



Provisional Summary

2001

NORTHERN IRELAND EDITION

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Introduction

This paper summarises the main trends in communicable disease in N Ireland during 2001. It is primarily based on

laboratory reports forwarded to CDSC (NI) and information supplied by Consultants in Communicable Disease Control (CCDCs). The data for 2001 should be regarded as **provisional**

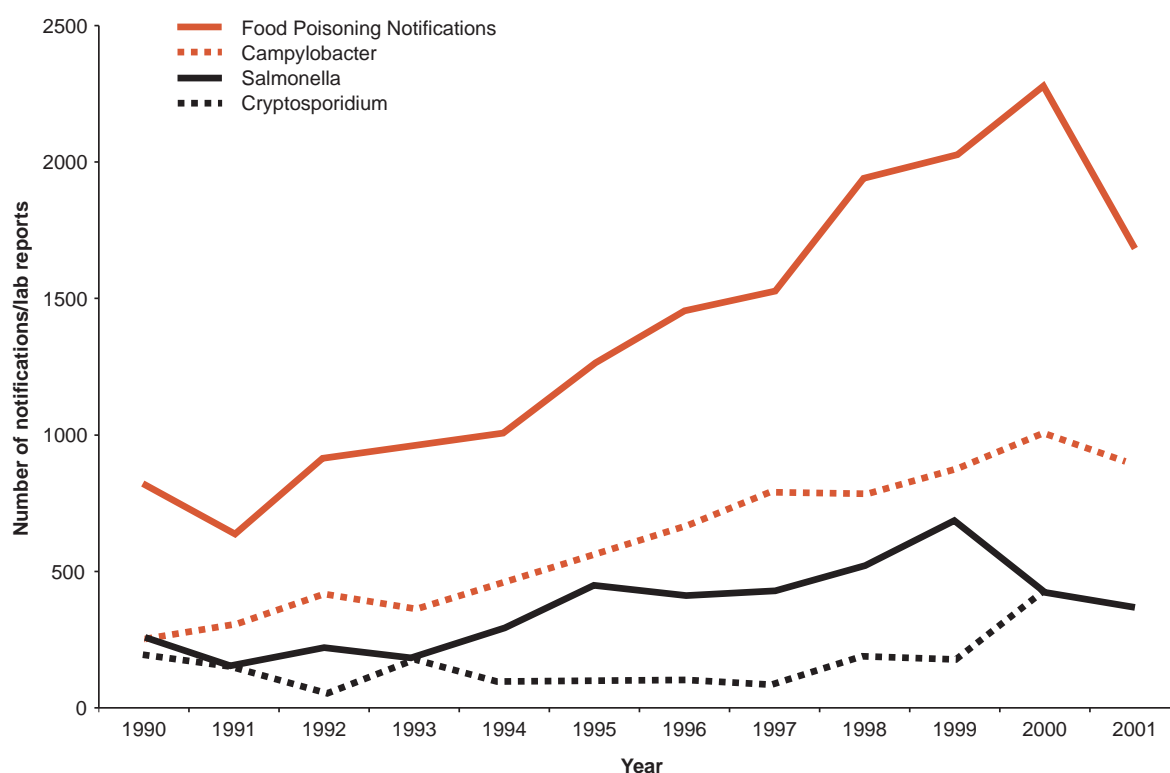
to allow for late reporting of results and for further typing of certain organisms. A more detailed report will be available later in 2002 with tables and graphs.

Gastrointestinal infection

Notifications of food poisoning have been increasing steadily since 1991. In 2001 they show a marked reduction (1683) compared with 2285 notifications in 2000 (a

reduction of 26%). Laboratory reports of campylobacter, salmonella, and cryptosporidium have also decreased in 2001.

Figure 1: Food Poisoning: Notifications and laboratory reports, 1990-2001, Northern Ireland



Campylobacter

Campylobacter remains the most common bacterial cause of food poisoning; in 2001 there were 2.4 times more laboratory reports of campylobacter than salmonella. However, reports have declined from 1001 in 2000 to 892 in 2001 (11% decrease).

Salmonella

Salmonella infection has exhibited a reduction for a second successive year. In 1999 there were 688 salmonella reports, in 2000 a total of 425 laboratory reports of salmonella were received, and in 2001 there have been 366 reports (a decrease of 14% between 2000 and 2001). This reduction can largely be attributed to the decrease in reports of *Salmonella enteritidis*, and in particular to the reduction in *S. enteritidis* PT 4. There were 180 reports of *S. enteritidis* in 2001 compared with 235 in 2000, (a reduction of 23%), and only 95 reports of *S. enteritidis* PT 4 in 2001 compared with 160 the previous year (a reduction of 41%). Reports of *Salmonella typhimurium* have also declined by 17% from 93 in 2000 to 77 in 2001; *S. typhimurium* DT 104 have declined by a greater extent, from 37 in 2000 to 20 in 2001 (46% reduction).

There has been only 1 salmonella outbreak reported to CDSC NI during 2001 involving 15 individuals all of whom were confirmed as having *S. enteritidis* PT 4 infection. No specific foodstuff was identified as the vehicle for infection.

E. coli 0157

There have been 54 reports of *E. coli* O 157 in 2001. The annual total for *E. coli* O157 has remained constant for 3 successive years. An outbreak occurred in June in a nursery/primary school in the Eastern Health Board and 16 positive cases were identified. In

investigating *E. coli* 0157 infection, household contacts, particularly if they are food handlers or in other high risk groups, are often screened to determine if they are excreting this organism. A number of contacts will be found to be asymptomatic carriers and thus not all the 54 laboratory reports would necessarily be in those with clinical illness.

Cryptosporidium

There have been 361 reports of cryptosporidium in 2001 compared with 417 last year. Reports have decreased by approximately 13% compared to the previous year despite a large outbreak in the Eastern Board in April of 2001 associated with 191 cases.

Influenza and RSV

There were 130 reports of influenza A and 170 of influenza B during 2001. This contrasts with 329 and 31 reports respectively in 2000. Serological titres to the virus may be due to previous infection or vaccination, therefore they cannot be relied upon as an indicator of current infection. To date there have been 406 reports of RSV in 2001 compared with 503 reports in 2000.

Enhanced surveillance of influenza in Northern Ireland commenced from week 40 of 2000, which is the beginning of winter 2000/01. This year, winter 2001/02, the pilot study was expanded to involve 20 general practices which are situated across the Province, and twelve of these are also involved in enhanced virological monitoring. During season 2000/01, consultation rates for flu-like illness (FLI) ranged from 9 to 93.9 per 100,000 population. Rates increased from the beginning of the surveillance period and reached a peak in week 50 (2000), before decreasing to 18.3 per 100,000 in week 8 (2001). Subsequently a further rise was

seen which peaked at 64.8 per 100,000 in weeks 13 and 14 (2001). Rates continued to drop steadily until the end of the surveillance period in week 20 (2001).

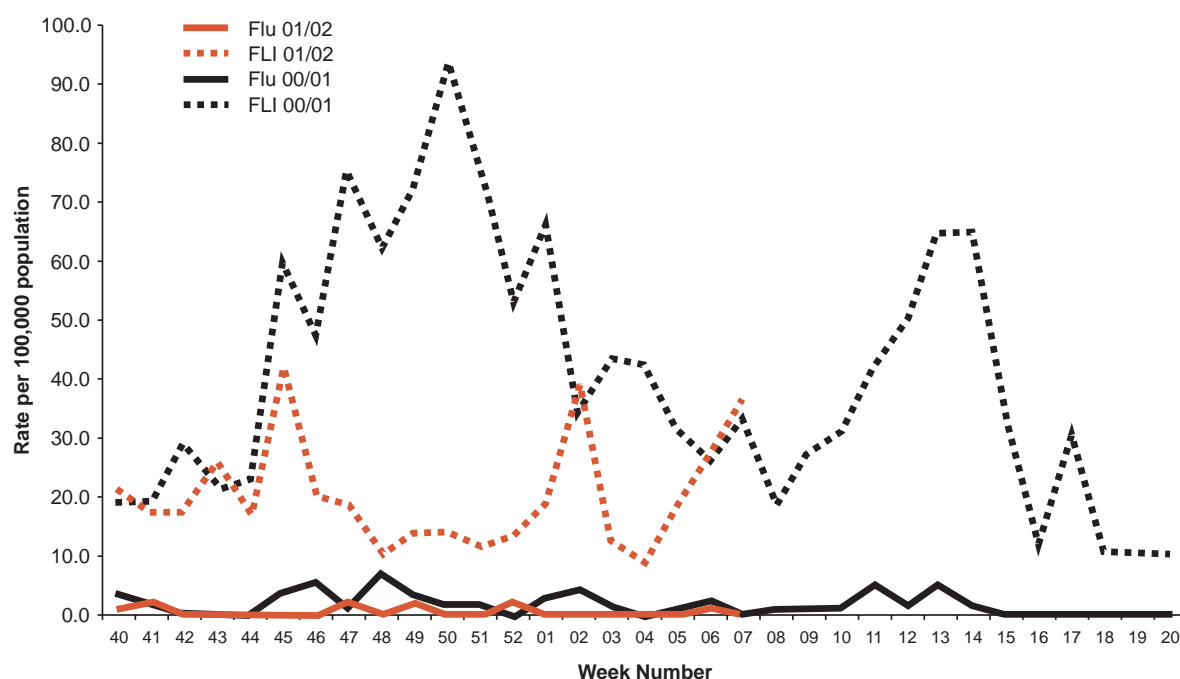
Throughout the surveillance period, consultation rates for FLI remained much higher and more variable than those for influenza. The low consultation rates for influenza reflect the low levels of influenza activity observed throughout the UK and Ireland. Rates of consultation for FLI probably reflect activity of several respiratory viruses in the community.

To date in season 2001/02 consultation rates for FLI have peaked at approximately 40 cases per 100,000 population in week 45 (2001) and week 02 (2002). Rates for influenza have remained relatively low throughout (see Figure 2).

Virological Surveillance in the Community

During season 2000/01, swabs submitted by general practices through the enhanced virological monitoring were tested for the following viruses which are common causes of respiratory tract illness: influenza A H1N1, influenza A H3N2, influenza B, rhinovirus, adenovirus and parainfluenza virus. Twenty-seven were positive and two samples were duplicated, bringing the total number of patients who tested positive to twenty-five. Twelve of these were positive for influenza A virus, all of which were influenza A H1N1. In two of the twelve cases, the swabs also tested positive for rhinovirus (common cold virus). Eight cases were positive for the presence of rhinovirus only. Two patients tested positive for the presence of adenovirus, and one tested positive for the presence of rhinovirus and adenovirus. Two patients tested positive for the presence of parainfluenza virus.

Figure 2: Northern Ireland GP consultation rates for 'flu and 'flu-like illness (FLI) by week, 2000/01 and 2001/02



Increases in virus detection in general practice coincided with peaks in consultation rates.

To date during season 2001/02, two swabs submitted by spotter practices have tested positive for the presence of influenza A. One of these has been typed as H3, and the other as H1. Four samples submitted through the routine laboratory system have also tested positive for the presence of influenza A H3.

Strains isolated during both the 2000/01 and 2001/02 seasons were covered by the respective season's vaccine composition.

A weekly surveillance update is produced and distributed by E-mail, fax or mail to interested parties, which includes the participating practices, the Department of Health, Social Services and Public Safety (DHSSPS), and surveillance units in the rest of the UK and Ireland.

During 1999, the Joint Committee on Vaccination and Immunisation recommended that influenza immunisation should be extended to include all people aged 65 years and over, in addition to people with

underlying "high risk" conditions whatever their age, and people in long stay residential care. The DHSSPS convened a multidisciplinary working group to improve uptake of influenza immunisation in all target groups. The regional and Board target of 65% set for uptake of influenza immunisations among people aged 65 years and over was increased to 70% for the 2001/02 vaccination programme.

As part of this initiative general practitioners are required to forward influenza immunisation statistics at monthly intervals during the immunisation programme. The regional target was reached by November 2001. At 30 November the vaccination uptake rate among the over 65 population was 70.3%, with Board rates ranging from 69.5% - 71%. A detailed epidemiological analysis will be carried out by CDSC NI by end March 2002.

Tuberculosis

Through the enhanced TB surveillance scheme, there have

been 34 notifications of pulmonary and 21 of non-pulmonary tuberculosis in 2001, compared with 30 and 22 respectively for 2000. There have been 42 laboratory reports of *M. tuberculosis* in 2001 compared with 26 in 2000. There was one report of *M. bovis* in 2001, compared with 3 in 2000.

An enhanced surveillance programme for tuberculosis has been operational in N Ireland for nearly 10 years. This combines clinical details, including treatment, with laboratory and demographic information and enables the production of a detailed annual report on the local epidemiology of tuberculosis. A national surveillance system commenced in England and Wales in 1999, and Northern Ireland joined this scheme in 2000.

Work on the national scheme has progressed to the development of the next phase of the surveillance scheme, which will enable effective monitoring of treatment outcome.

From 1 January 2002, clinicians reporting a case of tuberculosis in the previous year will be asked to

complete a short form detailing the patient's status 11 months after the start of treatment. The data collection form has been modified for Northern Ireland to allow collation of additional information which was collected by the previous system of surveillance. Uniform treatment outcome surveillance will generate useful information which will influence future clinical management and national policy.

The forms will be generated by CDSC (NI) 11 months after notification of a case and forwarded to the CCDC in the Board of residence. It will be passed to the clinician in charge of the case who will complete and return it to the appropriate CCDC. Data will be collated and analysed by CDSC (NI), and will subsequently be included in the annual tuberculosis report.

Meningococcal infection

Since January 1999 N Ireland has participated in a national enhanced surveillance programme for meningococcal infection. This includes laboratory confirmed cases as before but, in addition, includes probable cases i.e. those individuals in which meningococcal infection is the most likely diagnosis. CCDCs provide this information to CDSC(NI) at monthly intervals. (see Figure 3)

From 1 January to 31 December 2001 there have been 80 confirmed cases (59 group B, 8 group C, 16 other) and 51 probable cases (total 131 cases). There have also been six deaths: three aged 0-2 years, one aged 15-17 years, and two aged > 24 years. This compares with 136 laboratory confirmed cases for the same period in 2000 (83 group B and 36 group C, 17 other) and 9 deaths. In 2001, 10% of confirmed cases were group C compared to 26.5% in 2000 and 37.4% in 1999.

Compared with 2000, there has been a 77.8% reduction in the incidence of serogroup C infection. The enhanced surveillance programme has provided valuable information on the impact of the new meningococcal C vaccine which was introduced nationally in late autumn 1999. To date there have been no reports of invasive Group C meningococcal infection in a child vaccinated with the MenC vaccine.

Hepatitis

The incidence of hepatitis A (5 reports) fell substantially during 2001; there were 67 reports in 1999 and 18 in 2000. There were 37 reports of hepatitis B compared with 42 in 2000 (12% decrease). There was an increase of hepatitis C during 2001 with 62 reports received compared with 51 reports in 2000 (22% increase).

Of the 37 reports of hepatitis B received in 2001, none had a history of intravenous drug abuse recorded; 8 of the 62 reports of hepatitis C (%) had a history of intravenous drug abuse recorded. However, risk factor information is not routinely provided on the laboratory request forms. CDSC NI and the Regional Virus Laboratory are currently carrying out a study to differentiate between acute and chronic cases of hepatitis over the past decade, and to collect more comprehensive risk factor information.

MRSA

There were 414 *S. aureus* bacteraemias reported in 2001, of which 183 (44%) were methicillin resistant. This compares to a total of 355 reported in 1999, of which 130 (37%) were methicillin resistant. (see Figure 4)

Brucellosis

The rise in reported cases of brucellosis among the Northern Ireland population continues with a total of twenty cases for 2001 being reported to date. This is the highest annual total on record, with the previous highest total of fifteen cases being reported in 1975. There were no reported cases over the twelve-year period from 1986 – 1997 (see Figure 5)

The disease in the cattle population has shown a considerable increase and following a 14-month period in 1995 – 96 during which no brucellosis was detected, there has been a gradual rise in disease levels. Most recent data would show that over 100 herds are under restriction because of the disease.

Provisionally, nine of the human cases reported in 2001 are thought to have acquired their infection occupationally. All nine were farmers and at least three had contact with infected herds. Six of the farmers were from the Southern Board area and three were from the Western Board area. Eight of the cases were reported during October and November. This coincides with the peak calving period. One case was not occupationally acquired, but lived on a farm. Occupational histories on the remaining 10 cases are still being sought.

HIV and AIDS

Northern Ireland participates in the national HIV/AIDS surveillance programme which is primarily based on laboratory reports and confidential reports from clinicians. There were 17 HIV antibody positive reports and 8 reports of AIDS received during 2001. This compares to 19 HIV antibody positive reports and 5 AIDS reports received during 2000. Cumulative totals to the end of December 2001 to date for those individuals first reported in Northern Ireland stand at 229 HIV infected individuals and 98 AIDS cases. (see Figure 6)

Figure 3: Monthly cases of meningococcal disease from January 1999 to December 2001, Northern Ireland

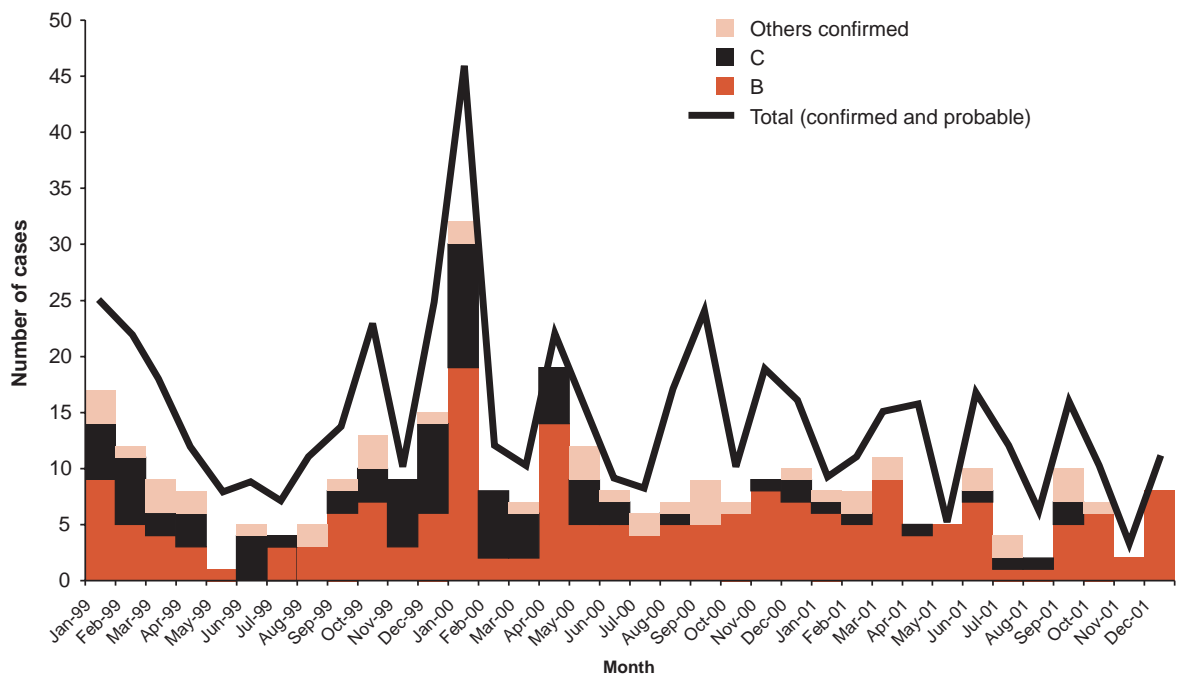


Figure 4: Laboratory reports of *Staphylococcus aureus* bacteraemias, 1992-2001, Northern Ireland

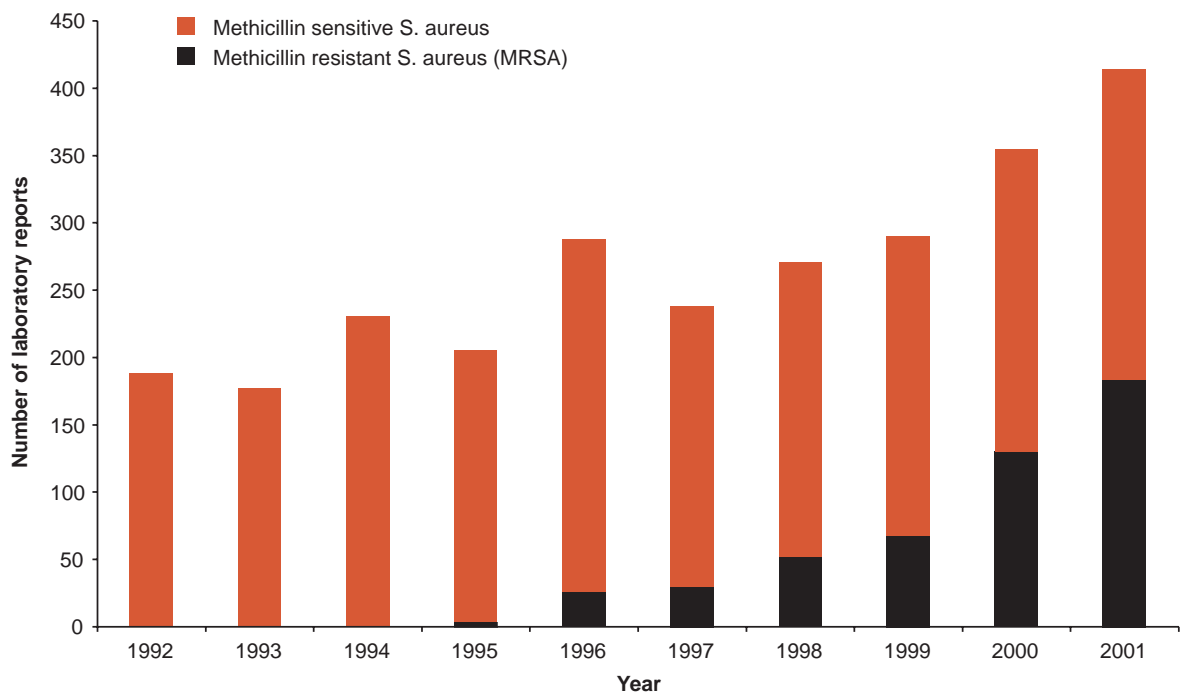


Figure 5: Annual totals of human brucellosis, 1974-2001, Northern Ireland

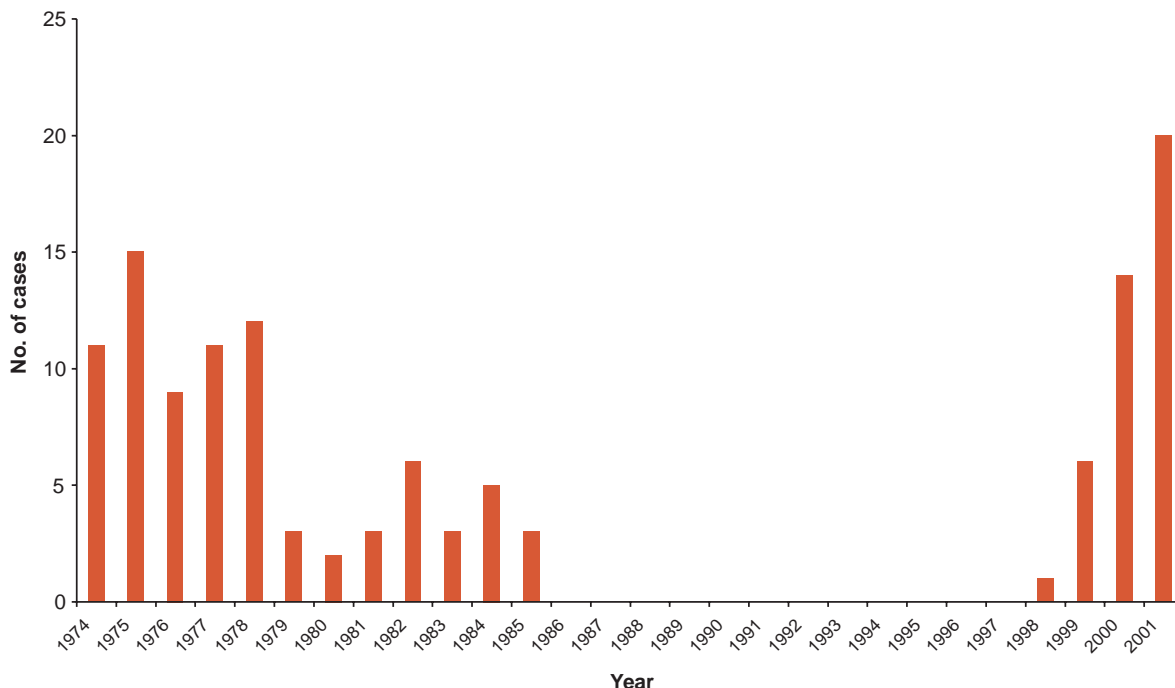
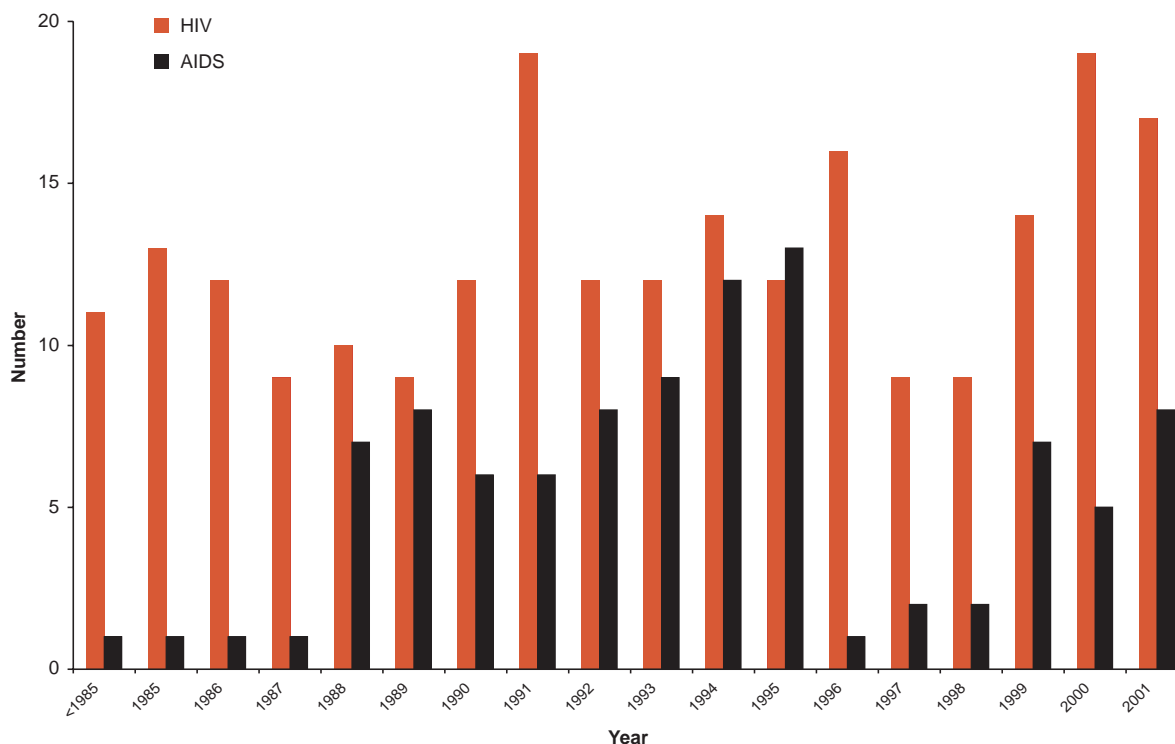


Figure 6: HIV infected individuals and AIDS cases, by year of diagnosis, 1985-2001, Northern Ireland



Childhood Vaccination Programme

Vaccination coverage statistics are available for the first three quarters of 2001. Vaccination uptake among children by their second birthday for diphtheria, pertussis and Hib were 95% or greater.

MMR vaccine uptake among children by their second birthday fell from 93.1% in 1997 to a low of 89.5% in 1998 and rose in 1999 to 91.8%. In the second quarter of 2000 the uptake rates rose to

92.7%, the highest level since the second quarter of 1997. However, during the third quarter of 2001 the uptake rate fell to a new low of 89.3%. Vaccine uptake in Northern Ireland still remains higher than the UK as a whole. (see Figure 7)

Figure 7: MMR Vaccination Uptake Rate at 24 months, 1996-2001, Northern Ireland and UK

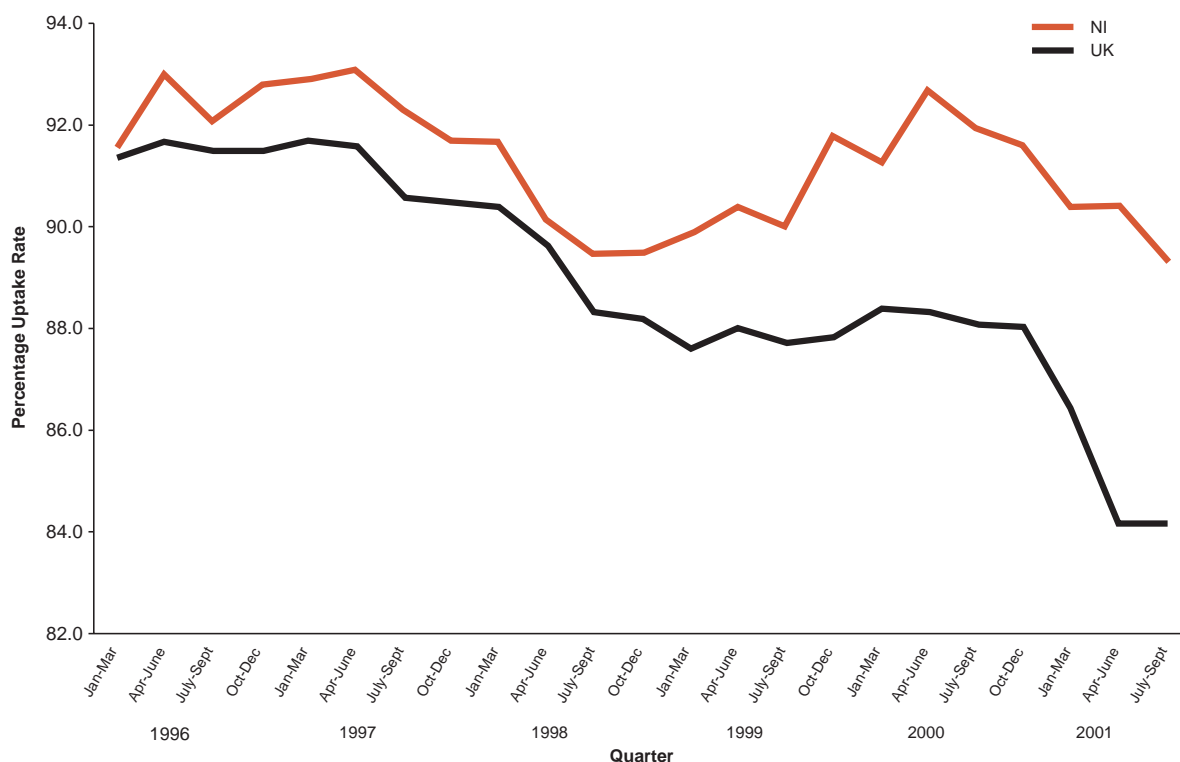


Table 1: Trends in specific reported pathogens, 1995-2001, Northern Ireland

	1995	1996	1997	1998	1999	2000	2001
Enterics							
Adenovirus (faeces only)	205	213	215	138	187	111	143
Campylobacter	557	653	778	775	862	1001	892
<i>Clostridium difficile</i> toxin	323	412	423	481	574	382	333
<i>Clostridium perfringens</i>	2	11	5	12	6	10	11
Cryptosporidium	81	98	82	180	181	417	361
<i>E. coli</i> O157	7	14	30	29	54	54	54
<i>Giardia lamblia</i>	49	45	24	21	37	30	16
Listeria	5	2	4	6	1	4	5
Rotavirus	443	379	585	521	357	510	440
Total <i>Salmonella</i> sp	452	413	432	534	689	425	366
<i>S. enteritidis</i>	261	171	169	272	462	235	180
<i>S. enteritidis</i> PT 4	226	113	123	207	397	160	95
<i>S. typhimurium</i>	119	169	185	177	124	93	77
<i>S. typhimurium</i> DT 104	56	121	134	142	66	37	20
Shigella	259	154	24	14	12	11	16
SRSV	31	7	11	35	90	68	133
Respiratory							
Adenovirus (excl faeces)	27	41	87	135	96	72	182
Chlamydia	48	52	37	43	23	22	42
<i>Coxiella burnetii</i>	53	62	51	44	53	35	27
Influenza A	92	131	156	259	419	329	130
Influenza B	96	4	88	5	158	31	170
<i>M. pneumoniae</i>	47	23	124	111	20	17	82
RSV	420	903	1070	651	782	503	406
Hepatitis A	91	40	37	70	67	18	5
Hepatitis B	30	31	22	18	24	42	37
Hepatitis C	58	29	26	38	23	51	62
<i>M. tuberculosis</i>	65	50	37	32	38	26	42
<i>M. bovis</i>	2	4	2	0	3	0	1
<i>S. aureus</i> total (bacteraemia)	205	288	238	271	290	355	414
MRSA (bacteraemia)	3	26	30	52	68	130	183

Table 2: Notifications of Infectious Diseases, 1995-2001, Northern Ireland

	1995	1996	1997	1998	1999	2000	2001
Acute Encephalitis/Meningitis:Bacterial	96	86	74	48	82	99	66
Acute Encephalitis/Meningitis:Viral	18	19	17	16	17	31	24
Anthrax	0	0	0	0	0	0	0
Chickenpox	4785	7004	5253	4907	4584	4531	3857
Cholera	0	0	0	0	0	0	0
Diphtheria	0	0	0	0	0	0	0
Dysentery	272	155	29	18	10	24	22
Food Poisoning	1267	1456	1534	1942	2033	2285	1683
Gastro-enteritis (persons under 2)	1072	745	896	1371	1121	1205	1103
Hepatitis A	92	49	33	91	62	26	9
Hepatitis B	9	15	8	1	4	11	6
Hepatitis Unspecified:Viral	21	15	15	16	12	9	10
Legionnaires Disease	1	0	2	2	2	1	1
Leptospirosis	0	1	1	2	1	0	0
Malaria	5	14	16	23	13	11	13
Measles	263	197	120	112	79	92	96
Meningoccal Septicaemia	44	67	56	87	145	123	77
Mumps	93	67	68	79	93	1006	534
Paratyphoid Fever	0	0	1	1	0	0	0
Plague	0	0	0	0	0	0	0
Polio (paralytic)	0	0	0	0	0	0	0
Polio (acute)	0	0	0	0	0	0	0
Rabies	0	0	0	0	0	0	0
Relapsing Fever	0	0	0	0	0	0	0
Rubella	221	190	127	111	73	62	65
Scarlet Fever	502	478	425	486	432	310	281
Smallpox	0	0	0	0	0	0	0
Tetanus	0	0	1	0	0	0	1
Tuberculosis (Pulmonary)	65	51	57	43	44	36	29
Tuberculosis (Non Pulmonary)	20	25	19	18	17	22	16
Typhoid	0	1	1	2	0	0	1
Typhus	0	0	0	0	0	0	0
Viral Haemorrhagic Fevers	0	0	0	0	0	0	0
Whooping Cough	131	148	135	100	108	61	65
Yellow Fever	0	0	0	0	0	1	1

Contributing Laboratories

Altnagelvin	Mater
Antrim	Musgrave Park
Belfast City	Regional Mycology
Belvoir Park	Regional Virus
Causeway	Royal Victoria
Craigavon	Tyrone County
Daisyhill	Ulster
Erne	

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