



Enhanced surveillance of meningococcal disease (ESMD)

During the month of January 2004, a total of eleven cases of invasive meningococcal disease were notified through the ESMD scheme. Five of these have been confirmed as serogroup B infection, one as serogroup C infection, and two are ungrouped. The remaining three cases are unconfirmed. One death, in a child aged under 1 year who presented with septicaemia, occurred during the month of January. The cause of death has not yet been confirmed as invasive meningococcal disease.

Only one of the five confirmed serogroup B infections during January 2004 occurred in a child under 3 years of age, who presented with both meningitis and septicaemia. A further three cases were in young adults aged 15-24 and the remaining case was in an individual over 25 years of age. The confirmed serogroup C infection occurred in a young child who had

received a full course of Men C vaccine more than 3 years prior to the onset of disease.

These figures are similar to the same period last year, when nine cases of invasive meningococcal disease were notified. Four of these nine cases were laboratory confirmed as serogroup B infection and the remaining five cases were unconfirmed. No deaths due to

Contents		PAGE
Mumps: further increase in confirmed cases		2-3
Vaccination Coverage Statistics for Children in Northern Ireland		4-5
Avian influenza outbreaks in poultry and in humans		4-5
Enhanced MMR Vaccination Uptake Surveillance		6
Salivary Antibody Testing		6-7
Laboratory Reports		
Foodborne and Gastro-intestinal Tract Infections		8
Positive Blood Cultures		7

meningococcal disease occurred during the month of January 2003.

Meningococcal infection occurs most frequently between the months of November and March. Updates on disease activity will appear in Monthly Reports throughout the meningococcal season.

Table 1: Meningococcal disease by Health and Social Services Board, Northern Ireland, January 2004

HSSB	Confirmed			Not confirmed	Total
	B	C	Other and ungrouped		
E	0	1	1	0	2
N	3	0	0	1	4
S	1	0	1	1	3
W	1	0	0	1	2
Total	5	1	2	3	11

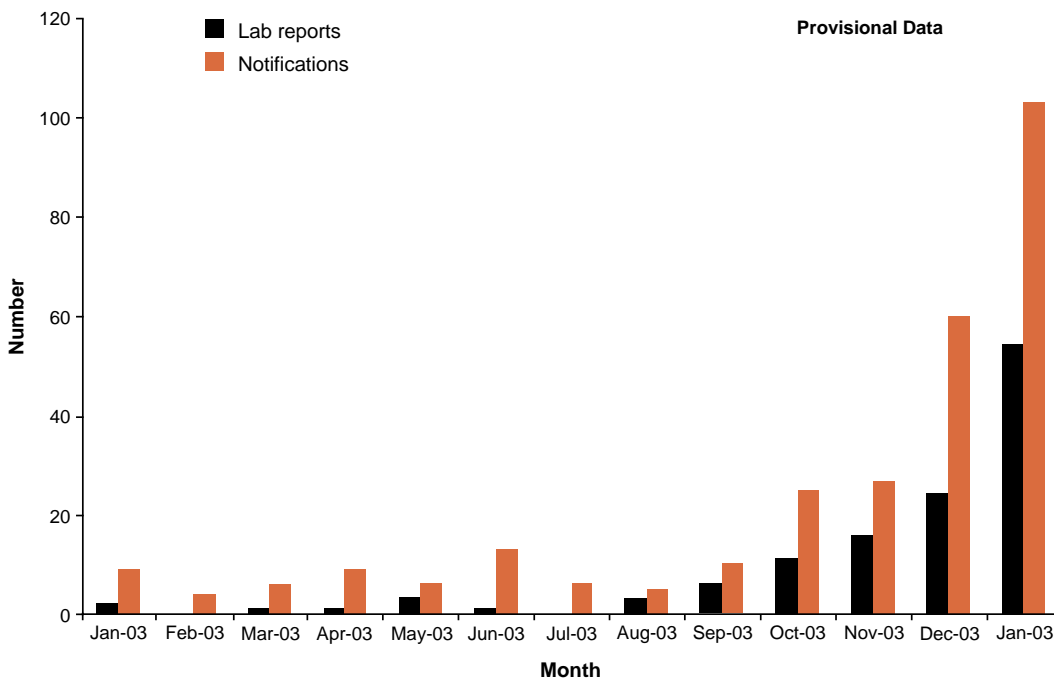
Mumps: further increase in confirmed cases

The number of reports of mumps (notifications and confirmed cases) has been increasing in Northern Ireland since September 2003 (Fig 1). Provisionally 180 notifications were received during 2003

compared with 77 in 2002 (246% increase). Sixty eight notifications were laboratory confirmed through salivary antibody testing. Mumps activity has been reported throughout the region but mainly (71%) in the Eastern and Southern

Board areas which together accounted for 128 notifications. This increased activity has carried into 2004 with 103 clinical notifications (54 confirmed cases) received by CDSC (NI) in January.

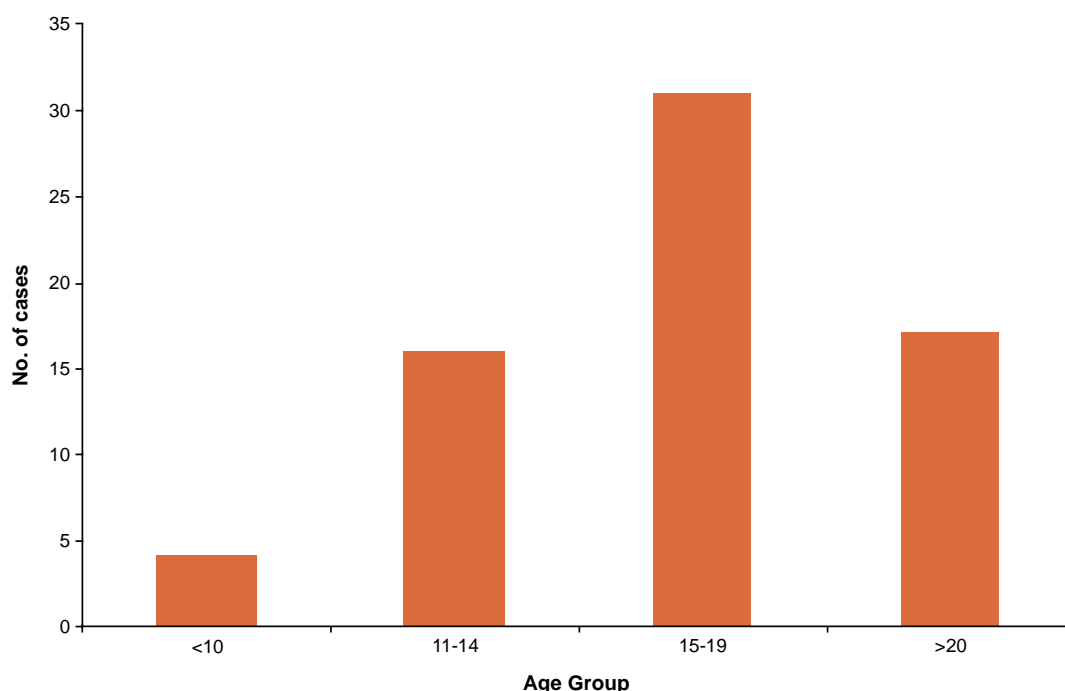
Figure 1: 'Epidemic' Curve: Mumps Laboratory Reports*, (Salivary & Blood), by Month of Specimen Date, 2003-2004, Northern Ireland



*includes cases for which no lab report has been received at CDSC (NI) but has been confirmed by CCDC

Forty seven (69%) of the 68 confirmed cases in 2003 were aged 11-19 years with 31 aged between 15-19 years (Fig 2). Vaccination status was ascertained for 54 (79%) of the confirmed cases (Table 2). Only two had received two doses of MMR vaccine. Eight (8/54, 15%) had no record of receiving MMR vaccine, 11 (20%) had received one dose of MMR vaccine, 11 (20%) had received MR vaccine only and 22 (41%) had received MR and MMR vaccine. This pattern has continued into 2004 with 19/36 (53%) confirmed cases aged between 15-19 years having received MR and MMR vaccine.

Figure 2: Provisional Mumps Laboratory Reports, (Salivary & Blood), by Age Group, 2003, Northern Ireland (n=68*)



*includes cases for which no lab report has been received at CDSC (NI) but has been confirmed by CCDC

Table 2: Vaccination Status of Provisional Laboratory Confirmed Mumps Cases, By Age Group, 2003, Northern Ireland (n=68)

Age	No Vaccine	MMR Only	MR Only	MMR & MR	MMR1 & MMR2	Not Known
<10	1	2	0	0	0	1
11-14	2	6	1	4	2	1
15-19	1	2	7	17	0	4
>20	4	1	3	1	0	8

The last mumps outbreak in Northern Ireland was in 2000/01 when 1543 notifications (mainly teenagers) were received. At that time the Eastern Board had few cases. Recent increases in mumps activity have also been reported in Scotland and England. The age profile of those with mumps indicate those most at risk are those too old to have had two doses of MMR vaccine in the routine schedule (born pre 1992) but young enough to have grown up during a period of lower mumps incidence (born post 1980). The recent rise in

mumps activity again highlights the importance of children receiving two doses of MMR vaccine.

References:

1. SCIEH Weekly report; 38 (2004/07): 37
2. Laboratory confirmed cases of measles, mumps and rubella, England and Wales: July – September 2003. <http://www.hpa.org.uk/cdr/PDFfiles/2003/cdr4803.pdf>.
3. Reaney E, Tohani V, Devine M, Smithson R, Smyth B. An outbreak of mumps among young people in Northern Ireland. *Communicable Disease and Public Health* 2001; 4: 311-5

Vaccination Coverage Statistics for Children in Northern Ireland

The vaccination coverage statistics for Northern Ireland (COVER/Körner Programme) are now available for the third quarter of 2003. The statistics give detailed coverage data and numbers of children in the four Boards in Northern Ireland. The tables below show the coverage data for Northern Ireland and the United Kingdom as a whole by the first and second birthday.

Completed Primary Immunisations by 12 months and 24 months COVER/Körner: Data Northern Ireland (July – Sept 2003)

Board	% Coverage at 12 months								% Coverage at 24 months							
	No of children in cohort	Dip3	Tet3	Pol3	Pert3	Hib3	MMR	MenC	No of children in cohort	Dip3	Tet3	Pol3	Pert3	Hib3	MMR	MenC
Eastern	2015	93.0	93.0	93.0	92.5	93.6	0.0	93.9	2091	95.6	95.6	95.4	95.0	95.5	81.9	95.5
Northern	1391	96.4	96.4	96.3	96.3	96.4	0.0	96.5	1347	98.5	98.5	98.4	98.0	98.4	90.4	98.1
Southern	1155	97.1	97.1	96.6	96.4	97.1	0.2	97.1	1145	97.4	97.4	97.4	96.6	97.2	90.4	97.8
Western	981	95.3	95.3	95.2	94.7	95.5	0.0	95.8	1014	97.1	97.1	96.7	96.4	97.3	90.3	97.3
NI Total	5542	95.1	95.1	95.1	94.7	95.4	0.0	95.6	5597	96.9	96.9	96.8	96.3	96.9	87.2	96.9

With the exception of Hib3 and MenC, uptake rates for all vaccines at 12 months have remained stable. Uptake rates for Hib3 have increased by 0.5 percentage points and decreased by 0.5 percentage points for MenC. At 24 months uptake levels for all vaccines have decreased by 0.2 – 0.6 percentage points. Although MMR uptake has fallen by 0.6 percentage points to 87.2%, the uptake levels in Northern Ireland still remain higher than the UK average (see Figure 3). The lowest MMR uptake since January 1996 was in Jan-March 2003 at 86.9%

Country	% Coverage at 12 months				% Coverage at 24 months				
	Dip3	Pert3	Hib3	MenC	Dip3	Pert3	Hib3	MenC	MMR
England	90.8	90.5	90.9	90.2	93.5	93.0	93.0	92.5	78.5
Wales	93.8	92.7	93.6	93.5	95.4	93.8	95.1	94.6	78.6
Scotland	95.5	95.2	95.3	94.8	97.3	96.9	96.9	86.4	96.2
UK	91.5	91.1	91.5	91.1	94.0	93.5	93.6	93.2	79.8

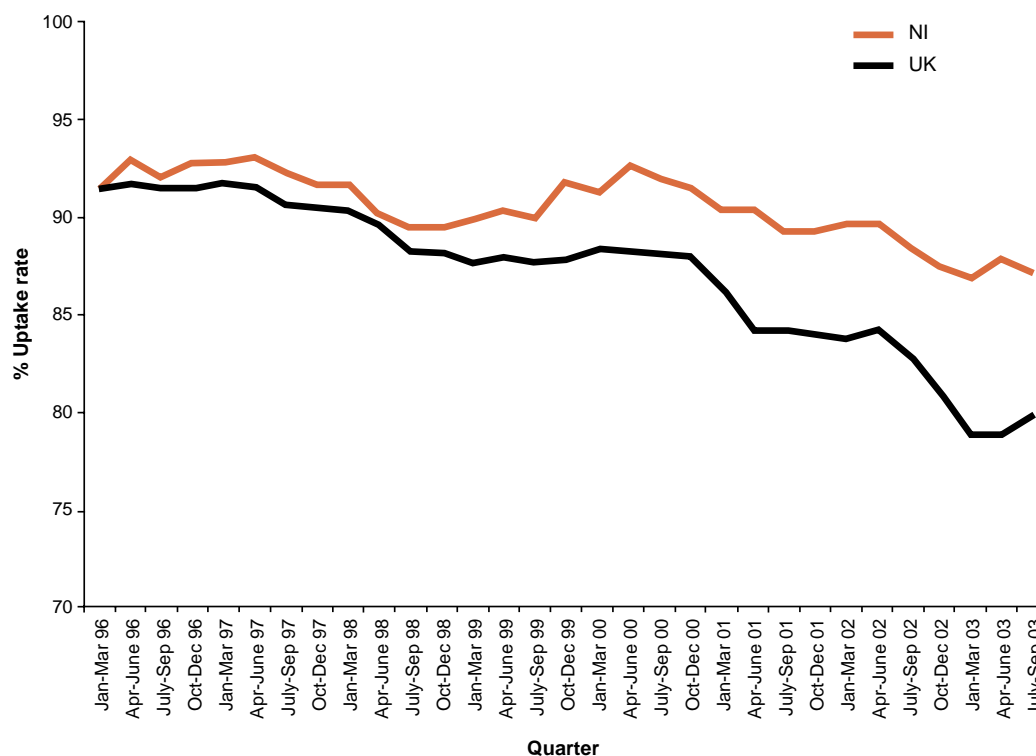
Vaccine Coverage at 5 years (July – Sept 2003)

Board	Dip3	Pert3	Hib3	Dip4	MMR1	MMR2	MenC
Eastern	97.5	96.6	96.5	85.0	96.2	82.8	96.2
Northern	98.2	97.5	97.6	92.6	96.5	90.6	96.0
Southern	98.4	96.9	97.6	89.4	97.2	87.7	96.9
Western	97.7	97.0	97.0	89.8	97.4	86.3	95.5

NI	97.9	97.0	97.1	88.7	96.7	86.4	96.1
England	94.0	93.2	93.3	80.4	90.7	75.1	87.9
Wales	95.2	93.0	94.9	82.2	90.5	73.4	91.7
Scotland	Not available						
England, Wales & NI	94.2	93.3	93.5	81.1	91.2	75.9	88.7

Compared with last quarter's data, with the exception of MenC, the uptake of all vaccines has decreased by 0.1 -1.9 percentage points. Uptake of MenC has increased by 0.5 percentage points. Since January 1999 the percentage of children by their fifth birthday receiving 2 doses of MMR has generally exceeded 86%.

Figure 3: MMR Vaccination Uptake Rate at 24 months, NI and UK, 1996-2003



Avian influenza outbreaks in poultry and in humans

Epidemics in poultry of highly pathogenic avian influenza A (H5N1) have been reported in East and South-East Asia, since 12 December 2003. Millions of domestic poultry have either died or been destroyed as a result and thousands of workers have been involved in the culling operations to avoid further spread of the virus. Poultry outbreaks of influenza A (H5N1) have been confirmed in Japan, the Republic of Korea, Vietnam, Laos, Thailand, Cambodia, Indonesia and China.

A limited number of human cases and deaths due to influenza A (H5N1) have been reported. As of 23 February 2004, Vietnam has reported 23 confirmed cases (15 fatal) and Thailand has reported nine cases (seven fatal). It is anticipated that human cases will also be detected in other countries where outbreaks in poultry are occurring.

The current situation is of serious concern for human health, as well as for agriculture and the poultry industry. The large epidemics of highly pathogenic influenza in poultry and other animal populations increase opportunities for human exposure and infection. When humans are simultaneously infected by human and avian

influenza viruses, there are more chances for the avian virus to acquire human genetic material. This increases the likelihood of the emergence of a new influenza subtype with the ability to spread from person-to-person and subsequently the possibility of a new influenza pandemic.

There is currently no evidence of efficient human-to-human transmission of influenza A (H5N1), as nearly all the human cases had known contact with infected poultry. The World Health Organization (WHO) is closely monitoring the current outbreaks, and has asked all countries to be vigilant for cases of influenza A (H5).

The threat of avian influenza A (H5N1) to Northern Ireland, the rest of the UK and the Republic of Ireland is currently low. CDSC (NI) is monitoring the situation and maintaining close liaison with the Health Protection Agency (HPA) in London and the WHO.

The WHO has published a chronology of key events in the current outbreaks. These can be found at:

http://www.who.int/csr/disease/avian_influenza/chronology/en/print.html

WHO frequently asked questions on avian influenza can be found at: http://www.who.int/csr/disease/avian_influenza/avian_faqs/en/

The first clinical and epidemiological data on 10 human H5N1 cases in the Vietnam outbreak have been published: http://www.who.int/csr/disease/avian_influenza/guidelines/vietnamclinical/en/

Further information is available at: http://www.who.int/csr/disease/avian_influenza/en/

Enhanced MMR Vaccination Uptake Surveillance

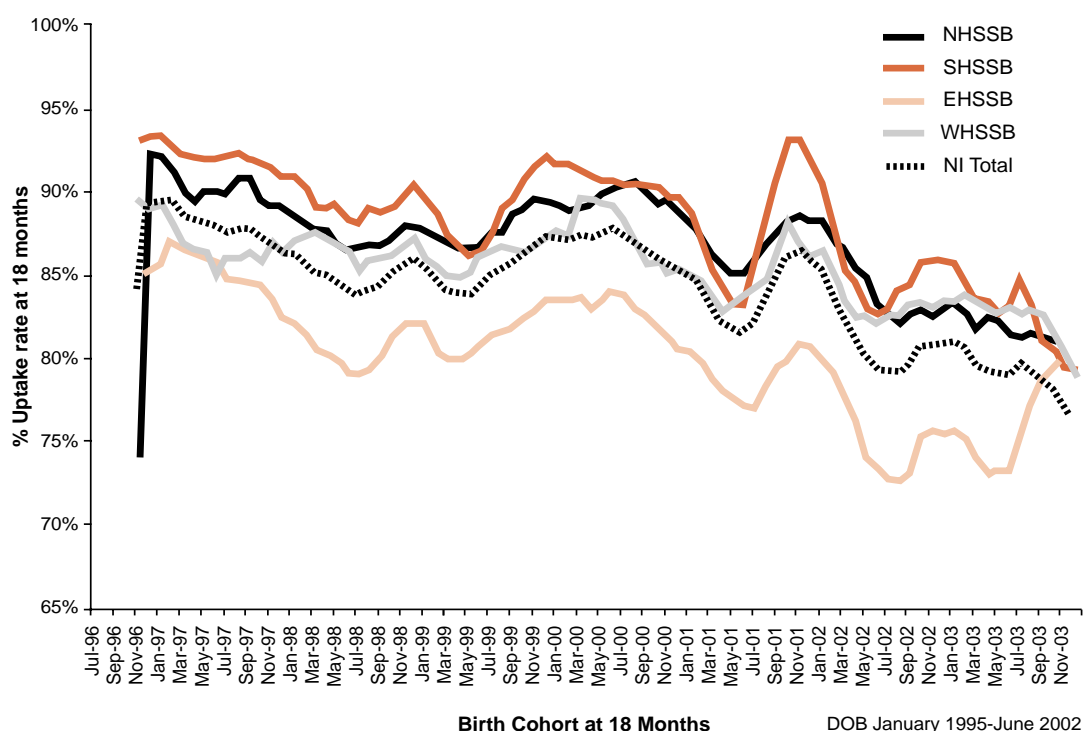
As well as using the quarterly COVER statistics which monitor MMR uptake at 24 months of age, CCDCs are undertaking additional monthly monitoring of MMR vaccine uptake in order to identify any decline in uptake rates as early as possible. This allows the opportunity to encourage parents

who have not presented their children for vaccination at 15 months to have them vaccinated before their 2nd birthday.

Enhanced monitoring of MMR vaccination uptake rates in those aged 18 months shows an overall downward trend: 75% of children

who were 18 months in December 2003 received MMR vaccination compared to 81% who were 18 months in December 2002. The latter group of children reached their 2nd birthday in June 2002 and the Apr-Jun COVER statistics shows the uptake rate to have reached 87.8%. Analysis of uptake by Board reveals a sustained rise within the Eastern Board area between June - November 2003 when uptake rates at 18 months increased from 73.3% to 80.4%.

Figure 4: Enhanced MMR Vaccine Surveillance at 18 months of age by Board, July 1996 - December 2003, Northern Ireland (5 Month Rolling Average)



Salivary Antibody Testing

Salivary antibody testing of notified cases of measles, mumps and rubella infection offers a convenient, non-invasive and sensitive method of confirming the initial diagnosis in children. With continued misleading information concerning MMR vaccine and evidence, particularly from other parts of the UK, of falling vaccination uptake levels it is particularly important to be able to detect an increase in these infections. Consultants in

Communicable Disease Control (CCDCs) routinely forward a salivary testing kit to each general practitioner notifying an individual with measles, mumps or rubella infection. The salivary samples are then posted to the Central Virus Laboratory in London for analysis.

Table 3 outlines the outcome of the salivary antibody testing programme in Northern Ireland during 2003. There were 271 notifications of measles, mumps

and rubella. Salivary testing was successfully completed on 181 (67%) individuals.

The salivary testing programme confirmed 55 cases of mumps during 2003. It did not confirm any cases of measles or rubella.

Thanks go to CCDCs, GPs and community nurses who participated in the salivary testing programme as it is an important part of surveillance of vaccine preventable infections.

Table 3: Salivary Antibody Testing Results 2003

	Board	*Notifications of suspected cases	Salivary test completed	Results		
				Evidence of recent vaccine	Confirmed case	Not confirmed
Measles	EHSSB	16	9	0	0	9
	NHSSB	8	7	0	0	7
	SHSSB	14	11	0	0	11
	WHSSB	19	13	0	0	13
	Total	57	40	0	0	40
Mumps	EHSSB	64	37	0	14	23
	NHSSB	29	22	0	5	17
	SHSSB	64	50	0	35	15
	WHSSB	23	13	0	1	12
	Total	180	122	0	55	67
Rubella	EHSSB	11	4	0	0	4
	NHSSB	4	4	0	0	4
	SHSSB	13	8	0	0	8
	WHSSB	6	3	0	0	3
	Total	34	19	0	0	19

*Provisional

Source: CDSC (Colindale)
DHSSPSNI

Laboratory Reports

Foodborne and Gastro-intestinal Tract Infections: Laboratory Reports, Weeks 01- 04

	Number of Reports received		Cumulative total	
	04/01-04	03/01-04	04/01-04	03/01-04
<i>Campylobacter</i>	32	47	32	47
<i>C. difficile</i> Toxin	93	70	93	70
<i>C. perfringens</i>	2	2	2	2
<i>E. coli</i> O157	1	0	1	0
<i>Salmonella</i> total	2	7	2	7
<i>S. enteritidis</i> (PT 4)	1	1	1	1
<i>S. typhimurium</i> (DT 104)	0	6 (1)	0	6 (1)
<i>Salmonella</i> other	1	0	1	0
<i>Shigella</i>	1	1	1	1
<i>Cryptosporidium</i>	2	1	2	1
<i>Giardia</i>	3	0	3	0
Adenovirus (faeces)	9	6	9	6
Enterovirus (faeces)	1	1	1	1
Rotavirus	2	63	2	63
SRSV	2	26	2	26

Comment:

The following was associated with foreign travel:

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

Female, age 21 years, *S. braenderup*, Cyprus.

S. braenderup 1

With the exception of *C. difficile* Toxin, *E. Coli* O 157, *Cryptosporidium*, *Giardia* and Adenovirus, laboratory reports of gastrointestinal infections are lower for the initial 4-week period of 2004 compared with the same period of 2003. However, it is too early to predict trends.

Reports of Positive blood cultures: Laboratory Reports, Weeks 01-04

	2004/01-04	2003/01-04
Gram negative bacteria		
<i>Acinetobacter</i> sp	2	2
<i>Aeromonas</i> sp	0	0
<i>Brucella</i> sp	0	0
<i>Campylobacter</i> sp	0	0
<i>Citrobacter</i> sp	2	2
<i>Enterobacter</i> sp	5	8
<i>Escherichia coli</i>	47	37
<i>Haemophilus influenzae</i>	0	3
<i>Haemophilus</i> sp	0	0
<i>Klebsiella</i> sp	10	11
<i>Legionella</i> sp	0	0
<i>Leptospira</i>	0	0
<i>Neisseria meningitidis</i>	2	2
<i>Neisseria</i> sp	0	1
<i>Proteus</i> sp	5	9
<i>Providencia</i> sp	1	1
<i>Pseudomonas aeruginosa</i>	1	4
<i>Pseudomonas</i> sp	10	7
<i>Salmonella</i> sp	0	1
<i>Serratia</i> sp	1	7
Other gram negative bacteria	5	2
Totals	91	97
Gram positive bacteria		
Corynebacterium sp & Diphtheroids	1	0
Staphylococci:		
<i>S. aureus</i>	47	28
coagulase negative	19	25
Streptococci and enterococci:		
group A	1	4
group B	6	5
group C	0	0
group G	2	1
<i>Enterococcus</i> sp	13	9
α- and non-haemolytic	0	7
<i>S. pneumoniae</i>	12	14
Other gram positive bacteria	4	0
Totals	105	93
Anaerobic bacteria		
Anaerobic cocci	1	2
<i>Bacteroides</i> sp	7	5
<i>Clostridium</i> sp	3	2
Other anaerobic bacteria	0	0
Totals	11	9
Grand Total	207	199

Annual and weekly notifications of infectious diseases are now available on the website:
<http://www.cdscni.org.uk/surveillance/noids/default.htm>