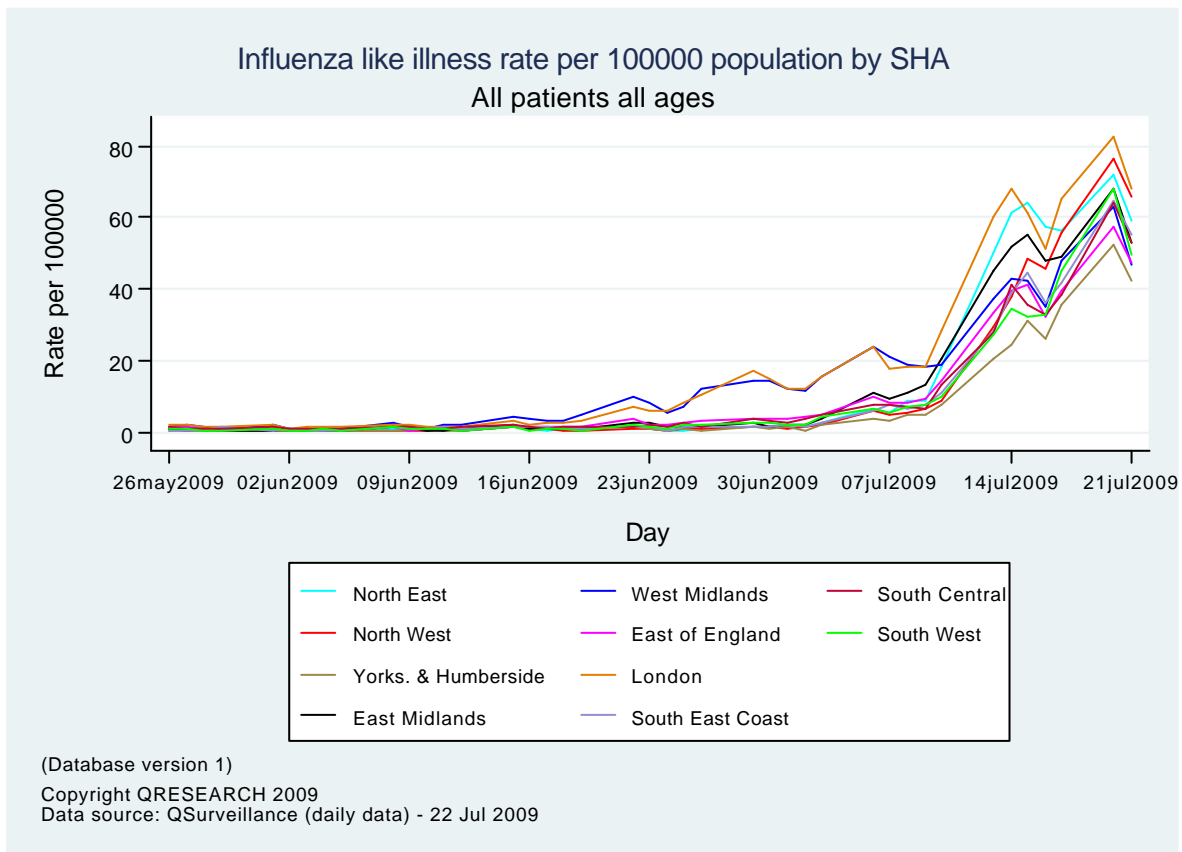
23 July 2009 (Week 30)

Figure 3. QSurveillance® – 7-day moving average daily consultation rate for influenza-like illness in the UK* (all ages) in 2008 and 2009.



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

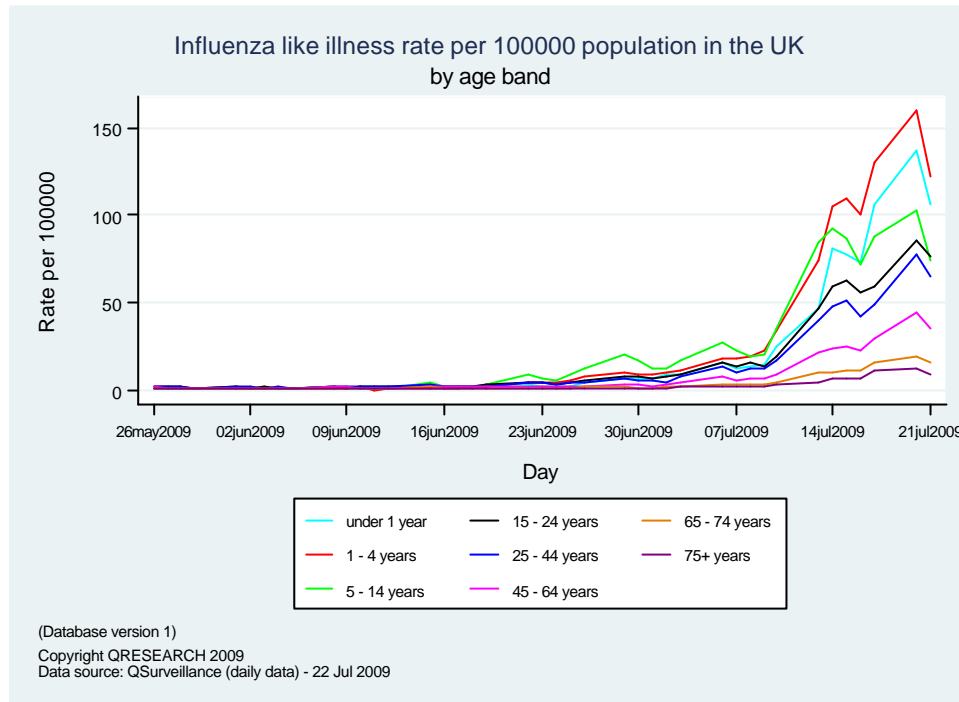
Figure 4. QSurveillance® – daily consultation rate for influenza-like illness by English SHA (all ages)



HPA Weekly National Influenza Report

23 July 2009 (Week 30)

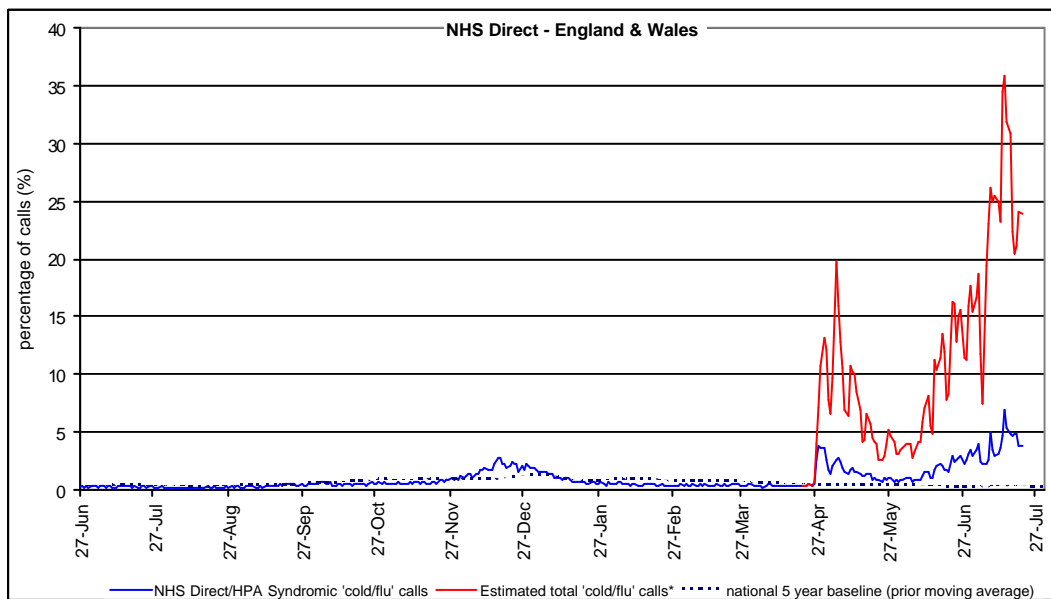
Figure 5. QSurveillance® – daily consultation rate for influenza like illness in UK by age band



NHS Direct/HPA Syndromic Surveillance System

On Tuesday 21 July there were 7738 calls to NHS Direct relating to 'swine flu', 39% of these were cold/flu related. Adding these calls to other calls relating to colds/flu show that the proportion of estimated cold/flu calls was 23.9%, a decrease from 35.9% on Tuesday 14 July, the level of calls remain above those observed during winter months (Figure 6). The highest proportion of calls were in the 5-14 year age group (32%). High cold/flu proportions have been observed in all regions, with recent increases seen in Wales (figure 7), which concurs with what had been observed with Welsh GP consultation rates.

Figure 6. Daily NHS Direct/HPA Syndromic Surveillance System estimated total cold/flu calls* 2009 compared to routine daily NHS Direct 'cold/flu' calls 2008-2009 shown as a percentage of all NHS Direct calls.

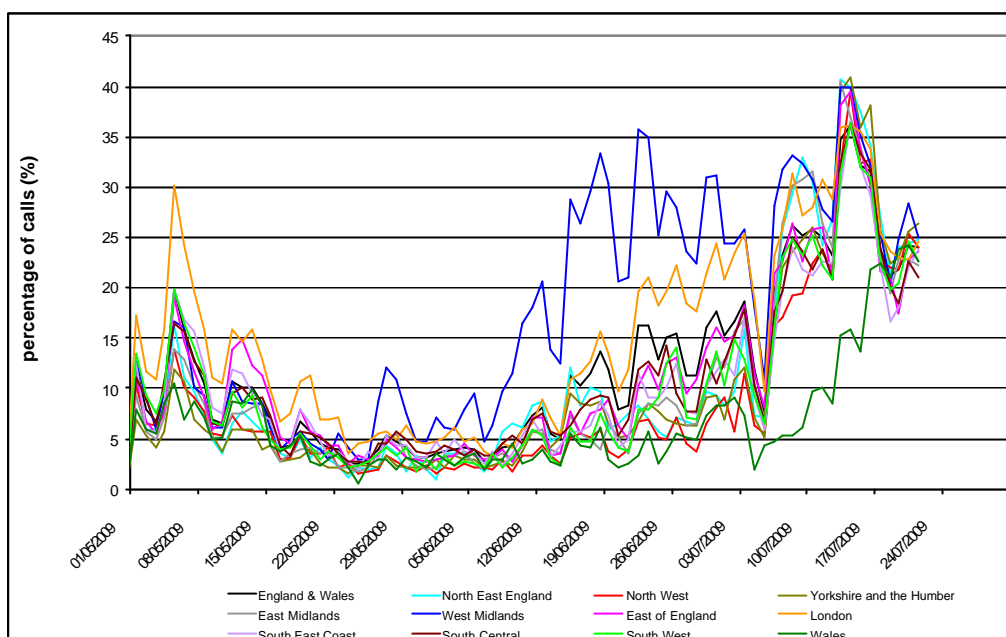


* Estimated total 'cold/flu' calls calculated by adding for each SHA NHS Direct/HPA Syndromic 'cold/flu' calls to NHS Direct 'swine flu' algorithm 'cold/flu' calls (and calculating percentages by SHA using all NHS Direct calls as the denominators). NB: due to the introduction of new call protocols there were reduced call numbers on 5th July 2009.

HPA Weekly National Influenza Report

23 July 2009 (Week 30)

Figure 7: Daily NHS Direct/HPA Syndromic Surveillance System estimated total 'cold/flu' calls by SHA.*



* Estimated total 'cold/flu' calls calculated by adding for each SHA NHS Direct/HPA Syndromic 'cold/flu' calls to NHS Direct 'swine flu' algorithm 'cold/flu' calls (and calculating percentages by SHA using all NHS Direct calls as the denominators). NB: due to the introduction of new call protocols there were reduced call numbers on 5th July 2009.

Microbiological surveillance

There have now been 11,159 laboratory confirmed cases of pandemic (H1N1) 2009 in the UK since the beginning of the pandemic (Table 2). There has been a decrease in the number of laboratory confirmed cases since the UK went to treatment only phase on 02 July.

Table 2: Cumulative number of laboratory confirmed cases, as of 21 July

Region / Country	Cumulative number of laboratory confirmed cases
England	9549
Northern Ireland	58
Scotland	1474*
Wales	78
Total UK	11,159

* Figure of 1647 reported for Scotland in previous week was incorrect.

In addition cumulative confirmed cases reported from the UK Overseas Territories and Crown Dependencies (n=155): Bermuda (1), British Virgin Islands (5), Cayman Islands (54), Falkland (5), Guernsey (17), Isle of Man (6), Jersey (38), Sovereign Base Area Cyprus (18), Turks and Caicos Islands (11).

At the HPA respiratory virus unit (RVU) at the Centre for Infections in week 29 32 pandemic (H1N1) 2009 influenza viruses were detected along with three A (H3). [Other circulating respiratory pathogens](#) such as RSV are at levels expected for the time of year, with slight elevations in detections due to increased testing.

Enhanced Virological Community and Primary Care Surveillance

In England three schemes for virological surveillance of influenza are being used in primary care (RCGP/HPA and HPA/RMN) and through NHS Direct; the proportion positive has remained between 19 and 25% in recent weeks (table 3, figure 8). Overall, the highest positivity rate has been seen in London (table 4). Schemes through primary care are also used in Wales, Scotland and Northern Ireland though few viruses have been detected (table 3). It is important to note that results from 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'](#).

HPA Weekly National Influenza Report

23 July 2009 (Week 30)

Table 3. Total number of samples tested and positive for pandemic influenza A (H1N1) from enhanced virological sentinel schemes in England (three schemes combined), Wales, Scotland and Northern Ireland by week*.

Week	England			Wales			Scotland			Northern Ireland**		
	Total tested	Pan (H1N1) 2009 N	%	Total tested	Pan (H1N1) 2009 N	%	Total tested	Pan (H1N1) 2009 N	%	Total tested	Pan (H1N1) 2009 N	%
18-22	265	8	3.0	12	0	0	51	0	0	11	0	0
23	259	1	0.4	2	0	0	26	0	0	2	0	0
24	412	12	2.9	2	0	0	35	0	0	2	0	0
25	517	38	7.4	0	0	0	18	0	0	7	0	0
26	416	106	25.5	3	0	0	6	0	0	7	0	0
27	609	120	19.7	4	1	25	2	0	0	4	0	0
28	271	67	24.7	10	0	0	57	2	3.5	4	1	25.0
29	137	27	19.7	12	1	8.3	50	2	4.0	13	1	7.7

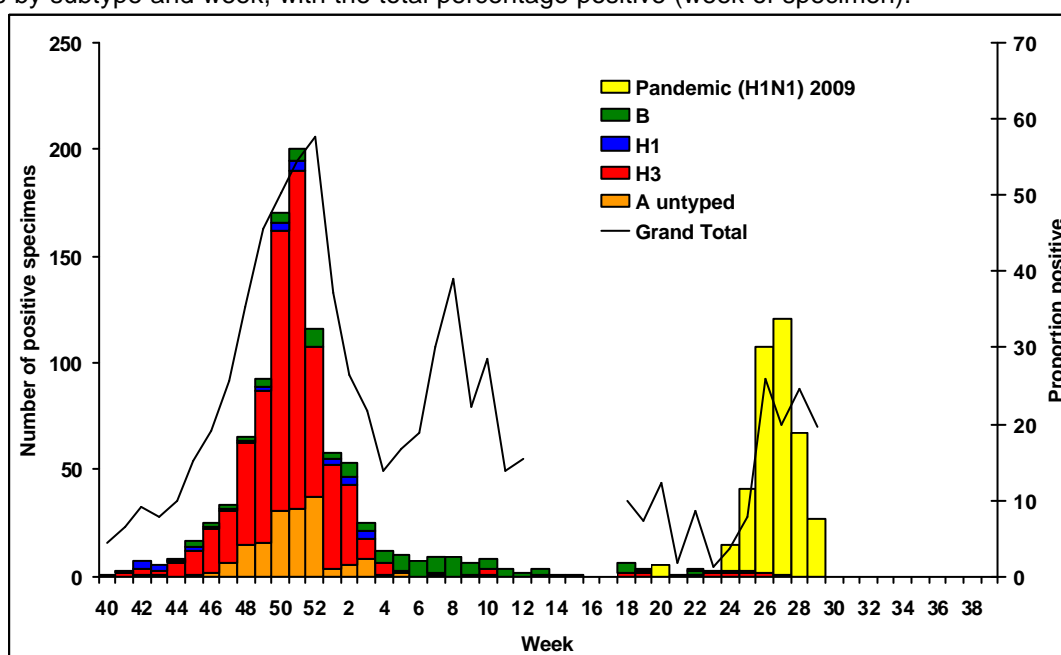
* All data are based on week of specimen, except for Northern Ireland which is by week of report; ** Until week 28 it has not been possible to differentiate between sentinel and non-sentinel pandemic (H1N1) 2009 positive specimens in Northern Ireland.

Table 4: Sample tested and positive for influenza from three English virological sentinel schemes (combined) by region.

Region	Influenza B	Influenza A (H3)	Pandemic (H1N1) 2009 N	%	Total tested
East	0	0	15	4.5	331
East Midlands	1	0	10	4.7	213
London	3	3	211	24.9	848
North East	0	0	4	3.5	113
North West	2	1	8	7.0	114
South East	1	0	31	6.9	450
South West	0	0	14	11.6	121
West Midlands	1	0	81	13.3	611
Yorkshire and Humberside	0	1	5	5.9	85
Total	8	5	379	13.1	2886

* Two influenza B and 9 influenza A (H3) detections through NHS Direct not included on this table.

Figure 8 The number of samples testing positive for influenza in the three English sentinel virological schemes by subtype and week, with the total percentage positive (week of specimen).



NB. Proportion positive omitted when fewer than 10 specimens reported; NHS Direct scheme started in week 21 so number positive in recent weeks cannot be directly compared to the number seen in the winter; data for the most recent weeks are subject to change due to reporting lag.

HPA Weekly National Influenza Report

23 July 2009 (Week 30)

Antiviral susceptibility

Testing for antiviral susceptibility is carried out at the Respiratory Virus Unit, Centre for Infections, Colindale (RVU). Four hundred and twenty-seven viruses have been analysed for the marker commonly associated with resistance to oseltamivir in seasonal influenza (H274Y); none were found to carry this marker. In addition, sixty of these have been fully tested for susceptibility; all 60 were found to be sensitive to oseltamivir and zanamivir (table 5).

Table 5: Samples tested for antiviral susceptibility at RVU, by test method, source and region.

Region	Samples tested for Resistance		Fully tested (hospital samples)	Proportion resistant
	Screened for H274Y mutation Hospital	Community*		
East	20	4	3	0%
East Midlands	5	3	3	0%
London	71	105	19	0%
North East	4	1	2	0%
North West	11	1	0	0%
South East	36	13	16	0%
South West	5	4	3	0%
West Midlands	64	45	6	0%
Yorkshire and Humber	1	1	0	0%
Ireland	7	0	5	0%
Northern Ireland	1	0	0	0%
Scotland	18	5	3	0%
Wales	2	0	0	0%
Total	245	182	60	0%

* Community samples from RCGP and NHS Direct sampling schemes

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*. According to guidelines for clinical management of patients with an influenza-like illness during an influenza pandemic (W S Lim, Thorax 2007;62;1-46) the antibiotics recommended for treating bacterial pneumonia in a primary care setting are co-amoxiclav or a tetracycline (Section 8.1.3 of the guidelines). There have been no significant changes to susceptibility trends for these two antibiotics in recent years and the results of a twelve week analysis (Table 6) show that over 90% of all isolates of the three organisms were susceptible to tetracyclines. There were no appreciable changes in resistant patterns for either tetracyclines or co-amoxiclav in the twelve weeks preceding 12 July 2009.

Table 6: 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 12 July 09.

Organism	Tetracyclines		Co-amoxiclav	
	Specimens tested (N)	Specimens susceptible (%)	Specimens tested (N)	Specimens susceptible (%)
<i>S. aureus</i>	2116	94	355	75
<i>S. pneumoniae</i>	1571	91	1596*	94*
<i>H. influenzae</i>	5569	99	5195	92

* *S. pneumoniae* isolates are not routinely tested for susceptibility to co-amoxiclav, however laboratory results for benzylpenicillin 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, and from the relevant body in Scotland, Wales and Northern Ireland. In England, on 21 July there were 840 hospitalised patients with suspected pandemic influenza, an increase from 642 seven days ago; the highest hospitalisation rate was in those aged under 5 years (table 7). In Scotland there have been 51 cumulative hospitalisations (including seven in critical care units), 17 in Wales and three in Northern Ireland.

HPA Weekly National Influenza Report

23 July 2009 (Week 30)

Table 7: Current inpatients with suspected pandemic influenza in England, 14 July 2009.

Age groups	<5	5-15	16-64	65+	Total
Total number of inpatients	169	87	435	149	840
Total number of inpatients in critical care	12	2	41	8	63
Total hospitalisation rate (per 100,000)	5.7	1.3	1.3	1.8	1.7

Thirty deaths (26 in England and four in Scotland) have been reported across the UK in people with suspected pandemic H1N1 infection.

HPA receives weekly death registrations from the Office for National Statistics. In week 28/09, an estimated 8296 all-cause deaths were registered, which is a slight increase compared to 8664 in week 27/09. It should be noted that these deaths are due to all causes and cannot be attributed to influenza. The weekly number is in the expected range for this time of year and no excess deaths have been observed since week 05/09 in February.

International Situation

Global/European update from [ECDC](#) and [WHO](#)

According to ECDC report of 17.00 CEST 22 July 30 of 31 EU/EFTA countries had reported 17,733 cases of laboratory confirmed pandemic (H1N1) 2009 and 33 deaths (UK (not including latest data) and Spain). Globally 146,738 cases and 850 deaths were reported. Nineteen countries (including the UK) have reported over 1000 cases. Evidence of sustained transmission has been recognised in Argentina, Bolivia, Chile, Colombia, Costa Rica, Ecuador, Paraguay and Uruguay. Globally, four antiviral resistant strains have been confirmed so far (Denmark (1), Japan (2) and Hong Kong (1)).

[United States of America](#)

During week 27 (July 05 - 11 2009), influenza activity decreased in the United States, however, there were still higher levels of influenza-like illness than is normal for this time of year. The proportions of out-patient visits for ILI are below baseline levels. The majority (99%) of all influenza viruses subtypes were pandemic (H1N1) 2009.

[Canada](#)

During week ending July 08 2009 the overall influenza activity level remained high for this time of the year, but has been decreasing for four consecutive weeks. There was a 21% increase in the reported number of hospitalized Pandemic (H1N1) 2009 cases this week.

[Australia](#)

Reporting period 30 May -16 June: Influenza notifications in Australia continue to rise, a reflection of ongoing transmission of H1N1 Influenza 09 in the Australian population and increased surveillance associated with the H1N1 Influenza 09 pandemic. Syndromic and laboratory surveillance indicates that the influenza season has not yet commenced in the Australian community. Seasonal influenza notification rates are highest in the 10-14 and 15-19 year age groups.

[New Zealand](#)

There was a slight increase in consultations for influenza-like illness through sentinel surveillance in week 29 and remains much higher than in previous years. So far, the highest ILI consultation rates have been reported among children and teenagers aged 0 to 19 years. The pandemic (H1N1) 2009 virus was the predominant strain detected through sentinel (61%) and non-sentinel (68%) surveillance.

Acknowledgements

This report was prepared by Estelle McLean, Joy Field, Hongxin Zhao and Richard Pebody. We are grateful 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 laboratory at the Centre for Infections, regional microbiology laboratories, QSurveillance, NHS Direct, ONS, Health Protection Scotland, National Public Health Service (Wales) and CDSC Northern Ireland.

Any queries relating to this report should be directed to respcdsc@hpa.org.uk.

An email alert is sent once the report is published, to join this mailing list please send an email with 'Join flu report mailing list' as the subject and your name and email address in the body of the email to respcdsc@hpa.org.uk. If you no longer wish to receive this email, please send an email to this effect to the same address.