

# COMMUNICABLE DISEASES

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We start the New Year with influenza virus now circulating in the community. Rates of flu-like illness from those presenting to sentinel GPs increased in late December and over the holiday period with the Regional Virus Laboratory detecting influenza A in hospital and community specimens. So far influenza activity is greater than that seen for the past two winters but within expected seasonal limits and nonetheless is lower than that noted during the 03/04 winter.

This edition also includes an update on the seasonal influenza immunization programme. By 30 November 67% of those aged over 65 years and 64% of those aged under 65 years and in the relevant "at risk" groups had received influenza vaccine. As influenza virus is likely to circulate in the community over the next 6-10 weeks there is still an opportunity to vaccinate those who remain unvaccinated and at risk of flu related complications.

The publication of the annual HPA report "Focus on Tuberculosis" provides an opportunity to compare the differing epidemiology of TB in other parts of the UK. While TB has increased in recent years in Northern Ireland we remain a low TB incidence region compared to most other areas of the UK and Ireland.

The pneumococcal conjugate vaccine was added to the childhood immunisation programme in 2006. Reference is made to the interim arrangements for the management of children with invasive pneumococcal disease who are eligible for routine or catch-up pneumococcal conjugate vaccine.

We have also revised the email format of the Monthly Report to enable readers "to see at a glance" the main points. Comments, as always, are greatly appreciated and should be sent to [cdscni@hpa.org.uk](mailto:cdscni@hpa.org.uk)

**Dr Brian Smyth**  
**Regional Epidemiologist**



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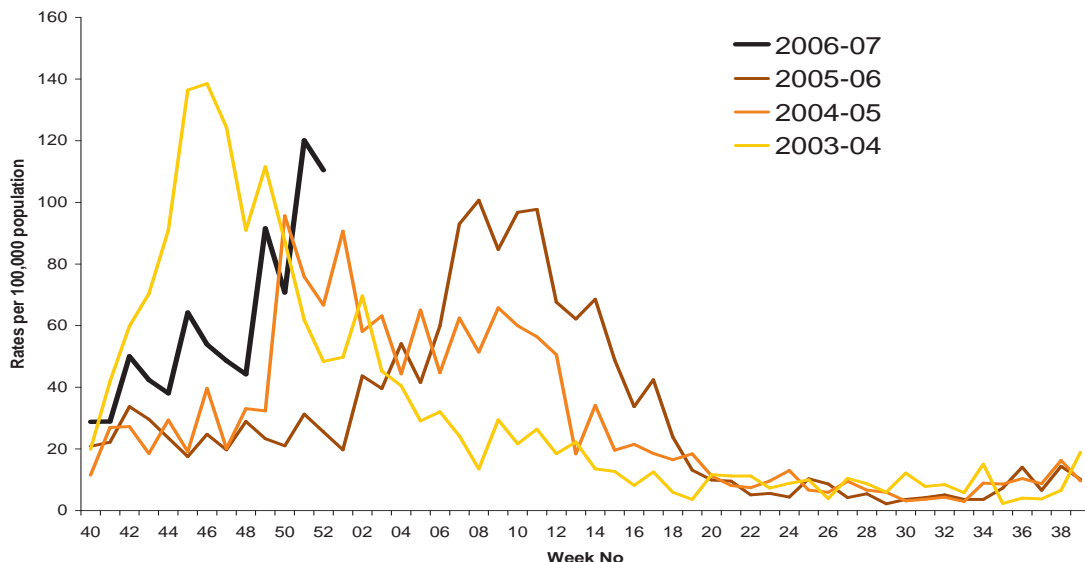
# Enhanced Surveillance of Influenza in Northern Ireland (ESINI)

Enhanced surveillance of influenza in Northern Ireland (ESINI) for the 2006/07 season commenced on 30 September 2006 (Week 40). Surveillance arrangements for this winter have been described previously (Monthly Report Vol. 15 No. 9).

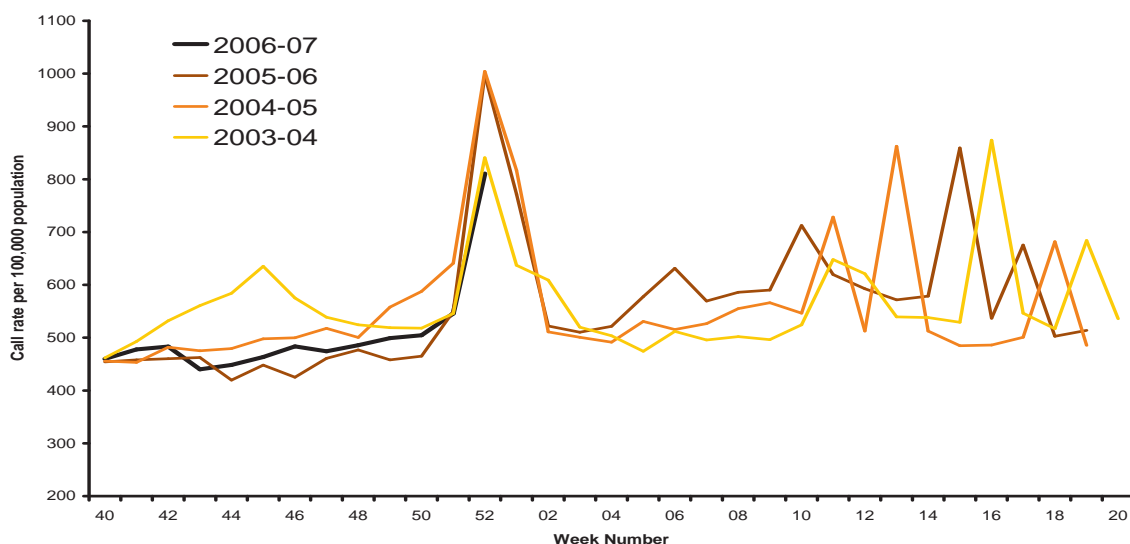
## Clinical Data

From Week 40 to Week 52 (29 December 2006) inclusive, a total of 796 cases of 'flu-like illness have been reported across the 22 sentinel GP practices which participate in the ESINI scheme. In addition, 56 cases of clinical 'flu have been reported (the majority of these between Weeks 50 and 52). Overall, GP consultation rates for 'flu and 'flu-like illness in Northern Ireland have been higher than the level expected for the time of year. However, Out-of-Hours Centres call rates from Week 40 to Week 52 show little variation compared to those of previous years. Although weekly GP consultation rates have continued to remain low throughout England, Wales and the Republic of Ireland, they have risen substantially in Scotland during Week 52 - as have the number of influenza A detections during the same period.

**Figure 1: Combined consultation rates for influenza and 'flu-like illness in General Practice, Northern Ireland**



**Figure 2: Total call rate for Out-of-Hours Centres, Northern Ireland**



## Virological Data

The first influenza detection of the 2006/07 season was in Week 50, the second in Week 51 and the third in Week 52. All were identified as influenza A, all were in hospitalised children and two of these children were co-infected with RSV. A number of sentinel GP swabs were also received over the New Year holiday period and, of these, one has already tested positive for influenza A. At present, RSV detections in Northern Ireland are also increasing week-on-week. However, this is not unexpected for the time of year.

## Weekly Influenza Bulletin

An Influenza Bulletin is issued each week during the season (Week 40 of 2006 to Week 20 of 2007). This is circulated to the Department of Health, Social Services and Public Safety, Boards and Trusts, participating GP practices and Out-of-Hours Centres and other national influenza surveillance centres. If you wish to be added to the mailing list for this bulletin, please contact Dr Hilary Kennedy on 028 9026 3765 or by email [hilary.kennedy@hpa.org.uk](mailto:hilary.kennedy@hpa.org.uk). Alternatively, current bulletins are posted on the website <http://www.cdscni.org.uk> and may be downloaded directly from there.

Northern Ireland is a member of the European Influenza Surveillance Scheme (EISS) and local age-specific and virological data are entered weekly onto the EISS database. Up-to-date detailed information, on the incidence of influenza throughout Europe, may be accessed via the website <http://www.eiss.org>

## Influenza Vaccination Programme: Winter 2006/07

- By 30 November 2006 vaccine uptake:      65 years and over group - 67.1%  
   Under 65 "at risk" group - 64.3%

The Department of Health, Social Services and Public Safety (DHSSPS) has, once again, set a regional target of 70% influenza immunisation uptake among the 65 years and over population for winter 2006/07. Returns were received from 352 of the 363 GP practices registered in Northern Ireland and, by 30 November 2006, 161,084 individuals aged 65 years or more had received influenza immunisation. This is equivalent to an overall Northern Ireland interim uptake rate of 67.1%. Uptake rates by Health and Social Services Board ranged from 60.3% to 72.9%.

In addition to the immunisation of those aged 65 years and over, a target of 60% influenza immunisation uptake among the under 65 "at risk" population was also set by DHSSPS for winter 2006/07. It is estimated that approximately 10% of the under 65 population fall into the "at risk" group. This group includes individuals with heart, renal or lung disease, those with diabetes, those with chronic liver disease, children who have previously been admitted to hospital for lower respiratory tract disease, those who are immunosuppressed through disease or chemotherapy and those living in residential homes. By 30 November 2006, 101,519 "at risk" individuals under 65 years of age had received influenza immunisation, giving an overall uptake rate in this group of 64.3%. Uptake rates by Health and Social Services Board in "at risk" individuals under 65 years of age ranged from 61.9% to 67.1%.

The total number of individuals receiving influenza immunisation by 30 November was 262,603 (Table 1). By this date, the uptake target in the under 65 "at risk" group had already been exceeded and the uptake target in the 65 and over group was close to being met. The total number of vaccines administered by 30 November excludes those not in either of the above risk groups, who may have received influenza immunisation as a result of workplace initiatives.

Final influenza immunisation uptake figures will be collected at the end of the 2006/07 campaign and a detailed report, including clinical risk profile of vaccinated individuals, will be prepared. CDSC (NI) appreciates the efforts of all those involved in the timely supply of vaccination uptake data from each Health and Social Service Board.

**Table 1: Influenza Vaccinations Coverage Data to end November 2006, Northern Ireland**

Board	EHSSB*	NHSSB	SHSSB	WHSSB	NI TOTAL*
No of Practices	147	81	77	58	363
No of Practices which made return by specified date	136	81	77	58	352
No of 65+ individuals vaccinated by 30 Nov 2006	61,219	43,984	31,201	24,680	161,084
Registered 65+ population	101,499	61,435	42,794	34,279	240,007
Vaccination uptake rate among 65+ population	60.3%	71.6%	72.9%	72.0%	67.1%
Presumed "at risk" population under 65 (10% of registered population under 65 years)	61,041	38,371	31,113	27,338	157,863
Total number of "at risk" individuals under 65 vaccinated by 30 Nov 2006	39,798	23,750	19,622	18,349	101,519
Vaccination uptake rate among "at risk" under 65 population	65.2%	61.9%	63.1%	67.1%	64.3%
Total number of patients (all ages) who have received influenza vaccine by 30 Nov 2006	101,017	67,734	50,823	43,029	262,603

\* Not all GP practices have submitted returns to their Board by specified date

Uptake rates in both over 65s and under 65s "at risk" are calculated using the total number of registered patients in each group, in each Board, as the denominator. As a consequence, true uptake rates in EHSSB (and NI as a whole) at 30 November 2006 will be slightly higher than above figures suggest.

## Focus on Tuberculosis

The Health Protection Agency has recently published its annual TB surveillance report covering England, Wales and Northern Ireland ([http://www.hpa.org.uk/publications/2006/tb\\_report/default.htm](http://www.hpa.org.uk/publications/2006/tb_report/default.htm)).

Among the key findings are:

- 8,113 cases of TB were reported in 2005 representing a rate of 14.7/100,000 population and an annual increase of 11% in case numbers compared to 2004
- The London region accounted for 43% cases and the highest incidence rate (46.3/100,000)
- Most TB cases are in young adults (61% aged 15-44 years)
- The rate among the UK born population has remained relatively stable (approximately 4/100,000)

- The rate among non-UK born cases has increased annually from 2000 and in 2005 was 103/100,000
- Among the non-UK born population those belonging to the Indian, Pakistani and Bangladeshi ethnic groups accounted for the highest number of cases while the highest rates occurred in the Black African ethnic group (339/100,000)

A detailed epidemiological report on TB cases notified in Northern Ireland during 2004 is available from the CDSC (NI) website

(<http://www.cdscni.org.uk/publications/AnnualReports/pdf/TBReport2004.pdf>).

This had been previously presented earlier in the autumn to the Northern Ireland TB Sub-Committee of the CMO's Regional Advisory Committee on Communicable Disease Control. It is interesting to compare and contrast the differing epidemiology between other geographical areas and highlights that TB epidemiology differs significantly within the UK.

While the incidence of TB disease in Northern Ireland has risen in recent years to 4.7 cases per 100,000 population it remains significantly less than that in GB and the Republic of Ireland. Eighty-one cases were notified in 2004 (64 pulmonary and 17 non pulmonary) with 65 (80%) culture confirmed. Twenty-five (31%) were born outside the UK/Ireland with the greatest number (11) born in East Timor. The annual number and proportion of TB cases born outside the UK/Ireland has steadily increased since 2002 with previously approximately only 10% cases born abroad. This is reflected in the ages of those notified; the median age of those born abroad was 28 years in 2004 compared with a median age of 56 years of those born in the UK/Ireland.

The year 2005 was unusual in that there were 5 (provisional) cases of *M. bovis* infection notified compared to an expected one or two cases. Some had recognized risk factors such as: extensive worldwide travel and drinking unpasteurised milk; living on a farm with known bovine TB; and age. However for two others no risk factors were identified.

During 2006 the DHSSPS issued new guidance on tuberculosis control in Northern Ireland ([http://www.dhsspsni.gov.uk/ph\\_hss\(md\)\\_10-06.pdf](http://www.dhsspsni.gov.uk/ph_hss(md)_10-06.pdf)) reflecting the changing local epidemiology of TB.

## Management of Invasive Pneumococcal Disease (IPD)

A recent DHSSPS letter HSS (MD) 47/2006 outlined the interim arrangements for accessing advice on the management of children diagnosed with IPD who are eligible for routine or catch-up pneumococcal conjugate vaccine. Based on the serotype of the diagnostic isolate and the vaccination history of the case, advice on investigation and further vaccination will be provided by the HPA's Centre for Infections (Cfi) in London.

Microbiologists should refer isolates from all cases of IPD born after 5/9/04 to the HPA's Respiratory and Systemic Infections Laboratory, Colindale. Paediatricians will ascertain the vaccination status of the cases, and report the case to CDSC (NI) who will then liaise with Cfi. Cfi will issue an advice letter to the paediatrician with a copy to CDSC (NI).

As part of the surveillance of the overall impact of the introduction of PVC, microbiologists have also been asked to refer isolates from cases of IPD of all other ages to RSIL for serotyping. The impact of the introduction of the pneumococcal conjugate vaccine to the childhood immunisation programme will be described in a future *Monthly Report*.

## Monthly Surveillance Figures for Creutzfeldt-Jakob Disease

The Department of Health has issued the latest information about the number of known cases of Creutzfeldt-Jakob disease. This includes cases of variant Creutzfeldt-Jakob disease (vCJD) - the form of the disease thought to be linked to BSE.

Further information can be accessed on the Department of Health website  
<http://www.dh.gov.uk/PolicyAndGuidance/HealthAndSocialCareTopics/CJD/fs/en>

**Table 2: Creutzfeldt-Jakob Disease in the UK by Calendar Year**

Referrals of Suspect CJD		Deaths of Definite and Probable CJD						
Year	Referrals	Year	Sporadic	Iatrogenic	Familial	GSS	vCJD	Total Deaths
1990	[53]	1990	28	5	0	0	-	33
1991	75	1991	32	1	3	0	-	36
1992	96	1992	45	2	5	1	-	53
1993	78	1993	37	4	3	2	-	46
1994	118	1994	53	1	4	3	-	61
1995	87	1995	35	4	2	3	3	47
1996	133	1996	40	4	2	4	10	60
1997	162	1997	60	6	4	1	10	81
1998	154	1998	63	3	3	2	18	89
1999	170	1999	62	6	2	0	15	85
2000	178	2000	50	1	2	1	28	82
2001	179	2001	58	4	3	2	20	87
2002	163	2002	72	0	4	1	17	94
2003	162	2003	79	5	4	2	18	108
2004	114	2004	51	2	4	1	9	67
2005	123	2005	65	3	7	6	5	86
2006*	98	2006*	53	1	5	3	5	67
<b>Total Referrals</b>	<b>2143</b>	<b>Total Deaths</b>	<b>883</b>	<b>52</b>	<b>57</b>	<b>32</b>	<b>158</b>	<b>1182</b>

\* Definite and probable CJD cases in the UK (as at 1 December 2006):

### Summary of vCJD cases

#### Deaths

Deaths from definite vCJD (confirmed):	112
Deaths from probable vCJD (without neuropathological confirmation):	46
Deaths from probable vCJD (neuropathological confirmation pending):	0
<b>Number of deaths from definite or probable vCJD (as above):</b>	<b>158</b>

#### Alive

Number of definite/probable vCJD cases still alive:	6
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<b>Total number of definite or probable vCJD (dead and alive):</b>	<b>164</b>
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## Foodborne and Gastrointestinal Tract Infections: Laboratory Reports, Weeks 45-48

	Number of Reports received		Cumulative total	
	06/45-48	05/45-48	06/01-48	05/01-48
<i>Campylobacter</i>	67	67	875	846
<i>C. difficile</i> Toxin	91	75	1381	1348
<i>C. perfringens</i>	1	2	25	18
<i>E. coli</i> O 157	6	10	47	48
<i>Salmonella</i> total	7	6	192	174
<i>S. enteritidis</i> (PT 4)	1	2	85 (10)	83 (13)
<i>S. typhimurium</i> (DT 104)	2	1	36 (8)	33 (4)
<i>Salmonella</i> other	4	3	71	58
<i>Shigella</i>	0	0	9	7
<i>Cryptosporidium</i>	8	15	131	160
<i>Giardia</i>	0	1	15	17
Adenovirus (faeces)	13	7	154	158
Enterovirus (faeces)	2	2	8	26
Rotavirus	5	6	425	430
Norovirus	24	4	348	203

*Salmonella* (other than *enteritidis* or *typhimurium*):

<i>S. chester</i>	1
<i>S. spp</i>	1
<i>S. unnamed</i>	1

### Comment:

The following were associated with foreign travel:

Female, age 5 years, *Campylobacter sp*, Republic of Ireland.

To week 48 of 2006, the cumulative number of laboratory reports of *Campylobacter* and *Clostridium difficile* toxin have both risen very slightly by 3%. *Clostridium perfringens*, *Salmonella* and *Shigella* have risen by 39%, 10% and 29% respectively. Norovirus has risen by 71% compared to the same period in last year.

All other organisms have exhibited a reduction compared to the same period in 2005.

## Positive Blood Cultures: Laboratory Reports, Weeks 01-48

	2006/-01-48	2005/01-48	2004/01-48
<b>Gram negative bacteria</b>			
<i>Acinetobacter sp</i>	30	50	40
<i>Aeromonas sp</i>	5	5	3
<i>Brucella sp</i>	1	0	0
<i>Campylobacter sp</i>	1	2	2
<i>Citrobacter sp</i>	24	19	21
<i>Enterobacter sp</i>	74	91	79
<i>Escherichia coli</i>	704	675	650
<i>Escherichia sp</i>	1	1	0
<i>Haemophilus influenzae</i> (all types)	9	10	12
<i>Haemophilus parainfluenzae</i>	2	1	0
<i>Klebsiella sp</i>	165	156	138
<i>Legionella sp</i>	0	0	1
<i>Leptospira</i>	0	1	1
<i>Neisseria meningitidis</i>	17	5	4
<i>Neisseria sp</i>	1	2	0
<i>Proteus sp</i>	53	75	85
<i>Providencia sp</i>	2	2	6
<i>Pseudomonas aeruginosa</i>	68	92	66
<i>Pseudomonas sp</i>	48	39	52
<i>Salmonella sp</i>	3	7	9
<i>Serratia sp</i>	63	86	61
Other gram negative bacteria	35	29	34
<b>Total</b>	<b>1306</b>	<b>1348</b>	<b>1264</b>
<b>Gram positive bacteria</b>			
<i>Corynebacterium sp</i> & Diphtheroids	8	9	13
Staphylococci:			
<i>S. aureus</i>	493	484	541
coagulase negative	401	366	321
Streptococci*:			
group A	19	27	30
group B	57	44	41
group C	3	13	12
group G	8	14	11
'anguinosus group'	19	26	24
'bovis group'	12	10	11
'mitis group'	14	20	16
'mutans group'	2	0	0
'salivarius group'	7	6	7
'sanguinis group'	8	8	9
<i>S. pneumoniae</i>	127	120	125
Other Streptococci	30	18	32
Enterococci:			
<i>E. faecalis</i>	112	105	89
<i>E. faecium</i>	98	77	74
Other Enterococci	14	17	24
<i>Listeria monocytogenes</i>	2	3	4
Other gram positive bacteria	29	21	20
<b>Total</b>	<b>1463</b>	<b>1388</b>	<b>1404</b>
<b>Anaerobic bacteria</b>			
Anaerobic cocci	1	9	2
<i>Bacteroides sp</i>	47	41	59
<i>Clostridium sp</i>	30	30	28
Other anaerobic bacteria	7	6	0
<b>Total</b>	<b>85</b>	<b>86</b>	<b>89</b>
<b>Grand Total</b>	<b>2854</b>	<b>2822</b>	<b>2757</b>

\* Pyogenic streptococci have been grouped according to traditional Lancefield serological groupings; non-pyogenic streptococci grouped according to their biochemical and genetic properties and based on current taxonomy.

## Respiratory Tract Infections: Laboratory Reports, Weeks 37-48

	Number of Reports received			Cumulative Total	
	06/37-40	06/41-44	06/45-48	06/01-48	05/01-48
<i>Coxiella burnetii</i>	2	0	0	14	6
<i>Mycoplasma pneumoniae</i>	0	0	0	58	30
Respiratory <i>Chlamydia</i>	4	1	0	48	13
<i>Adenovirus</i> (excluding faeces)	0	2	0	52	130
RSV	1	6	29	547	266

## Contributing Laboratories

Altnagelvin

Greenpark

Antrim

Regional Virus

Belfast City

Royal Hospitals Bacteriology

Causeway

Tyrone County

Craigavon

Ulster

Mater

## Editorial Team

Dr Brian Smyth

Dr Neil Irvine

Audrey McQuaid

Dr Hilary Kennedy

Helen Hughes

Julie Boucher

Ruth Campbell

Lewis Shilliday

CDSC (NI)

McBrien Building

Belfast City Hospital

Lisburn Rd

Belfast

BT9 7AB

Tel: 028 9026 3765

Fax: 028 9026 3511

Email: [cdscni@hpa.org.uk](mailto:cdscni@hpa.org.uk)

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