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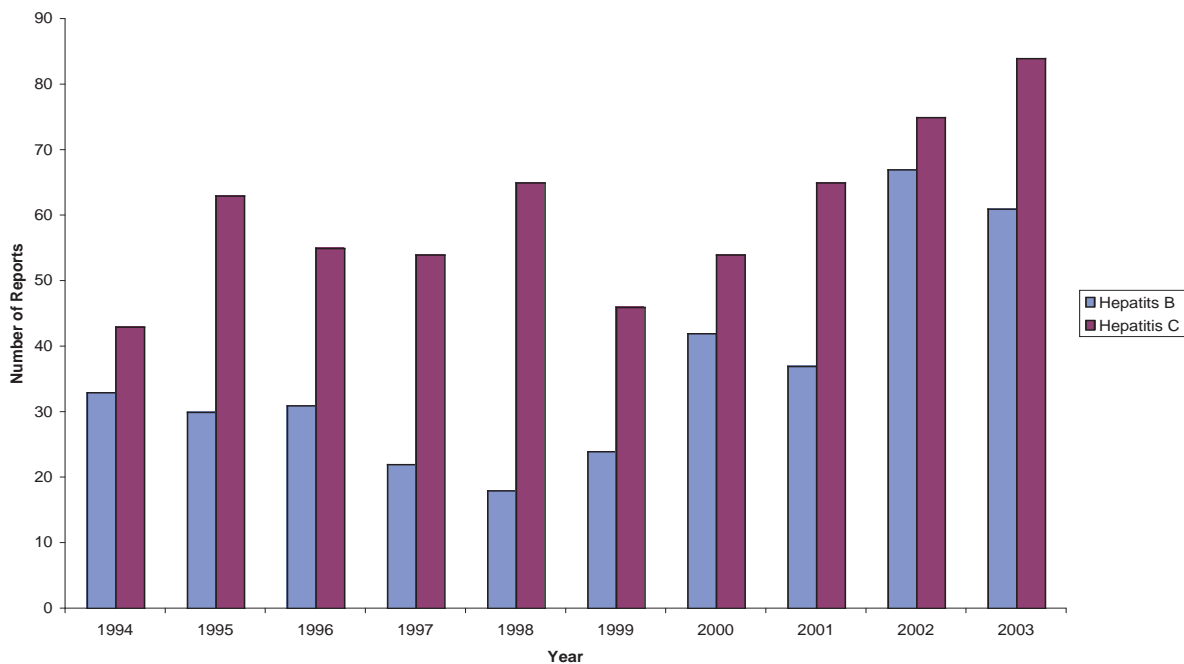
Hepatitis B and C

CDSC (NI) is currently undertaking an evaluation of the surveillance system for Hepatitis B and C in Northern Ireland. This is in the context of a commitment given by DHSSPS to evaluate the surveillance system for hepatitis C in its Strategic Framework and Action Plan for the Prevention and Control of Hepatitis C in Northern Ireland 2004-7¹.

The bulk of surveillance data is now through voluntary reporting by the Northern Ireland Blood Transfusion Service (NIBTS) and the Regional Virus Laboratory (RVL) to Health Boards and CDSC (NI). NIBTS undertakes the majority of antenatal testing for hepatitis B. Feedback from CDSC (NI) is mainly through publication of weekly notifications of infectious disease (NOIDS) data and annual summaries of laboratory reported cases on its website.

The need for timely, accurate and complete information has assumed increasing importance in recent years, given the rising numbers of laboratory reports of Hepatitis B and C (Figure 1). Difficulties have arisen in terms of de-duplicating case reports, distinguishing between acute and chronic Hepatitis B infections and in the acquisition of risk factor information necessary to guide prevention and control actions.

Figure 1: Laboratory diagnoses of hepatitis B and C in Northern Ireland, 1994 - 2003



For this evaluation, surveillance is being considered in its widest sense; not just the collection, collation, analysis and dissemination of data but also the subsequent public health action. In addition to standard CDC guidelines for evaluating surveillance systems², methods have involved a postal questionnaire survey of consultant physicians and GPs in Northern Ireland, and a semi-structured interview with each Consultant in Communicable Disease Control.

The project will be taken forward with regional and local stakeholders in coming months.

¹http://www.dhsspsni.gov.uk/publications/2004/HepatitisC_strategic_framework.pdf

²<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5013a1.htm>

Legionella Infection in Northern Ireland : 2004 Annual Summary

Legionnaires' disease is a notifiable disease in Northern Ireland. The disease, caused by *Legionella pneumophila*, is a multi-system illness which can have severe widespread clinical symptoms, though the principal manifestation of the disease is pneumonia.

The organism is commonly found in various natural and man-made aquatic environments, often in low numbers. Water-cooling towers, air conditioning systems and spa pools have been implicated as major sources of infection. Colonisation is enhanced by temperatures of 25-42°C, stagnation and the presence of scale and sediment. Airborne or aerosol transmission of the organism from contaminated water in water systems in large institutions has accounted for numerous outbreaks throughout the world, associated with hotels, leisure complexes and hospitals. A significant proportion of cases are travel related. Sporadic cases may also occur worldwide. The elderly, immunosuppressed and chronically ill people are most at risk of infection.

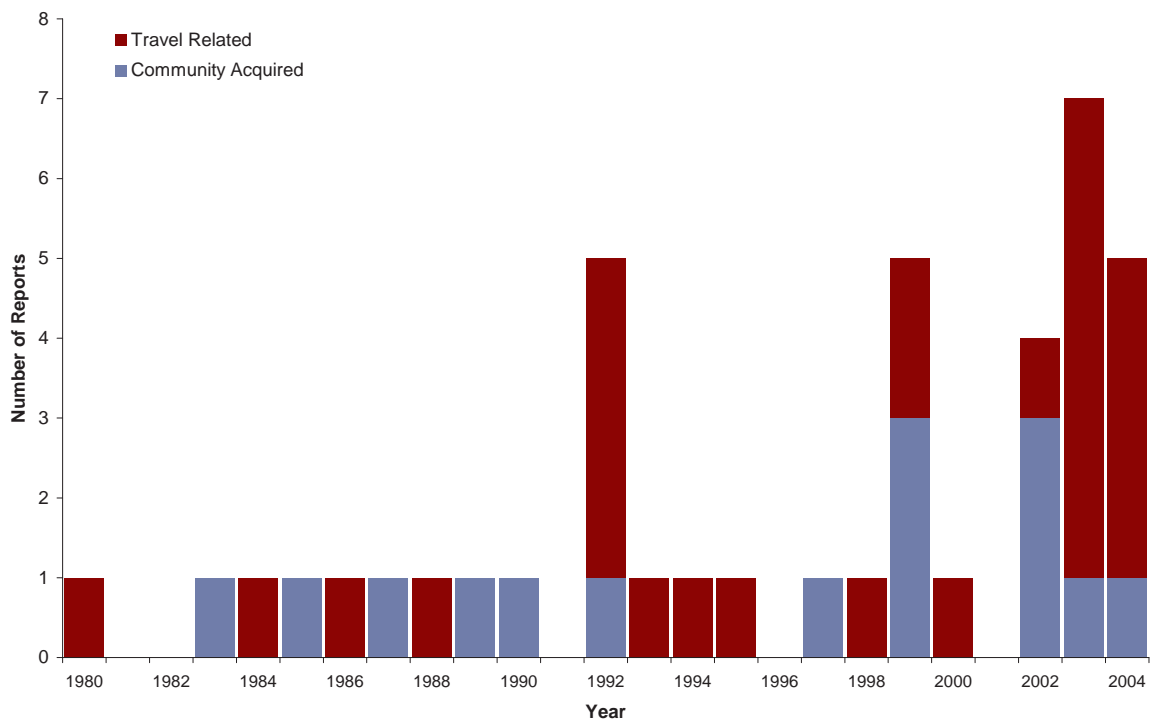
During 2004, five cases of Legionnaires' disease were reported in Northern Ireland. Ages ranged between 36 and 60 years, mean 48.6 years. One case was female. Four cases were travel-related, with cases having travelled to Spain, Corfu, Italy and France. One case with onset in December 2004 was the first case of a cluster associated with Bangor, which continued over the first weeks of 2005. No deaths were recorded in 2004.

Thirty-six cases have been notified between 1980 and 2003. Twenty-two cases are known to have been travel related, with Spain ($n=3$) and Portugal ($n=3$) the countries most frequently implicated. Four patients died and of these one was travel-related (Spain). Information relating to age of patient was available in 34 cases. Ages ranged from 23 years to 78 years, with median and mean ages of 50 years and 52 years respectively. The sex of cases was known in 35 cases. Of these, 26 were male. There has been an increase in the number of cases reported since 2001. This increase is mainly due to better ascertainment, especially with regards to travel-related cases.

Monitoring of Legionella infections in Northern Ireland is carried out in conjunction with the European Working Group for Legionella infections (EWGLI). Although the disease is not a serious risk to public health in Northern Ireland, participation in this surveillance scheme ensures standardised methods of detection, diagnosis, recording and reporting of disease, and permits direct comparisons with data from other participating regions. Outbreaks or clusters of cases of Legionnaires' disease in returning travellers can be quickly identified through this European network, allowing rapid alerts to be communicated to all collaborating countries, WHO and other relevant centres.

For further information on Legionnaire's Disease, please see http://www.hpa.org.uk/infections/topics_az/legionella/menu.htm

Figure 2: Reports of Legionellosis, Northern Ireland, 1980 - 2004



Surveillance for *Clostridium difficile* in Northern Ireland

Clostridium difficile is a Gram positive anaerobic bacterium that was first described in 1935. It was not until the mid 1970's that it became recognised as a cause of antibiotic-associated diarrhoea and colitis.

Colonisation and disease due to *C. difficile* is usually caused by the use of antibiotics that disturb the balance of "normal" bacteria in the large bowel. Symptoms are generally caused by the production of toxins in the large bowel once the organism has become established. Symptoms can range from mild diarrhoea, which may resolve once antibiotic treatment is stopped, through to severe colitis and life-threatening pseudo-membranous colitis. The organism produces spores that can exist in the environment and may be transmitted from patient to patient or via healthcare workers. The elderly are most at risk with over 80% of cases reported in the over 65 years age group. Immunocompromised patients are also at risk. Children under the age of 2 years are not usually affected.

The Department of Health, Social Services and Public Safety has made surveillance on *Clostridium difficile* in Northern Ireland mandatory from 1 January 2005. CDSC (NI) is basing this surveillance on routine CoSurv/CDR reporting by laboratories around the region.

The methodology for surveillance for *C. difficile* follows the recommendations of the National *Clostridium difficile* Standards Group¹, published in February 2003 and which form the basis of the surveillance system in the UK. This means that surveillance will be limited to patients over 65 years of age with diarrhoeal stools and repeat positives within a 4-week period will be excluded from the analysis. Another important recommendation from this document is that *all* diarrhoeal stools submitted to the laboratories should be tested for *C. difficile* toxin. CDSC (NI) will be using KOH3 hospital occupancy data (occupied bed-days) as a denominator, in the same way that this is being used for MRSA surveillance.

Laboratories in Northern Ireland have recently received a questionnaire which aims to identify current practices with regards to testing for *C. difficile*. This information will enable CDSC to publish more meaningful data on *C. difficile* and to publish rates by hospitals, making this surveillance more meaningful to Trusts.

An analysis of the data submitted by laboratories over the last few years shows that reports of *C. difficile* have increased dramatically in Northern Ireland (Figures 3 and 2). A large part of this increase has been probably due to increased ascertainment and more time is needed to understand trends in the incidence of this disease.

Figure 3: Annual number of Laboratory Reports of *C. difficile*, Northern Ireland, 2000 - 2004

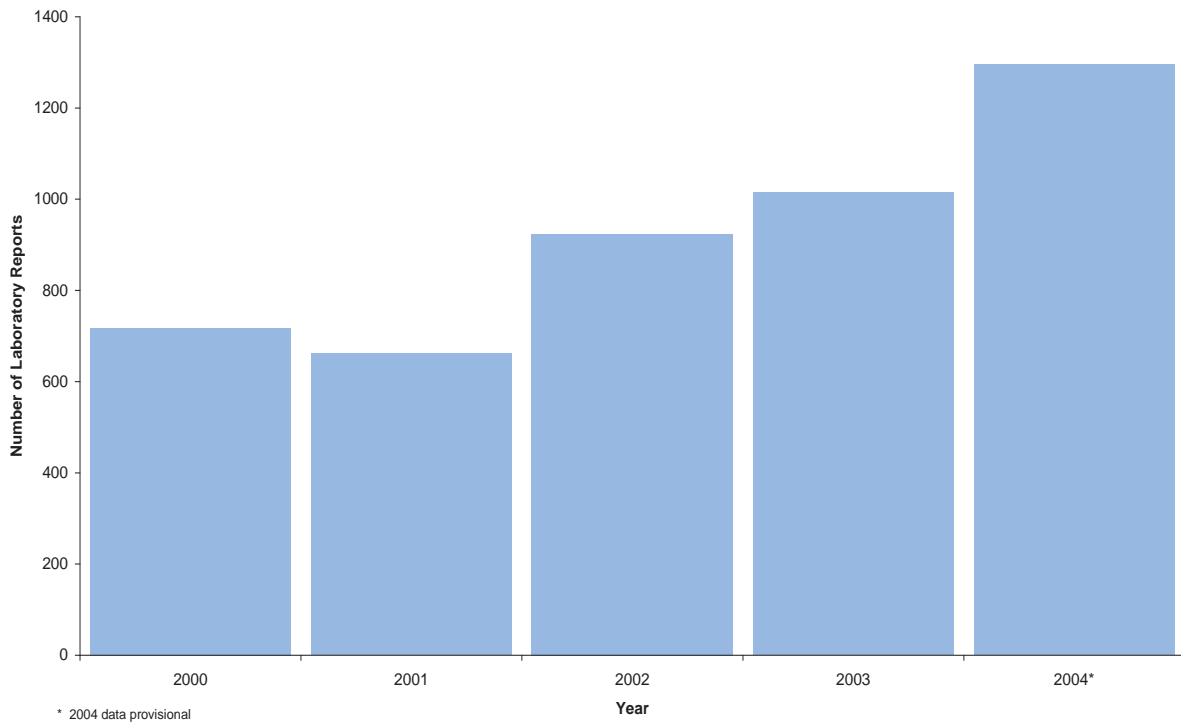
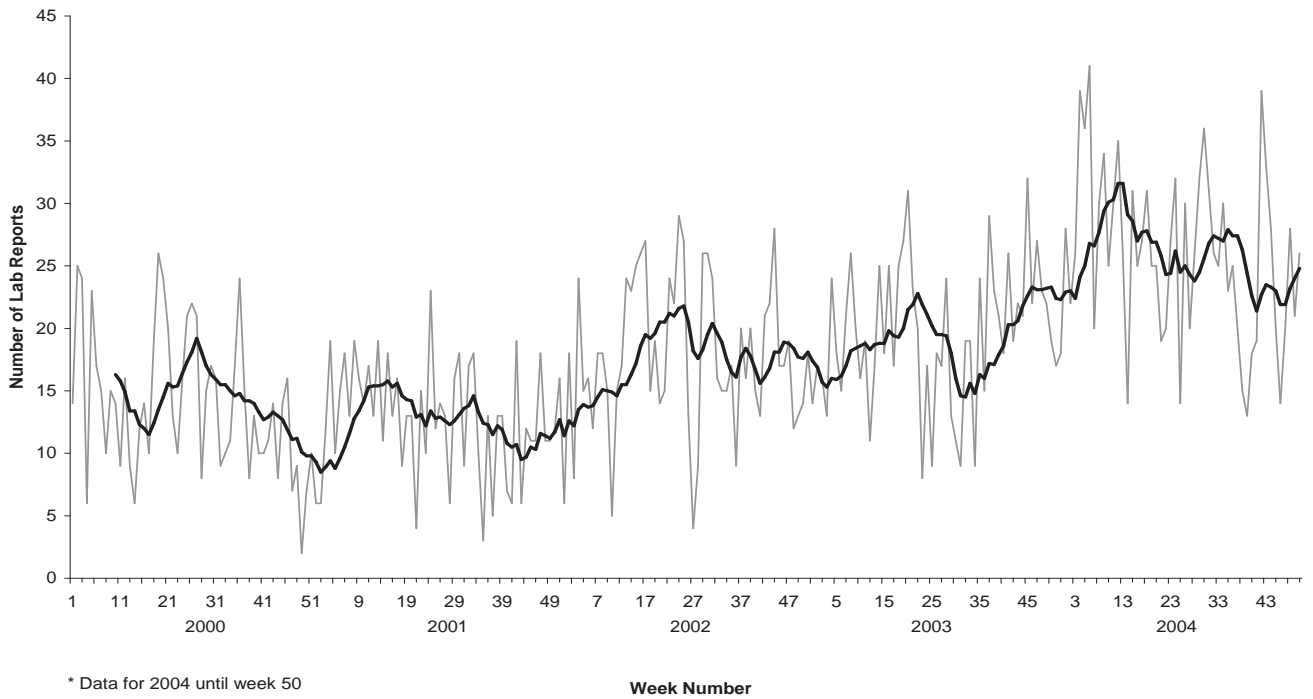


Figure 4: Weekly number of Laboratory Reports of *C. difficile* and 8 - week moving average, Northern Ireland, 2000 - 2004



During 2004, Trusts reported a total of 1331 detections of *C. difficile* toxin for all ages. From the 1,331 reports, only 50 (3.8%) were indicated as being from community specimens (this includes 39 GP samples, 7 outpatient samples, 3 A&E samples and 1 GUM clinic sample). There were 1,110 reports (83.4%) from hospital inpatients, while 171 reports (12.8%) did not have a source of sample reported.

This surveillance system will give an increased understanding of the current rates of *C. difficile* associated disease in Northern Ireland and identify areas where further work needs to be done in order to reduce the burden of this health-care acquired infection. Further improvements of the system might enable us to collect information on risk factors which are associated with the disease.

¹ The National Clostridium difficile Standards Group: Report to the Department of Health <http://www.dh.gov.uk/assetRoot/04/06/76/51/04067651.pdf>

Enhanced Surveillance of Meningococcal Disease (ESMD)

During the month of February 2005, ten cases of invasive meningococcal disease were notified through the ESMD scheme. Five of these were identified as serogroup B infection, of which all but one occurred in children aged 4 years and under. One death from meningococcal disease was recorded during February 2005. The patient was an adult, normally resident in Northern Ireland, who was deceased at the time of admission to hospital elsewhere in the UK. At post mortem, serogroup B infection was identified. The remaining five notified cases are, as yet, unconfirmed.

Between 1 January and 28 February 2005, CDSC (NI) has received 17 notifications through the ESMD scheme. To date, 9 (53%) of these 17 cases have been laboratory confirmed and all have been identified as serogroup B infection. During this period, one death has been attributed to invasive meningococcal disease (described above).

These figures are slightly higher than for the same period of 2004, when 14 cases of invasive meningococcal disease were notified. However, when compared to historical data (Figure 6), the number of notifications during February 2004 was considerably lower than would, normally, have been expected. Of the 14 cases notified during January and February 2004, 9 (64%) were laboratory confirmed; 6 (67%) were identified as serogroup B, 1 (11%) as serogroup C and 2 (22%) were ungrouped. One death attributed to invasive meningococcal disease occurred between January and February 2004. The patient was a child under 1 year of age who presented with both meningitis and septicaemia, but infection was not laboratory confirmed.

Table 1: Meningococcal disease by Health and Social Services Board, Northern Ireland, January to February 2005

HSSB	Confirmed			Not Confirmed	Total
	B	C	Other and Ungrouped		
E	4	0	0	1	5
N	0	0	0	2	2
S	4	0	0	4	8
W	1	0	0	1	2
Total	9	0	0	8	17

Table 2: Meningococcal disease: case and death by age, Northern Ireland, January to February 2005

Age group	Confirmed			Not Confirmed	Incidence per 100 000 population*	Death
	B	C	Other and Ungrouped			
0-2	5	0	0	5	15.4	0
3-4	1	0	0	0	2.2	0
5-14	1	0	0	2	1.2	0
15-17	0	0	0	0	0.0	0
18-24	1	0	0	1	1.2	0
> 24	1	0	0	0	0.1	1
Total	9	0	0	8	1.0	1

* age-specific incidence

Table 3: Meningococcal disease: case and death by age, Northern Ireland, February 2005

Age group	Confirmed			Not Confirmed	Total	Death
	B	C	Other and Ungrouped			
0-2	3	0	0	2	5	0
3-4	1	0	0	0	1	0
5-14	0	0	0	2	2	0
15-17	0	0	0	0	0	0
18-24	0	0	0	1	1	0
> 24	1	0	0	0	1	1
Total	5	0	0	5	10	1

Figure 5: Cases of Meningococcal Disease by Month, January 2004 to February 2005

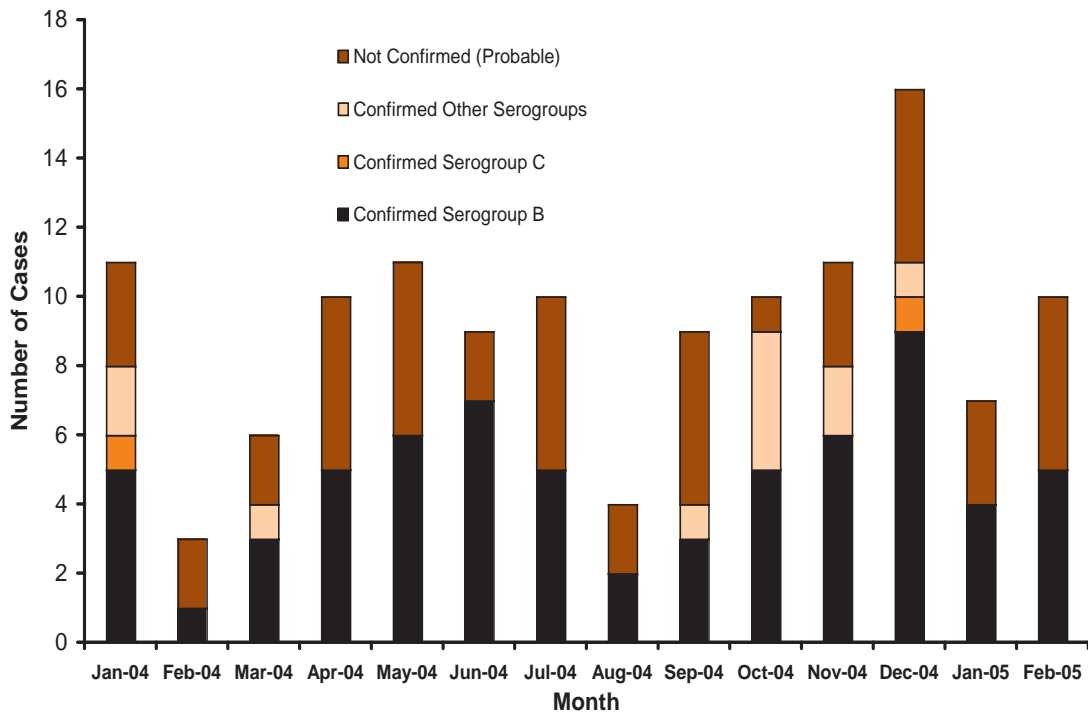
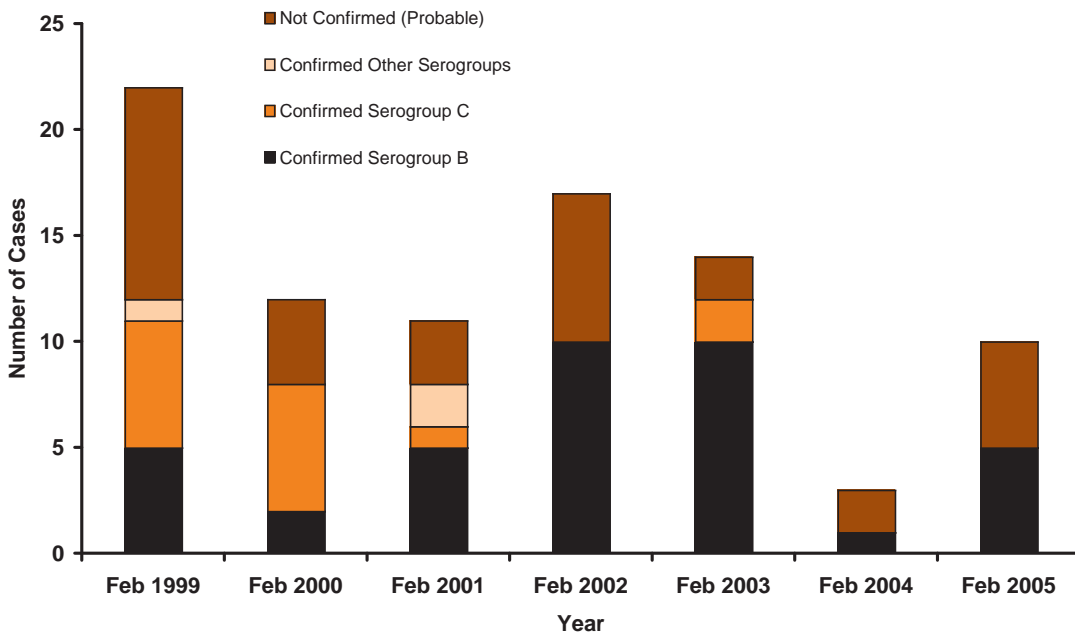


Figure 6: Cases of Meningococcal Disease in the month of February, 1999 - 2005



Health Protection Agency Annual Conference 2005 - Call for abstracts

The HPA Annual Conference will draw together almost a thousand health and scientific professionals from across the Agency and our partner organisations. Abstracts for consideration for oral or poster presentation are now invited for submission online via the conference website - <http://www.hpaconference.org.uk>

The conference, which takes place at Warwick University on 12-14 September 2005, will focus on the UK's EU Presidency health themes; *Health Inequalities* and *Patient Safety*, as well as Public Safety.

Health Inequalities - Abstracts are encouraged that focus on the importance of protecting the health of those who are disadvantaged by social, cultural or environmental factors, particularly the young and the old and categories will include: Infectious disease outbreaks, burden of disease, environmental justice and reducing health inequalities

Patient Safety - This theme will focus on any research and practice being undertaken to improve the safety of patients, particularly in reducing the incidence of infections acquired within a healthcare setting.

Public Safety - This theme will cover how public safety can be increased through preparation for health protection emergencies. Abstracts are invited covering surveillance, testing, control, emergency planning, new and emerging diseases and health threats, risk communication and public liaison.

There is a wide range of other health protection categories for abstract submission including children's health, gastrointestinal infections, hepatitis, SARS and influenza, TB, sexual health, vaccine preventable diseases, and environment & health protection.

Abstracts can be submitted until 10 May. If you do not wish to submit an abstract, but may wish to attend, please make a note of the dates - online booking to attend the conference will be possible after Easter. We hope we can look forward to your participation.

Email: hpaconference@hpa.org.uk

Website: <http://www.hpaconference.org.uk>

Foodborne and Gastrointestinal Tract Infections: Laboratory Reports, Weeks 05 - 08

	Number of Reports received		Cumulative total	
	05/05-08	04/05-08	05/01-08	04/01-08
<i>Campylobacter</i>	20	53	47	97
<i>C. difficile</i> Toxin	66	127	151	241
<i>C. perfringens</i>	2	2	2	4
<i>E. coli</i> O 157	0	1	0	3
<i>Salmonella</i> total	5	6	6	9
<i>S. enteritidis</i> (PT 4)	2	3	3 (1)	4
<i>S. typhimurium</i> (DT 104)	1	1	1	1
<i>Salmonella</i> other	2	2	2	4
<i>Shigella</i>	0	1	0	2
<i>Cryptosporidium</i>	2	6	10	8
<i>Giardia</i>	3	2	5	5
Adenovirus (faeces)	4	18	15	27
Enterovirus (faeces)	0	1	0	3
Rotavirus	6	17	12	19
SRSV	4	6	63	8

Comment:

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

<i>S. unnamed</i>	1
<i>S. typhi</i>	1

The following was associated with foreign travel:

Female, Age 30 years, *Campylobacter sp*, France

N.B. There has been a delay in receipt of a number of reports pertaining to this reporting period. Cumulative figures may therefore increase by date of next publication.

With the exception of SRSV and *Cryptosporidium*, cumulative laboratory reports of all foodborne and gastrointestinal tract infections to week 8 have shown a decrease compared with the same period last year.

There have been no laboratory reports of *E. Coli* O 157, *Shigella* or enterovirus to week 8 of this year.

Respiratory Tract Infections: Laboratory Reports, Weeks 01 - 08

	Number of Reports received		Cumulative Total	
	05/01-04	05/05-08	05/01-08	04/01-08
<i>Coxiella burnetii</i>	0	0	0	0
<i>Mycoplasma pneumoniae</i>	0	0	0	5
Respiratory <i>Chlamydia</i>	1	0	1	3
<i>Adenovirus</i> (excluding faeces)	16	2	18	7
RSV	93	12	105	151

Contributing Laboratories & Information

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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