

Summary

- In week 28 (week ending 12 July), GP consultation rates for influenza and influenza-like illness increased in all GP sentinel schemes across the UK. Rates in England 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 and Wales 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 most English regions indicating that influenza activity is widespread.
- Daily calls to NHS Direct relating to colds/flu are 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.
- The majority of pandemic influenza cases continue to be mild. The cumulative number of deaths reported due to pandemic (H1N1) 2009 in the UK has increased from 17 last week to 28. There are currently 652 inpatients in hospitals in England with suspected pandemic influenza.
- According to the European Centre for Disease Prevention and Control (ECDC), by 15 July, 125,993 laboratory confirmed cases of pandemic influenza (H1N1) had been reported globally with 667 deaths. In Europe, levels of influenza activity remain low in most countries.

Weekly consultation rates in national sentinel influenza schemes

In week 28 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 at similar levels to the peak seen in December of last year. Rates for Scotland and Wales remain below threshold levels. The weekly QSurveillance rate of 86.8 per 100,000 is double that of the winter peak in week 51/09 (42.7 per 100,000), thresholds have not yet been set.

In England, increases were seen in the central region (40.9 per 100,000 to 93.9 per 100,000) and the north (6.8 per 100,000 to 37.2 per 100,000) whereas the rate in the south decreased slightly (table 1). 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 5-14 year-olds (159.6 per 100,000 and 202.5 per 100,000 respectively) however, in Northern Ireland it was highest in the under one year age group (increasing from 47.0 per 100,000 to 162.3 per 100,000). Age-specific rates were not available for Wales and 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 24	Week 25	Week 26	Week 27	Week 28
RCGP (England & Wales)	30	6.8	11.2	29.6	51.9	73.4
RCGP North	30	2.5	6.3	6.8	6.8	37.2
RCGP Central	30	6.7	13.3	27.7	40.9	93.9
RCGP South	30	8.6	12	39.4	77.6	74.9
Northern Ireland	N/A	18.1	12.7	20.5	25.4	34.9
Scotland	50	15	32	27	15	25
Wales	25	0.4	1.7	1.43	5.1	15.8
QSurveillance® (UK)	N/A	5.8	8.9	17.4	30.4	86.8

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

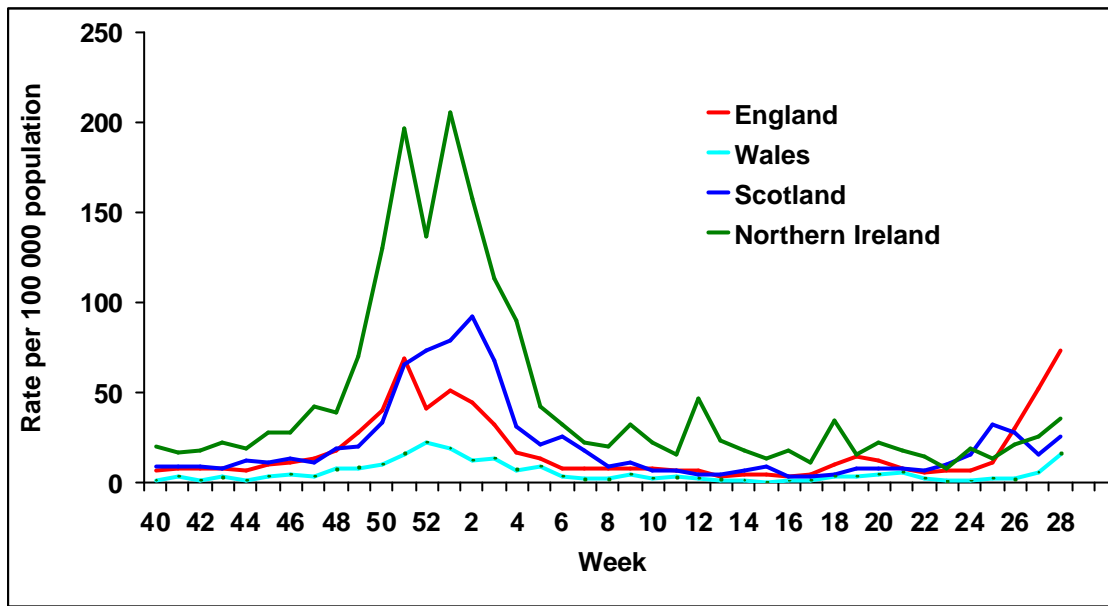
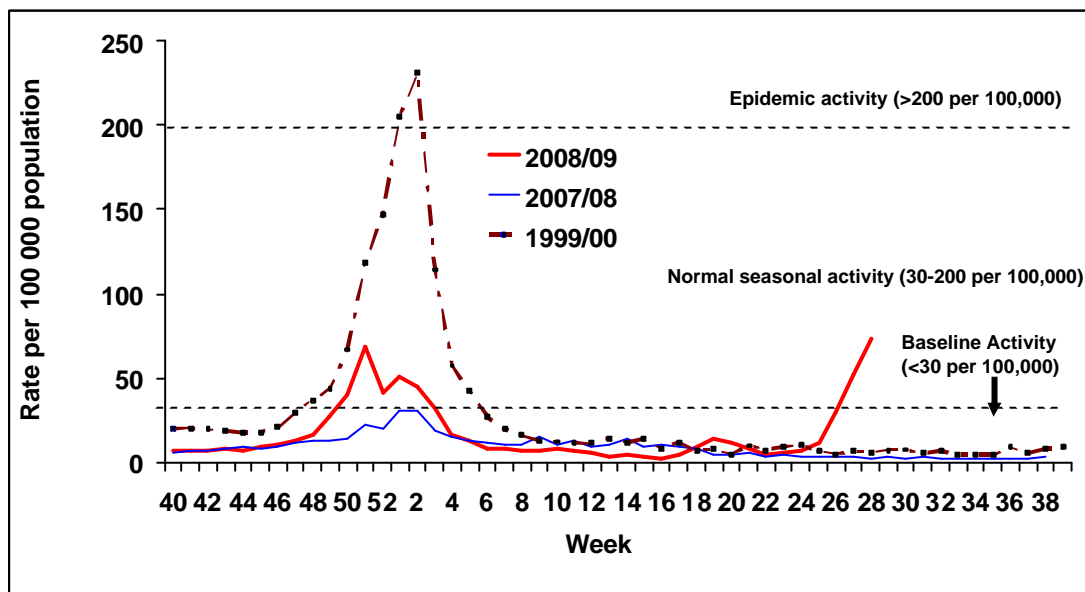


Figure 2: RCGP weekly consultation rate for influenza like illness 2008/09 and recent years.



Enhanced Daily Syndromic Surveillance

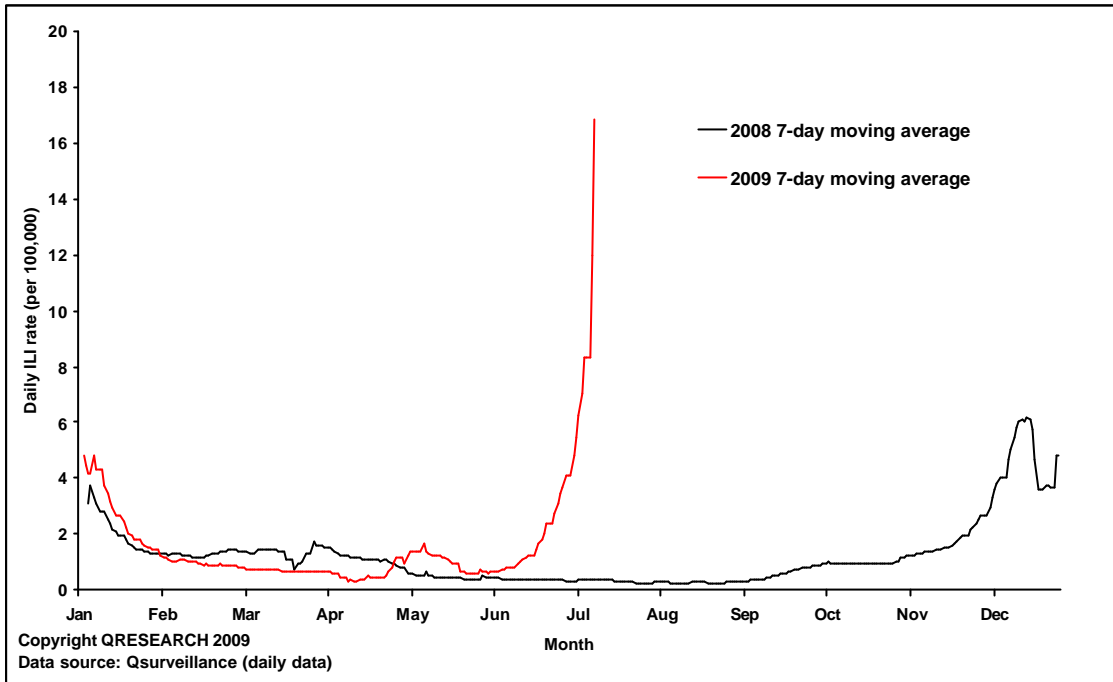
QSurveillance®

Daily GP ILI consultation rates are still increasing; the overall daily rate on 14 July through Q-surveillance was 44.2 per 100,000 which is the highest daily rate observed 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 almost all areas, whereas previously London and the West Midlands had been experiencing the highest levels of activity. The highest regional rate remains in London (66.9 per 100,000) followed by the North East (58.4 per 100,000) (figure 4). Rates have increased in all age groups with the highest rates still in those under 44, the rate in the 1-4 year age band (103 per 100,000) is now the highest followed by the 5-14 age band (91.3 per 100,000) (figure 5).

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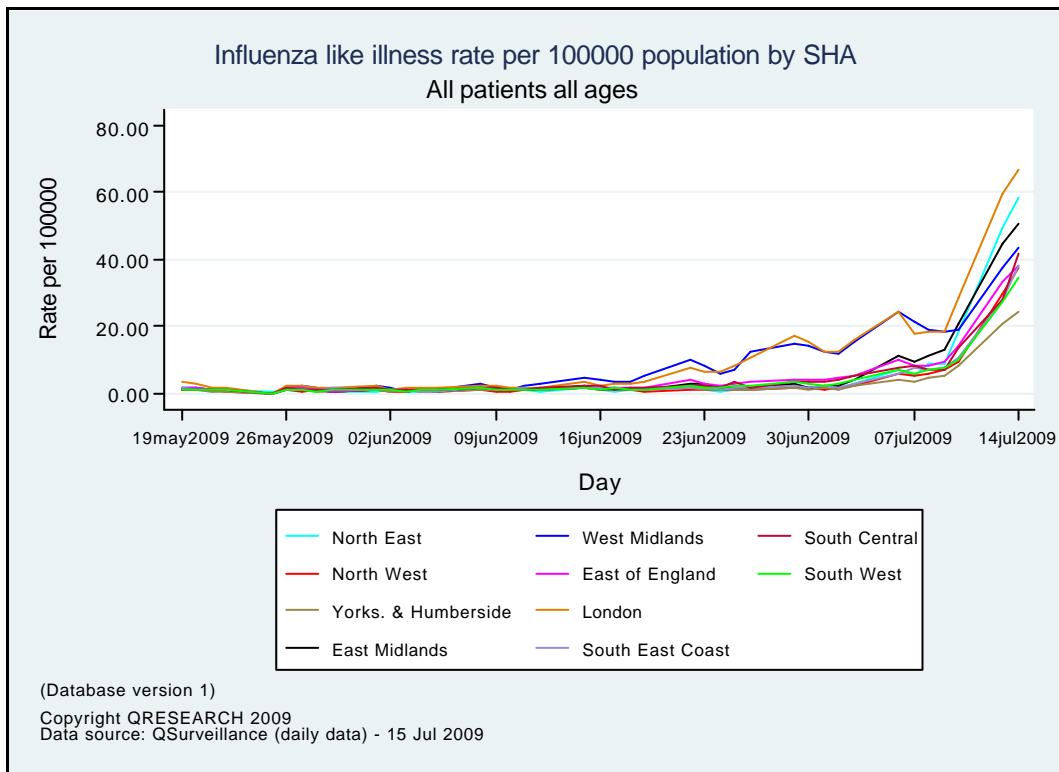
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Figure 3. QSurveillance® – 7-day moving average daily consultation rate for influenza-like illness in the UK* (all ages) in 2008 and 2009.



* based on data from 43% of England's populations, 10% of the population in Wales, 17% in Northern Ireland and 0% in Scotland; ** due to a change in coding in week 28 recent data will be an under-estimate of ILI consultation rates.

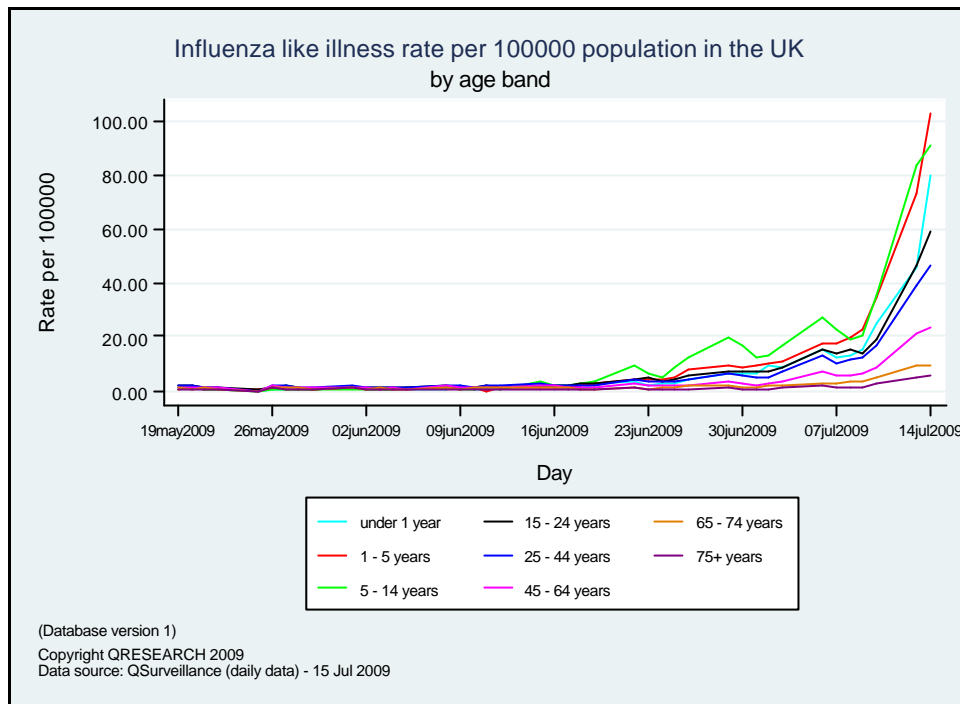
Figure 4. QSurveillance® – daily consultation rate for influenza-like illness by English SHA (all ages)



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

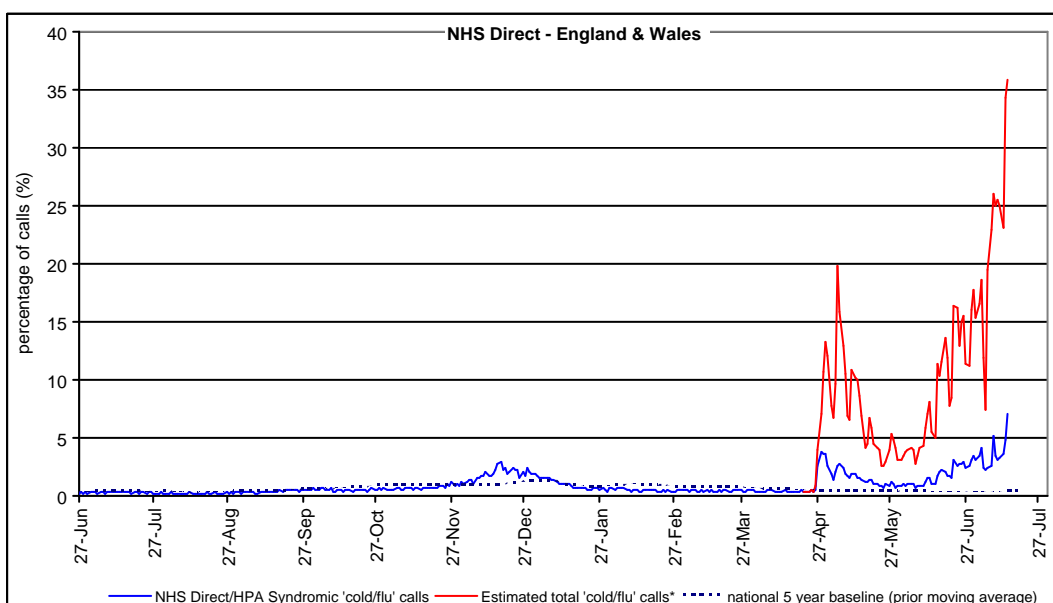


* 1-5 years should read 1-4.

NHS Direct/HPA Syndromic Surveillance System

On Tuesday 14 July there were 7541 calls to NHS Direct relating to 'swine flu', 51.3% 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 35.9%, the highest seen since the start of the outbreak (Figure 6). The highest proportion of calls were in the 5-14 year age group (44.3%). High cold/flu proportions have been observed in all regions, whereas previously the markedly higher levels were seen in London and the West Midlands (figure 7), this concurs with what had been observed with 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.

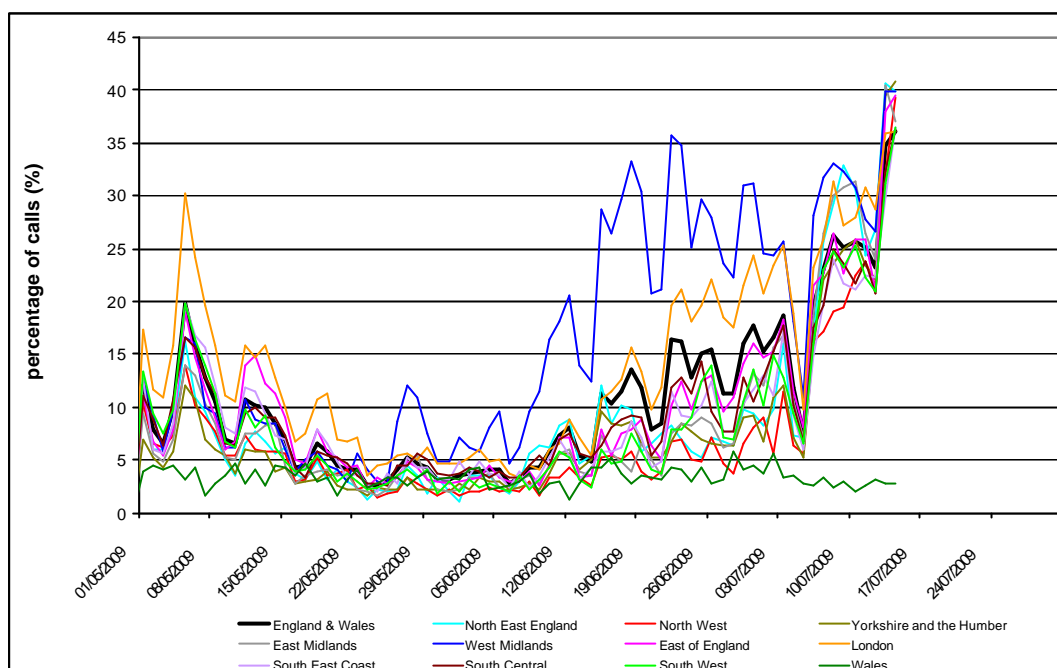


*Adjusted total 'cold/flu' calls calculated by adding NHS Direct/HPA Syndromic 'cold/flu' calls to NHS Direct 'swine flu' algorithm 'cold/flu' calls (and calculating percentage using all NHS Direct calls as the denominator).

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



Microbiological surveillance

There have now been 10,649 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 15 July

Region / Country	Cumulative number of laboratory confirmed cases
England	8885
Northern Ireland	50
Scotland	1647
Wales	67
Total UK	10649

In addition cumulative confirmed cases reported from the UK Overseas Territories and Crown Dependencies (n=117): Guernsey (17), Cayman Islands (43), British Virgin Islands (5), Jersey (38), Bermuda (1), Isle of Man (6), Turks and Caicos Islands (4), Sovereign Base Area Cyprus (3).

At the HPA respiratory virus unit (RVU) at the Centre for Infections in week 28 60 pandemic (H1N1) 2009 influenza viruses were detected along with one A (H1) (non-pandemic strain) and one 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; a steady overall increase in the proportion positive has been observed in recent weeks reaching 25% in week 26 (table 3, figure 8). 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'](#).

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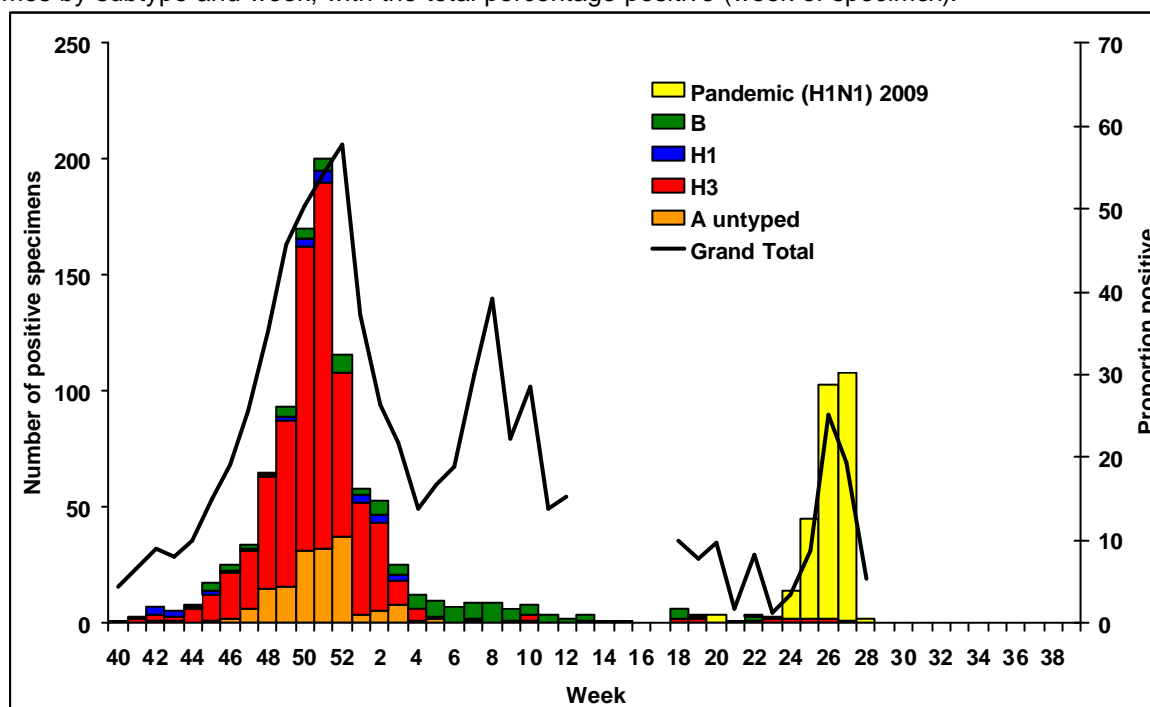
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Table 3. Total number of samples tested and positive for pandemic influenza A (H1N1) from three enhanced virological sentinel schemes in England (three schemes combined), Wales, Scotland and Northern Ireland by week*.

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	%
21***	213	6	2.8	9	0	0	25	0	0	7	0	0
22	48	1	2.1	3	0	0	26	0	0	4	0	0
23	259	1	0.4	2	0	0	26	0	0	2	0	0
24	410	12	2.9	2	0	0	35	0	0	2	0	0
25	511	43	8.4	0	0	0	18	0	0	7	0	0
26	410	101	24.6	3	0	0	6	0	0	7	0	0
27	559	107	19.1	4	1	25	0	0	0	4	0	0
28	37	2	5.4	9	0	0	11	1	9.1	4	1	25

* All data are based on week of specimen, except from 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; *** Data from week 18-21 included in week 21.

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.

Antiviral susceptibility

Eighteen of the Influenza A (H1N1v) isolates have been fully tested for susceptibility at the Respiratory Virus Unit, Centre for Infections, Colindale (RVU); all 18 were found to be sensitive to oseltamivir and zanamivir and resistant to amantadine. Three hundred and sixty-eight positive specimens have been analysed for the marker commonly associated with resistance to oseltamivir in seasonal influenza (H274Y), all were found not to carry this marker.

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 4) show that over 90% of all isolates of the three organisms were susceptible to tetracyclines. There

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were no appreciable changes in resistant patterns for either tetracyclines or co-amoxiclav in the twelve weeks preceding 05 July 2009.

Table 4: 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 05 July 09.

Organism	Tetracyclines		Co-amoxiclav	
	Specimens tested (N)	Specimens susceptible (%)	Specimens tested (N)	Specimens susceptible (%)
<i>S. aureus</i>	2165	94	383	75
<i>S. pneumoniae</i>	1619	91	1661*	94*
<i>H. influenzae</i>	5710	99	5352	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. In England, on 14 July there were 652 hospitalised patients with suspected pandemic influenza; the highest hospitalisation rate was in those aged under 5 years (table 5). In Scotland there have been 46 cumulative hospitalisations and in Wales 10.

Table 5: Current inpatients with suspected pandemic influenza in England, 14 July 2009.

Age Group	<5	5-15	16-64	65+	Total
Total inpatients	134	84	354	80	652
Population	2955462	6718519	33003261	8085703	50762945
Rate (per 100,000)	4.5	1.3	1.1	1.0	1.3

Twenty-eight deaths (26 in England and two in Scotland) have been reported across the UK in people with laboratory confirmed pandemic H1N1 infection.

HPA receives weekly death registrations from the Office for National Statistics. In week 27/09, an estimated 8664 all-cause deaths were registered, which is a slight increase compared to 8433 in week 26/09. 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 15 July 30 of 31 EU/EFTA countries had reported 14,451 cases of laboratory confirmed pandemic (H1N1) 2009 and 16 deaths (UK and Spain). Globally 125,993 cases and 667 deaths were reported. Seventeen countries (including the UK) have reported over 1000 cases. Southern hemisphere countries, which are moving to start their 'normal' influenza seasons, are showing some of the largest increases in case numbers.

Globally, three (in Denmark, Japan and Hong Kong) of the pandemic (H1N1) 2009 isolates have been found to be resistant to oseltamivir (Tamiflu).

[United States of America](#)

During week 26 (June 28-July 04 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.

[Canada](#)

During week ending July 08 2009 the overall influenza activity level remained high for this time of the year, but has been decreasing in week 26, for the third consecutive week. There was almost a 25% increase in the reported number of hospitalized Pandemic (H1N1) 2009 cases this week.

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[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 notifications rates are highest in the 10-14 and 15-19 year age groups.

[New Zealand](#)

There has been a continuing sharp increase in consultations for influenza-like illness through sentinel surveillance in week 28 (6-12 July 2009). The weekly ILI consultation rate is much higher than previous years for the same week. So far, the highest ILI consultation rates have been reported among children and teenagers aged 0 to 19 years.

Acknowledgements

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

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