COMMUNICABLE DISEASES

Monthly Report

ISSN 1361-1887 WEEKS 41-44/06 VOL. 15 NO. 11

NORTHERN IRELAND EDITION www.cdscni.org.uk November 2006

As we near Christmas there has been, at the time of writing, only one confirmed report of influenza (A/H3) so far this winter. Currently consultation rates for 'flu-like illness are low elsewhere in the UK and Ireland with only a few sporadic cases of influenza A reported. However it is still too early to state if this will be another winter of low influenza activity - much can change between now and mid May which marks the end of the seasonal influenza reporting period. This autumn there has been an encouraging start to the influenza immunisation among the at risk population. Still on an influenza theme, this edition also outlines developments underway to enhance the influenza surveillance programme as part of pandemic influenza preparedness.

We are now in the midst of the meningococcal season when an increase in meningococcal activity is expected. Five children, four with confirmed serogroup B meningococcal infection, were notified during November. Clinicians will be required to remain extra vigilant over the next few months during this period of increased meningococcal activity particularly when there is increased activity from other respiratory viruses.

Surveillance of communicable disease in Northern Ireland is underpinned by strong collaborative links between CDSC (NI) and public health colleagues, microbiologists and laboratory colleagues, environmental health practitioners, veterinarians, the water industry, Government Departments and similar centres in England, Scotland, Wales and the Republic of Ireland. There are many other partners with whom we work closely throughout the year. Surveillance is not resource neutral and we gratefully acknowledge the contribution of others in supplying data to inform our work particularly when they themselves are under increasing pressures. To all our collaborators we wish you a

HAPPY CHRISTMAS and a peaceful NEW YEAR

Dr Brian Smyth
Regional Epidemiologist

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Influenza Vaccination Programme: winter 2006-07

The Department of Health, Social Services and Public Safety (DHSSPS) has, once again, set a regional target of 70% influenza immunisation uptake for those aged 65 and over during winter 2006/07. To date, returns have been received from 330 of the 363 GP practices registered in Northern Ireland. By 31 October 2006, 117,996 individuals aged 65 years and over had received influenza immunisation. This is equivalent to an overall Northern Ireland interim uptake rate of 49.2%. Uptake rates by Health and Social Services Board ranged from 38.9% to 57.3%.

In addition to the immunisation of those aged over 65 years, 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, lung or chronic liver disease, those with diabetes, 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 31 October 2006, 65,563 "at risk" individuals under 65 years of age had received influenza immunisation, giving an overall uptake rate in this group of 41.5%. Uptake rates by Health and Social Services Board in "at risk" individuals under 65 years of age ranged from 39.1% to 44.5%.

Two further sets of interim influenza immunisation uptake rates, to 30 November 2006 and 31 December 2006, will be available in mid-December 2006 and mid-January 2007 respectively and will be published shortly thereafter. 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 by CDSC (NI). In addition, information on the number of carers receiving influenza vaccination (as recommended by the Joint Committee on Vaccination and Immunisation for winter 2006/07) will also be published. CDSC (NI) appreciates the efforts of all those involved in the timely supply of vaccination uptake data from each Health and Social Service Board.

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 47 inclusive, a total of 375 cases of 'flu-like illness have been reported across the 22 sentinel GP practices which participate in the ESINI scheme. Only nine cases of clinical 'flu have been reported. Overall, GP combined consultation rates for 'flu and 'flu-like illness have been somewhat higher than the level expected for the time of year. However, Out-of-Hours Centres call rates from Week 40 to Week 47 show little variation compared to those of previous years. Weekly GP consultation rates also continue to remain low throughout the UK and Republic of Ireland

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

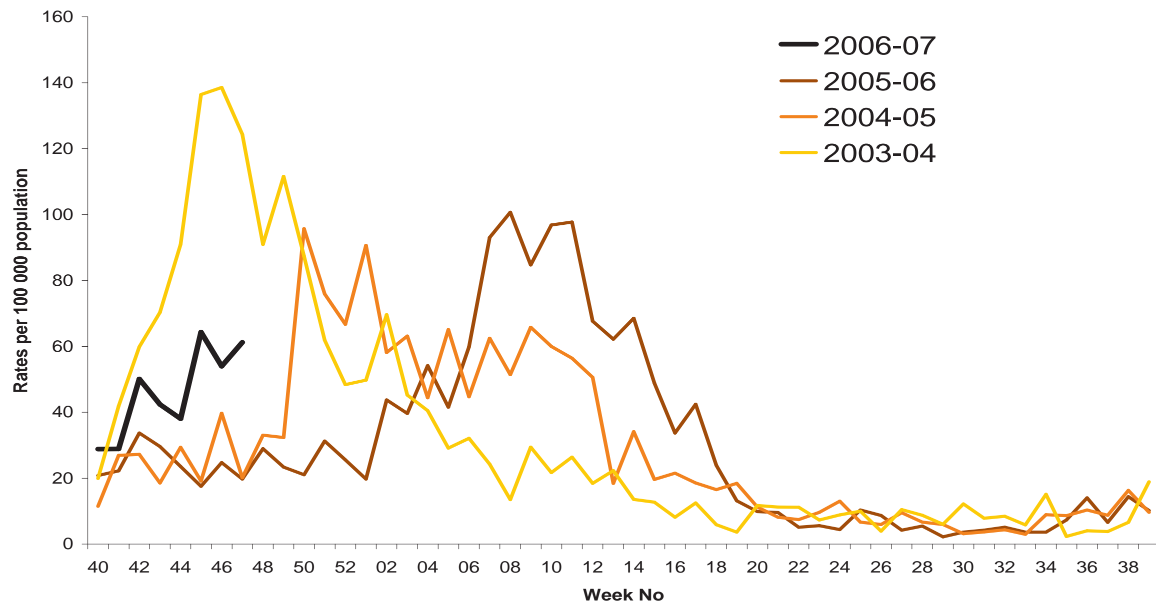
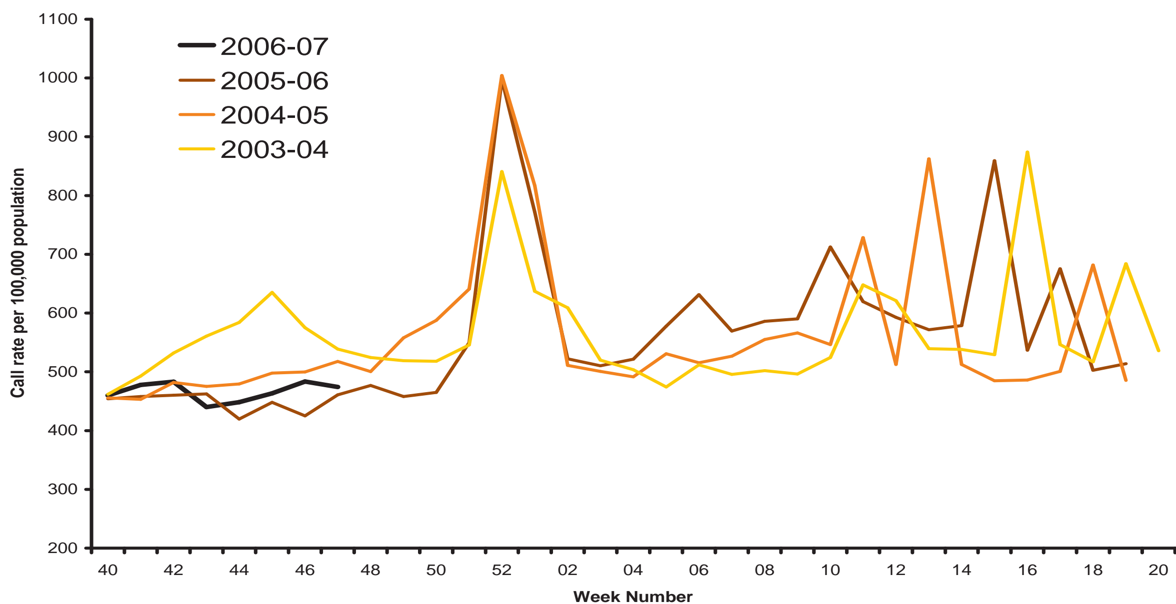


Figure 2: Total call rate for Out-of-Hours Centres, Northern Ireland



Virological Data

Since the 2006/07 season commenced, there have been no influenza virus detections in Northern Ireland; either from sentinel GP swabs or from hospitalised patient samples. Numbers of detections of other respiratory viruses, such as RSV, also continue to remain low at present.

Weekly Influenza Bulletin
At present, the 'Flu Bulletin is being issued at fortnightly intervals. Once influenza virus is known to be in circulation, or consultation rates increase substantially, the Bulletin will be issued weekly thereafter. The 'Flu Bulletin is circulated to the Department of Health, Social Services and Public Safety, Boards and Trusts, participating GP practices, Out-of-Hours Centres and other national influenza surveillance centres. If you wish to be added to the mailing list, please contact Dr Hilary Kennedy on 028 9026 3765 or by email 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.

Pandemic Influenza Preparedness: Update on Surveillance Arrangements

This *Monthly Report* provides an update on the incidence of 'flu-like illness as reported from sentinel GP practices and virology reports from the Regional Virus Laboratory. The seasonal influenza surveillance programme will form the core of surveillance arrangements in the period immediately prior to and during a pandemic.

A number of developments are underway to further enhance surveillance arrangements. These include:

Reports of rates of 'flu-like illness from Out-of-Hours Centres
In the past calls to such Centres were not coded thereby making it difficult to readily extract in a timely manner the number of patients with symptoms consistent with 'flu-like illness. New software currently being installed in the Out-of-Hours Centres will provide this information thereby facilitating the calculation of call rates for flu-like illness by centre. In addition, it should also be possible to capture information on the outcome of the call, i.e. whether a home visit or hospital admission was required. This information should be available for seasonal influenza surveillance next winter. In a pandemic, the Out-of-Hours Centres may be required to prescribe/provide antiviral medication or influenza vaccination and it is hoped this new software will also be able to provide this data.

Surveillance of secondary bacterial infections associated with influenza
In a pandemic patients may acquire a secondary bacterial infection. It will therefore be important to ensure that empirical antibiotic advice is based on antimicrobial sensitivities to common respiratory tract bacterial pathogens. A number of laboratories in the UK, including one in Northern Ireland, are now contributing to this surveillance programme through an extension of the normal voluntary laboratory reporting scheme. This involves collating antimicrobial sensitivity information from respiratory tract specimens from which *S. aureus, H. influenza* and *S. pneumonia* have been cultured. This information is extracted through CoSurv from the laboratory IT system and via CDSC (NI) sent weekly to the national database at the Centre for Infections, Colindale. Information is also requested on patient age and patient source (general practice, outpatient, inpatient and A&E). This data collection and analysis system is being established and validated in advance of pandemic influenza as part of general pandemic preparedness arrangements. A report on the initial Northern Ireland data will be presented in a future *Monthly Report*.

Calculation of excess mortality

CDSC (NI) current receives weekly data from the Northern Ireland Statistics and Research Agency (NISRA), as part of its weekly enhanced influenza surveillance programme, the total number of deaths registered in the previous week and the proportion that are due to pneumonia, bronchitis, influenza and bronchiolitis. CDSC (NI) is currently liaising with NISRA on methods to detect and quantify excess mortality that would occur during a pandemic.

Influenza outbreak reporting

Influenza can spread rapidly in institutions such as care homes and schools and cause significant disruption. Those in care homes are already at risk of 'flu-related complications and are recommended to be offered seasonal influenza vaccine each year. Depending on the influenza virus attack rates can be high among school age children. Thus it is important to document institutional outbreaks, measure attack rates and identify the virus causing the outbreak. CDSC (NI) has agreed arrangements with Consultants in Communicable Disease Control in each Health and Social Services Board on the reporting of such outbreaks. The reporting proforma will be tested during this and subsequent winters and refined appropriately. A summary of outbreaks reported from institutional settings will be included in the annual influenza surveillance report which is published each May/June.

National patient database

A national database is being developed in which detailed clinical, laboratory and epidemiological data will be held on pandemic influenza patients. It is envisaged this would be used for the first few hundred UK cases to provide essential data for modellers at the Department of Health and the HPA to predict the course of the pandemic. This database will also be used to document relevant details on human cases of Influenza A/H5N1.

Enhanced Surveillance of Meningococcal Disease (ESMD)

During the month of November 2006, five cases of invasive meningococcal disease were notified through the enhanced surveillance of meningococcal disease (ESMD) scheme and all occurred in children aged four years or younger. Of these five cases, four have been identified as serogroup B infection. The fifth case is, as yet, unconfirmed.

Between 01 January 2006 and 30 November 2006, CDSC (NI) received 94 notifications of invasive meningococcal disease through the ESMD scheme. Sixty-nine (73%) of these 94 cases have, to date, been laboratory confirmed and all but two have been identified as serogroup B infection. One of these two cases has been identified as serogroup C infection (the first since December 2004) and the other is Ungrouped. One death has been attributed to meningococcal disease during 2006 to date. This occurred in a child under 12 months of age who presented with septicaemia and had laboratory confirmed serogroup B infection.

These figures are approximately 16% higher than for the same period of 2005, when a total of 81 cases were notified, but are identical to the equivalent period of 2004. Between January and November 2005, 48 (59%) of the 81 cases notified were laboratory confirmed and all but one were identified as serogroup B infection. Three deaths occurred between January and November 2005; one in child over 14 years of age and two in adults. Two of these three cases were laboratory confirmed as serogroup B infection and the remaining case was unconfirmed.

Table 1: Meningococcal disease by Health and Social Services Board, Northern Ireland, January to November 2006

HSSB	Confirmed			Not Confirmed	Total
	B	C	Other and ungrouped		
E	29	0	0	5	34
N	16	0	1	3	20
S	12	0	0	3	15
W	10	1	0	14	25
Total	67	1	1	25	94

Figure 3: Cases of Meningococcal Disease by Month, January to November 2006

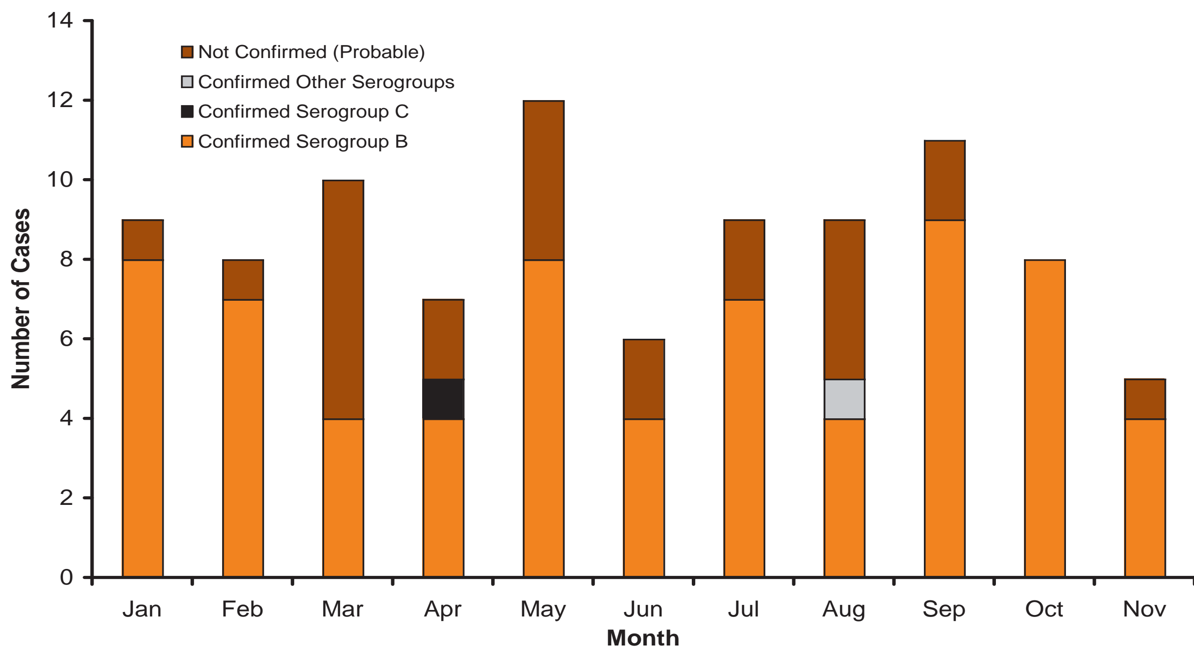
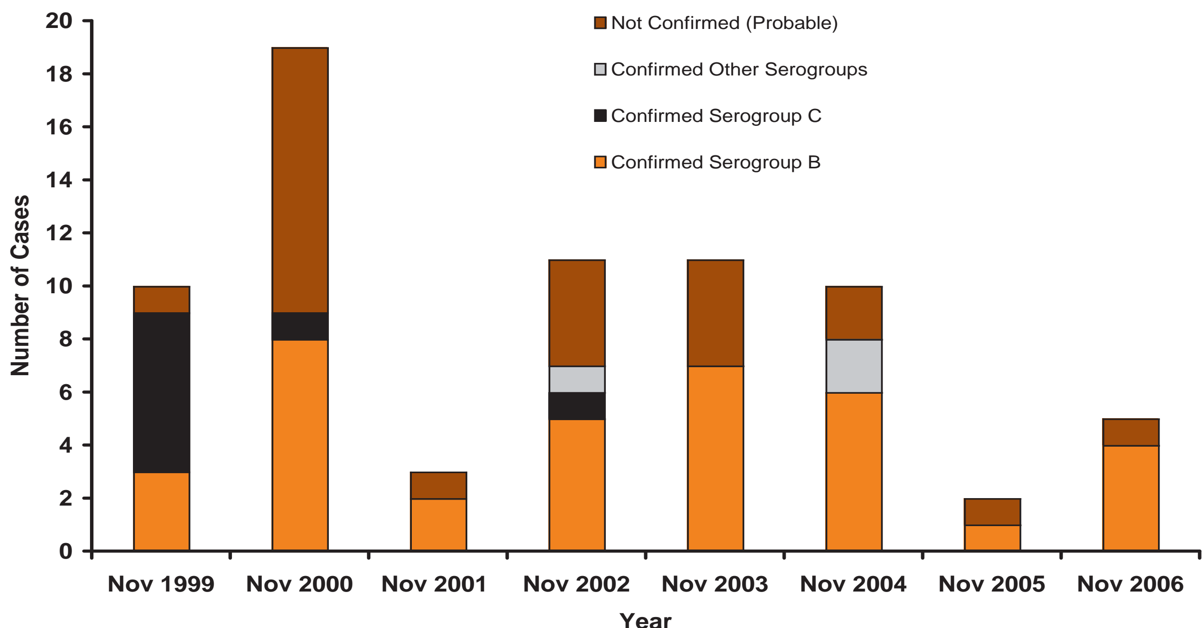


Figure 4: Cases of Meningococcal Disease in the Month of November, 1999-2006



Mycobacteria: Laboratory Report Weeks 33-44

	Number of Reports received			Cumulative total	
	06/33-36	**06/37-40**	**06/41-44**	**06/01-44**	**05/01-44**
M. abscessus	0	0	0	2	3
M. avium-intracellulare group	1	3	0	26	25
M. bovis	0	0	0	1	2
M. celatum	0	0	0	1	0
M. chelonae	0	1	0	4	3
M. fortuitum	0	0	1	2	2
M. gordonae	0	2	0	20	17
M. kansasii	0	1	0	5	4
M. malmoense	0	1	0	5	3
M. peregrinum	0	0	0	2	1
M. septicum	1	0	0	1	0
M. simiae	0	1	0	2	0
M. sp	0	0	0	0	2
M. terrae	0	0	0	0	1
M. tuberculosis	2	9	4	39	39
TOTAL	4	18	5	110	102

Comment:

Four cases of *M. avium intracellulare* were reported during weeks 33 - 44, 2006. All cases were female, aged between 5 and 84 years. Three cases were isolated from sputum and one from pus (source unknown).

There was one case of *M. chelonae* isolated from sputum during this reporting period. The case was male, aged 81 years.

One case of *M. fortuitum* was isolated from sputum. The case was female, aged 38 years.

There were two cases of *M. gordonae* during this twelve-week reporting period. One case was male, aged 82 years and one was female, aged 47 years. Both specimens were from sputum.

One case of *M. kansasii* was isolated from sputum. The case was female, aged 84 years.

One case of *M. malmoense* was isolated from sputum. The case was male, aged 71 years.

One case of *M. septicum* was isolated from sputum. The case was male, aged 64 years.

One case of *M. simiae* was isolated from sputum. The case was female, aged 82 years.

Fifteen cases of *M. tuberculosis* were reported during this reporting period. Eight cases were male, aged between 33 and 88 years; seven cases were female, aged between 26 and 91 years. Eleven cases were isolated from sputum, two from pus (source unknown), one from lung and one from skin/wound.

Foodborne and Gastrointestinal Tract Infections: Laboratory Reports, Weeks 41-44

	Number of Reports received		Cumulative total	
	06/41-44	05/41-44	06/01-44	05/01-44
Campylobacter	76	79	793	779
C. difficile Toxin	111	64	1270	1273
C. perfringens	1	2	24	16
E. coli O 157	1	2	42	38
Salmonella total	8	11	171	168
S. enteritidis (PT 4)	5 (1)	4	78 (9)	81 (13)
S. typhimurium (DT 104)	0	2	31 (7)	32 (4)
Salmonella other	3	5	62	55
Shigella	1	2	9	9
Cryptosporidium	8	16	122	145
Giardia	1	1	15	16
Adenovirus (faeces)	7	12	172	151
Enterovirus (faeces)	0	1	4	24
Rotavirus	3	6	418	424
Norovirus	0	2	316	199

Salmonella (other than enteritidis or typhimurium):

S. spp	2
S. unnamed	1

Comment:

The following were associated with foreign travel:

Male, age 39 years, *Campylobacter sp*, Hungary; Female, age 24 years, *Campylobacter sp*, Cyprus; Female, age 5 years, *Campylobacter sp*, Republic of Ireland.

Laboratory reports of *C. difficile* toxin, *Cryptosporidium*, *Giardia* and Rotavirus are showing a decline compared to the same period last year.

Cumulative reports of *Campylobacter* and *Salmonella* have risen very slightly. Reports of *E. Coli* O 157 and *C. perfringens* and have risen by 11% and 50% respectively compared to the same period last year,

Reports of Norovirus and Enterovirus have remained unchanged.

Contributing Laboratories

Altnagelvin

Antrim

Belfast City

Causeway

Craigavon

Mater

Greenpark

Regional Virus

Royal Hospitals Bacteriology

Tyrone County

Ulster

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

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Comments and contributions are welcomed and should be sent to the Editor.

Monthly numbers are provisional and should not be used to indicate trends.