HPA Weekly National Influenza Report

01 July 2009 (Week 27)

Summary

As of 01 July 2009 there were 6929 confirmed cases of influenza A (H1N1v) in the UK. The highest numbers were in London (1794) and the West Midlands (2424). Three deaths have been reported and 105 hospitalisations.

Clinical rates have increased in England and Northern Ireland and have decreased in Scotland and Wales. The rate for England is at the threshold for normal seasonal flu activity. 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 highest in the West Midlands and London. The estimated total proportion of calls for colds and flu to NHS Direct is as might be expected during the normal influenza season, with the highest increase seen in the West Midlands. Nationally, calls for fever in the 5-14 age group are approaching national influenza early warning thresholds.

Seventy-two specimens tested at the Respiratory Virus Unit (RVU) Influenza Reference Unit at the HPA Centre for Infections (CfI) were positive for influenza (all H1N1v) and three for influenza A (H3) in week 26/09. Seventy of the confirmed influenza H1N1v cases have come through enhanced virological surveillance in the community (sentinel GP practices and self-sampling of callers to NHS Direct).

Seventeen of the novel virus isolates have been tested for antiviral drug susceptibility and all were found to be sensitive to oseltamivir and zanamivir but resistant to amantadine. 199 specimens have been tested for the marker which is associated with resistance to oseltamivir and have all been found not to carry this marker.

According to the World Health Organization (WHO), by 09.00 GMT on 29 June, 70,893 cases of influenza A (H1N1v) had been reported globally with 311 deaths.

UK Case s of Influenza A (H1N1v)

As of 01 July 2009 there were 6929 confirmed cases of influenza A(H1N1v) in the UK, with the highest numbers in London (1794), West Midlands (2424) and Scotland (1162). A further 989 clinically presumed cases have been reported (981 in England and eight in Wales – Scotland are no longer reporting this) (Table 1). Three hundred and ninety-six are assumed to have acquired the virus abroad, 5521 are assumed to have acquired the virus in the UK, for 849 cases data on the route of transmission is pending (figures 1 and 2). The highest number of cases have been males aged between 10 and 19 years (Figure 2). Of the 5606 cases with the sex recorded 52% of cases are males, and of the 6659 with the age recorded 62% are aged less than 20 years. One hundred and five associated hospitalisations (77 in England, 25 in Scotland, one in Northern Ireland and two in Wales) and three associated deaths (two in Scotland and one in England) have been reported.

Table 1: Confirmed cases by Region, United Kingdom as reported by 01 July 2009

Region name	Number of Cases
East	371
East Midlands	136
London	1794
North East	45
North West	64
South East	557
South West	173
West Midlands	2424
Yorkshire & Humberside	140
Total England	5704
Northern Ireland	33
Scotland	1162
Wales	30
Total UK	6929*

* 989 clinically presumed cases (not confirmed virologically) have been reported from England and eight from Wales.

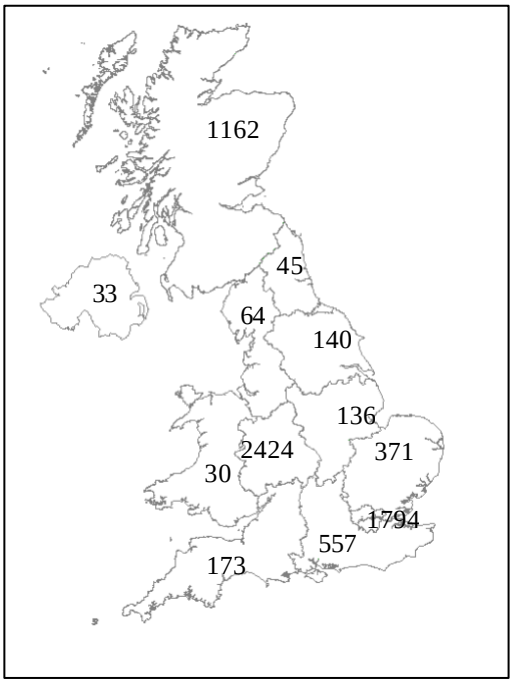

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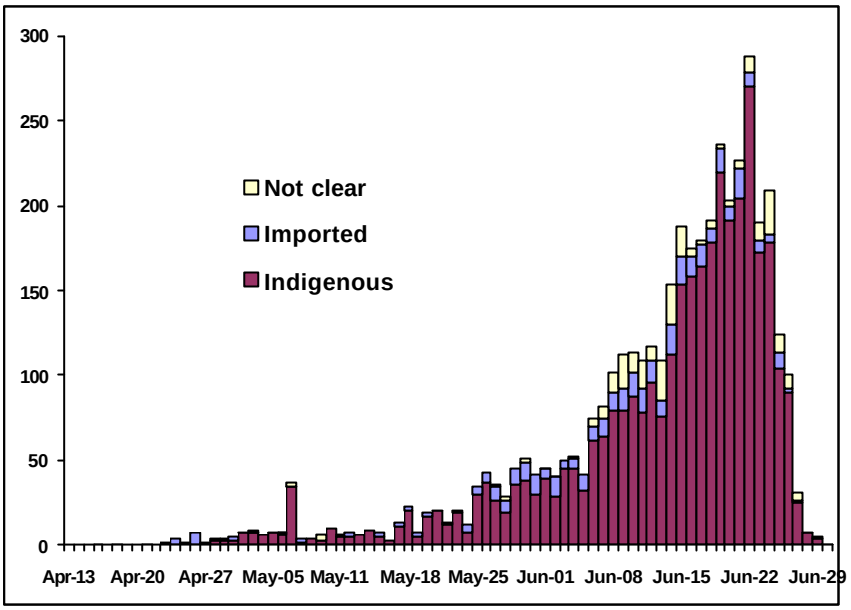
Figure 1: Cases of laboratory confirmed novel influenza A (H1N1v) by date of onset and assumed mode of transmission, 01 July 2009 (n=4147*), United Kingdom



***** 2782 cases have an unknown date of onset, five assumed imported, 2014 assumed non-imported, 763 unknown transmission.

Figure 2: Cases of laboratory confirmed novel influenza A (H1N1v) by date of report 01 July 2009 (n=6929) United Kingdom

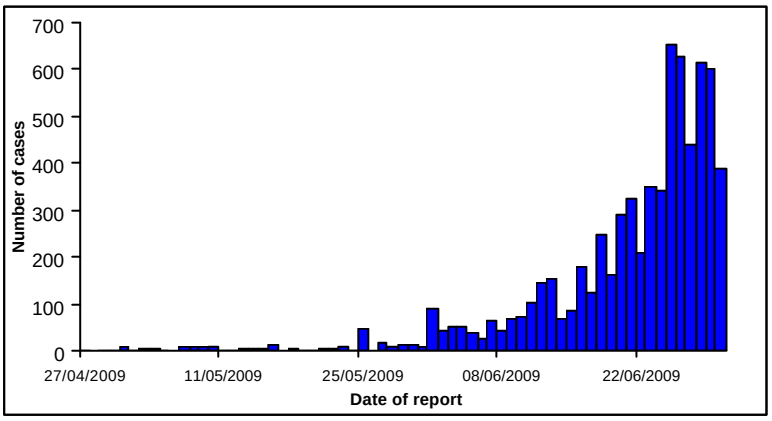
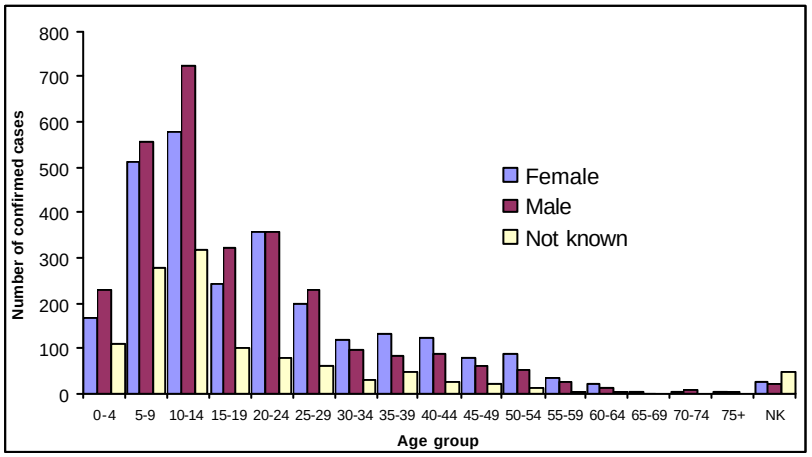


Figure 3: Cases of laboratory confirmed influenza A (H1N1v) by age group and sex, 01 July 2009 (n=6766*), United Kingdom



* Data not available on 163 cases.

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Schools

A total of 364 schools in England have been affected since April; 292 had confirmed cases but did not close and 72 closed. In Scotland, as of 23 June, 34 schools had closed since April due to influenza A (H1N1v).

Clinical Indicators

In week 26 rates have increased in England and Northern Ireland and have decreased in Scotland and Wales (Table 2, Figures 5 and 6). In England the rate is at the threshold level (30 per 100,000).

In England, the highest ILI rate was in the southern region (39.4 per 100,000) and in the 1-4 year (45.9 per 100,000) 5-14 year (60.7 per 100,000). In Wales the highest rate was in the 25-34 year age group (5.9 per 100,000), in Northern Ireland it was highest in the 65-74 year age group (33.5 per 100,000).

For further information on the different schemes please see the following websites:

- RCGP – http://www.rcgp.org.uk/bru/index.asp
- Northern Ireland – http://www.cdscni.org.uk/
- Scotland – http://www.hps.scot.nhs.uk/resp/index.aspx
- Wales – http://www.wales.nhs.uk/sites3/page.cfm?orgid=457&pid=27922
- QSurveillance® – http://www.qresearch.org

Table 2: GP consultation rates for ILI/influenza in the UK.

Scheme / Country	Threshold (per 100,000)	Clinical rate* per 100,000				
		Week 22	Week 23	Week 24	Week 25	Week 26
RCGP (England & Wales)	30	4.8	6.2	6.8	11.2	29.6
Northern Ireland	N/A**	13.8	7.9	18.1	12.7	20.6
Scotland	50	6	10	15	32	27
Wales	25	1.85	0.33	0.4	1.7	1.43
QSurveillance® (UK)	N/A**	4.2	4.4	5.8	8.9	17.4

* RCGP, Scotland and QSurveillance® rate is for influenza-like illness (ILI), for Northern Ireland it is a combined ILI and influenza rate and for Wales it is for influenza. This, and differences in health-seeking behaviour and diagnoses across the four countries, is reflected in the different threshold levels and activity rates, for further information see the HPA website: (http://www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb_C/1195733821514?p=1191942171484).

** No thresholds have yet been set for Northern Ireland or QSurveillance®.

Figure 5: RCGP consultation rate for influenza like illness 2008/09 and recent years.

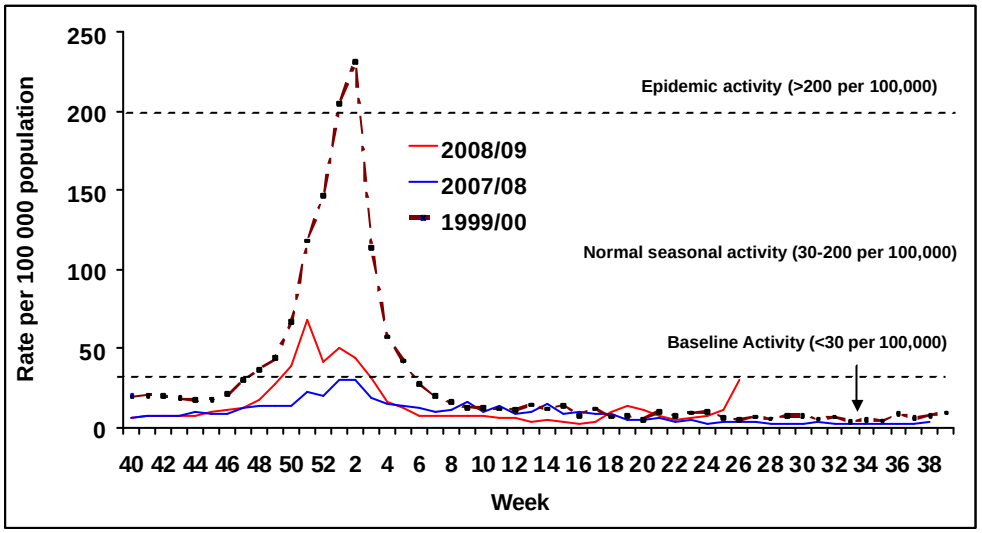
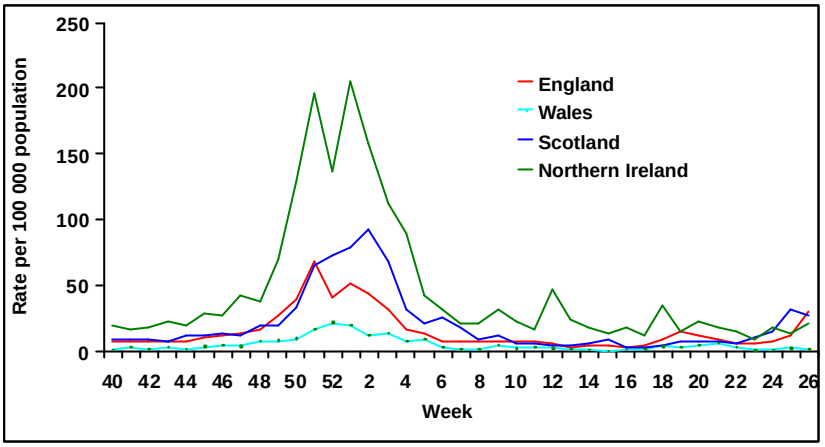


Figure 6: GP consultation rates for influenza/ILI in the UK 2008/09 season.



Enhanced Daily Syndromic Surveillance

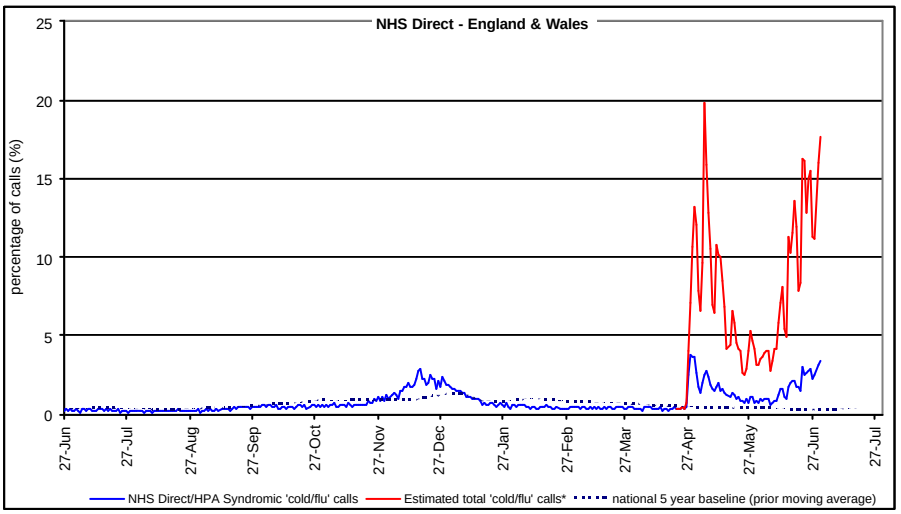
NHS Direct/HPA Syndromic Surveillance System (up to 30 June)

NHS Direct has an existing algorithm for 'cold/flu' calls, in response to the current situation, a new algorithm to handle 'swine flu' calls was introduced. When both indices are added together, they show that the 'estimated total' proportion of cold/flu calls to NHS Direct peaked and decreased very quickly initially soon after the outbreak was declared. The estimated total proportion of cold/flu calls has increased rapidly again recently (figure 7) and are showing levels consistent with levels of cold/flu calls during winter months. The West Midlands and London showed an increase in the proportion of 'cold/flu' calls and remain markedly higher than other SHAs (figure 8), other regions of England also have higher than expected proportions of cold/flu calls for this time of year. Calls for fever in the 5-14 age group are approaching national influenza early warning thresholds, accounting for 8.5% of the calls (threshold is 9%).

QSurveillance® (up to 30 June)

The daily GP ILI consultation rate on 30 June was 5.5 per 100,000, and is similar to what would be expected during the normal influenza season. In the West Midlands the rate was 13.2 per 100,000 and in London it was 14.7 per 100,000. Six West Midlands PCTs were significantly high, compared to the rest of the country, on 30 June - in particular Birmingham East & North, South Birmingham and Heart of Birmingham PCTs. There were also several London PCTs with rates significantly higher than the UK including Tower Hamlets and City & Hackney PCTs. The main impact of ILI nationally is in the 5-14 year age group (figure 9).

Figure 7: Daily NHS Direct/HPA Syndromic Surveillance System cold/flu calls 20082009 and daily NHS Direct adjusted total 'cold/flu' 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 8: Daily NHS Direct/HPA Syndromic Surveillance System estimated total 'cold/flu' calls by SHA.*

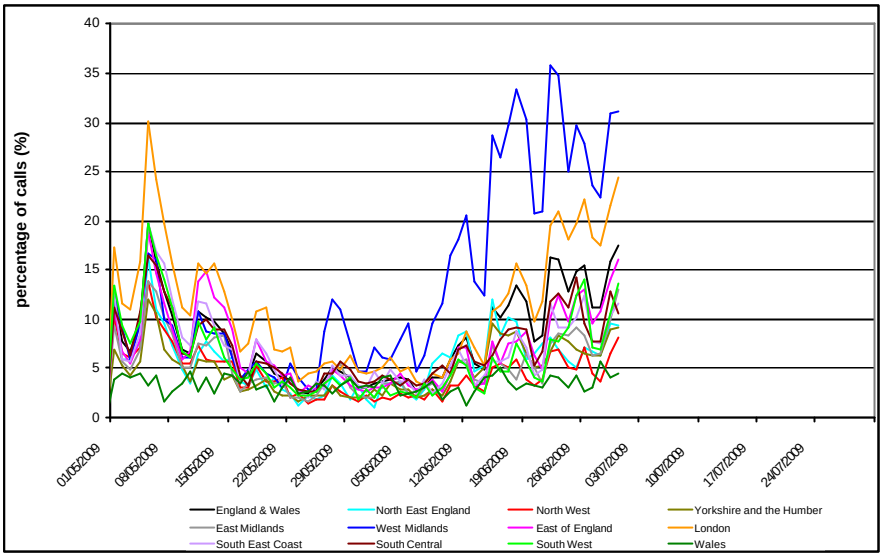
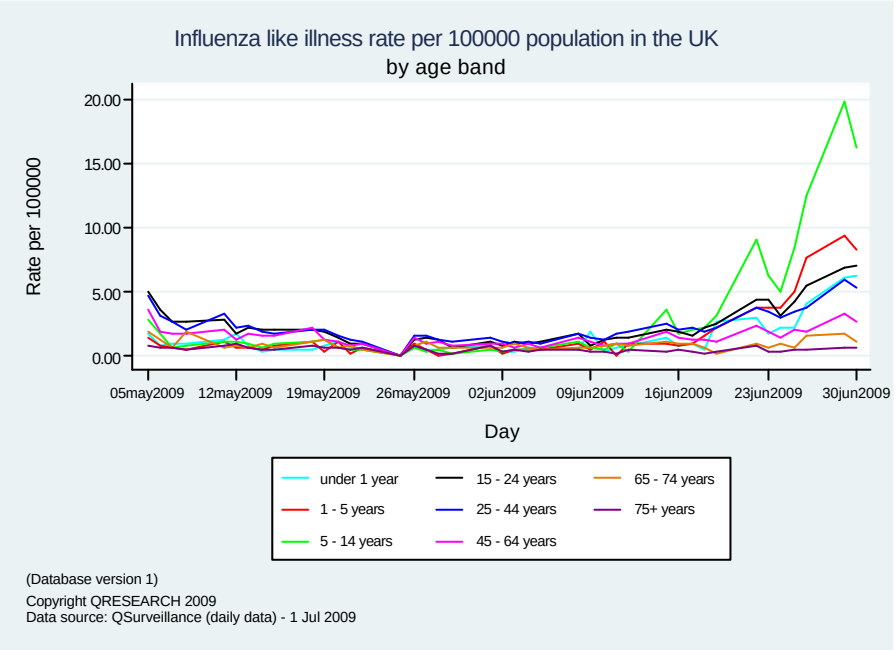


Figure 9: QSurveillance® – daily consultation rate for influenza like illness in UK by age band



Virological Data

In week 26/09 72 samples were positive for influenza A (H1N1v) at RVU, CfI (table 3).

In week 26/09 118 influenza A and one influenza B positive specimens were reported from other NHS and HPA laboratories. It should be noted that these detections are by PCR or isolation only and that the data is based on week of report.

Table 3: Samples positive for influenza (by PCR or isolation) reported by the RVU reference laboratory by subtype (week of report).

Week	A (H1)	A (H3)	B	A (H1N1v)
23	0	1	2	30
24	0	1	0	22
25	0	0	0	29
26	0	3	0	72

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Enhanced Virological Surveillance

Three schemes for virological surveillance of influenza are being used:

- **RCGP/HPA** – A subset of GPs who contribute clinical data via the RCGP network take samples from patients with ILI. This scheme continued from the normal influenza season. Thirty-six positive specimens have come through this scheme.

- **HPA/RMN** – A network of GPs across the country swab patients with ILI, this is a scheme which normally operates in the influenza season but was restarted in week 22 this year. Two positive specimens have come from this scheme.

- **NHS Direct/HPA** - Callers aged 16 or over to NHS Direct who are identified as 'cold/flu' enquirers and who reach a 'self-care' outcome, are offered the opportunity to participate in this scheme, if they agree a self-sampling kit is sent to them. This is a new scheme which started in week 23. Thirty-two positive specimens have come through this scheme.

Results up to 27 June from these schemes are shown in table 4. An overall increase in the proportion positive has been observed in recent weeks.

Table 4: Total number of samples tested and positive for influenza A (H1N1v) from three enhanced virological schemes by week*.

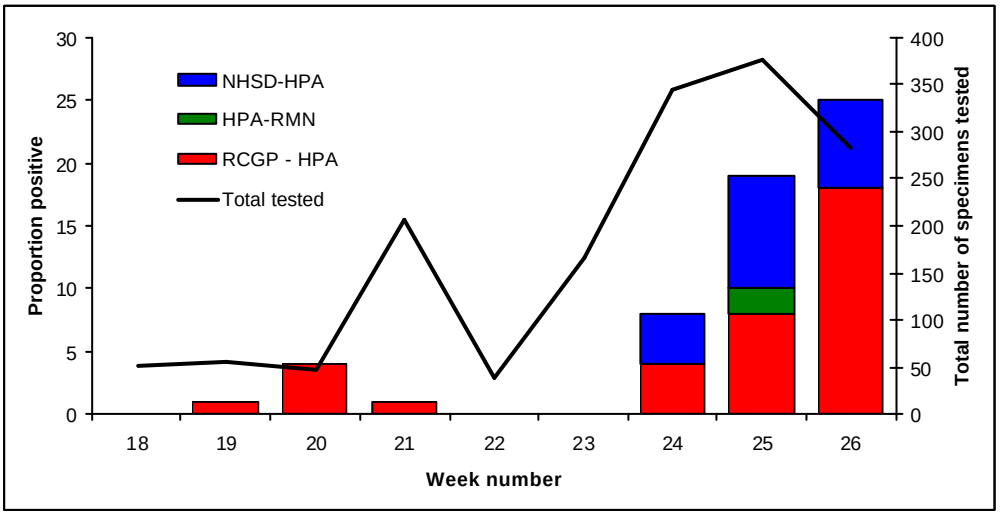
Week**		Scheme											
		RCGP - HPA			HPA-RMN			NHSD-HPA			Total		
		H1N1v +ve		Total tested	H1N1v +ve		Total tested	H1N1v +ve		Total tested	H1N1v +ve		Total tested
Number	Ending (Sat)	N	%		N	%		N	%		N	%	
22***	May-30	6	2.5%	237	0	0.0%	6	-	-	-	6	2.5%	243
23	Jun-06	0	0.0%	51	0	0.0%	10	0	0.0%	105	0	0.0%	166
24	Jun-13	4	8.5%	47	0	0.0%	16	4	1.4%	281	8	2.3%	344
25	Jun-20	8	8.9%	90	2	8.7%	23	9	3.4%	263	19	5.1%	376
26	Jun-27	18	12.8%	141	0	0.0%	9	7	5.3%	132	25	8.9%	282
Total		**36**	**5.9%**	**615**	**2**	**3.1%**	**64**	**32**	**3.3%**	**966**	**70**	**4.3%**	**1645**

* RCGP/HPA and NHSD/HPA by week specimen received in the laboratory, HPA/RMN by week specimen taken from patient

** For current week results are given up to day of report

*** Includes RCGP-HPA data from April 27 to May 30

Figure 10: Number of specimens positive for influenza from the enhanced virological surveillance schemes by week.



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Anti-viral susceptibility testing

Seventeen of the influenza A (H1N1v) isolates have been fully tested for susceptibility at RVU; all 17 were found to be sensitive to oseltamivir and zanamivir and resistant to amantadine. One hundred and ninety-nine 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 (table 5).

Table 5: Samples tested for the H274Y mutation at RVU, CfI, by region.

Region	Resistant	Total tested
East	0	19
East Midlands	0	2
London	0	65
North East	0	2
North West	0	13
South East	0	22
South West	0	5
West Midlands	0	59[a]
Yorkshire and Humberside	0	1
Northern Ireland	0	1
Scotland	0	11[b]
Unknown region	0	2
Grand Total	**0**	**199**

[a] Two samples were taken post oseltamivir treatment
[b] One sample was taken post oseltamivir treatment

Mortality data from the Office of National Statistics

In week 25/09, an estimated 8728 all-cause deaths were registered, which is similar to 8730 in week 24/09. It should be noted that these deaths are due to all causes and cannot be attributed to influenza. The 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

World Health Organization

http://www.who.int/csr/disease/swineflu/en/index.html

According to the World Health Organization (WHO), by 09.00 GMT on 29 June, 70,893 cases of influenza A (H1N1v) had been reported globally with 311 deaths. Countries with greater than 1000 cases are shown in table 6.

Table 6: Countries with greater than 1000 confirmed cases of influenza A (H1N1v) according to latest WHO report.

Country	Number of Cases	Number of Deaths
United States of America	27717	127
Mexico	8279	116
Canada	7775	21
Chile	5186	7
Australia	4038	7
Argentina	1488	23
China	1442	0
Japan	1212	0

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Europe

http://www.ecdc.europa.eu/en/Health%5Ftopics/novel%5Finfluenza%5Fvirus/2009%5FOutbreak/

As of 30 June 2009, 8179 cases of influenza A (H1N1v) had been reported from 29 European countries. Two deaths from the novel virus has been reported from the UK (not including the latest data). The countries with the highest number of confirmed cases are the UK, followed by Spain (717 cases), Germany (407 cases) and France (288 cases). Overall influenza activity remains low across Europe.

United States of America

http://www.cdc.gov/h1n1flu/

As of 25 June 2009 the USA had reported 27,717 confirmed and probable cases of influenza A (H1N1v). A total of 127 deaths due to the novel virus have been reported. Influenza A (H1N1v) activity is being detected through CDC's routine influenza surveillance systems. During week 24 (June 14-20, 2009), influenza activity decreased in the United States, however, there are still higher levels of influenza-like illness than is normal for this time of year.

Mexico

http://portal.salud.gob.mx/contenidos/noticias/influenza/estadisticas.html

As of 23 June 2009 Mexico had reported 8279 cases of influenza A (H1N1v) with 116 deaths. The peak in the number of cases according to date of onset occurred in late April 2009. The majority of the confirmed cases were aged under 20 years (4922 cases or 59%), and 52% were women.

Canada

http://www.phac-aspc.gc.ca/alert-alerte/swine-porcine/surveillance-eng.php

As of 29 June 2009 Canada had reported 7983 cases of influenza A (H1N1v) from all provinces and territories. Five hundred and thirty-eight hospitalisations and 25 deaths due to the novel virus have been reported. During week 23 overall influenza activity remained high, in particular for rates of visits to healthcare professionals for ILI consultations (42 consultations par 1,000 visits) and proportion of tests positive for influenza (19.2%).

Australia

http://www.healthemergency.gov.au/internet/healthemergency/publishing.nsf/Content/health-swine_influenza-index.htm

The first cases of influenza A (H1N1v) was reported from Australia on 09 May, in a person returning from the USA. Since then the number of cases has increased rapidly. On 27 June 2009 the cumulative number of case was reported as 3519, with four deaths. From 27 June to 01 July a further five deaths were reported bring the total to nine.