COMMUNICABLE DISEASE SURVEILLANCE CENTRE (Northern Ireland)

Health Protection Agency

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Outbreak of Salmonella Typhimurium DT104

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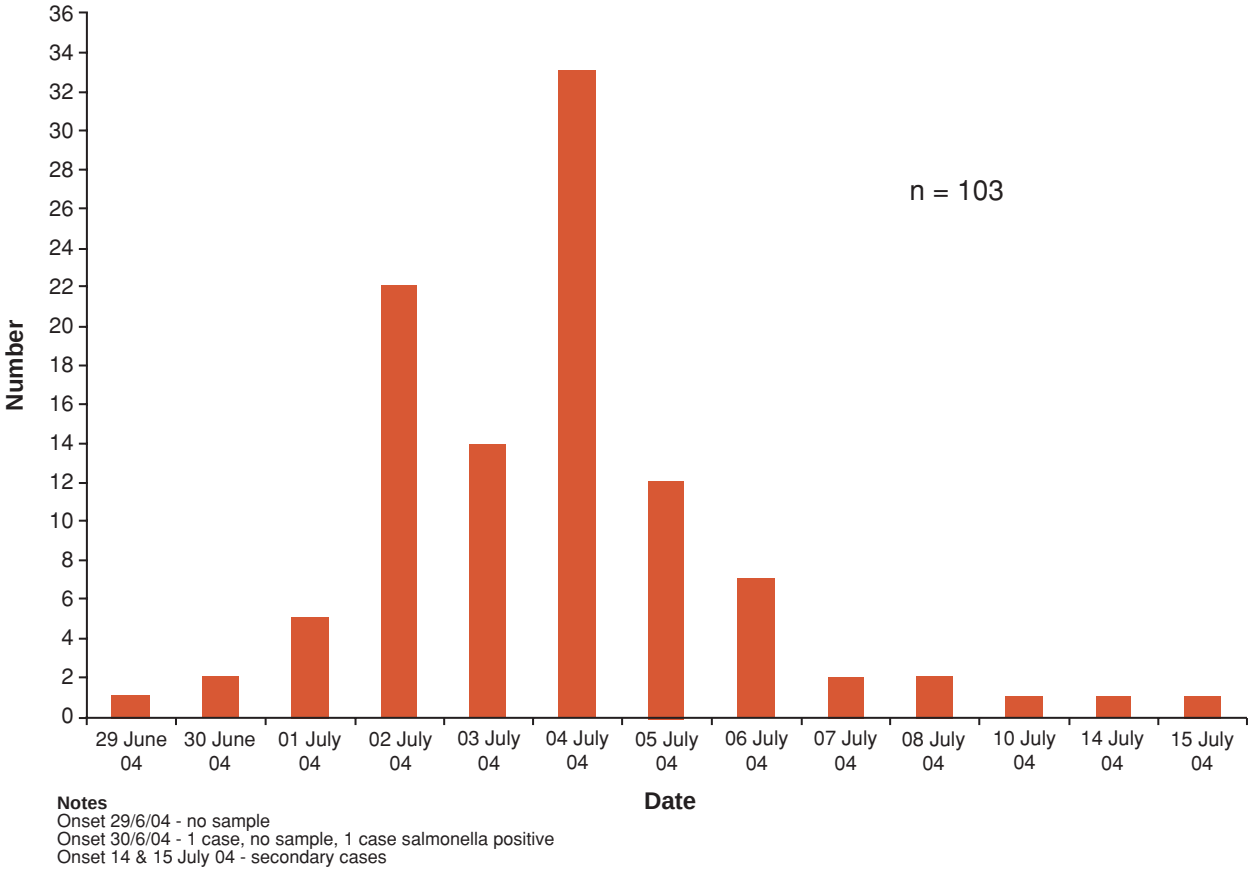
Over the period 6 July to 30 July 2004, the EHSSB investigated an outbreak of diarrhoea and vomiting (D&V) in Downpatrick. Over this time, 167 cases of D&V were reported, of which 113 cultured positive for *Salmonella typhimurium*. Preliminary investigations have revealed that 40 people visited local A&E Departments with 10 requiring hospital admission.

A small hot food establishment was identified as the source of the infection with Salmonella Typhimurium DT104 also being cultured from the food (both chicken pakora and mayonnaise) as well as the infected persons. Initial investigations suggested that contaminated products were on sale for a number of days. The hot food establishment closed voluntarily from Thursday 8 July and has not reopened at the time of reporting.

This is the largest salmonella outbreak in Northern Ireland reported since 1987. The second largest outbreak was in 1998 when 79 individuals were affected – also involving a hot food establishment. The last salmonella outbreak reported to CDSC (NI) was in 2001. In 2003 CDSC (NI) received 214 laboratory reports of salmonella with 131 reports received to week 30 this year. Therefore it is likely, as a result of this outbreak, the 2004 annual incidence of salmonella will exceed that of 2003 and reverse the decreasing annual incidence of salmonella noted since 1999.

Contents

Figure 1: EHSSB Outbreak of Vomiting and Diarrhoea in July 04 by Date of Onset



Notes
Onset 29/6/04 - no sample
Onset 30/6/04 - 1 case, no sample, 1 case salmonella positive
Onset 14 & 15 July 04 - secondary cases

Changes to the Childhood Immunisation Programme

The Department of Health, Social Services and Public Safety has announced changes to the childhood immunisation programme following recommendations made by the Joint Committee on Vaccination and Immunisation. The main changes are that inactivated polio vaccine (IPV) should be used instead of oral polio vaccine (OPV) and acellular pertussis vaccines to be used instead of whole cell pertussis vaccines.

The risk of importation of "wild" polio virus to the UK is now very low as polio has been eliminated from large parts of the world through global immunisation programmes. Switching from a vaccine containing live attenuated strains to IPV removes the very low risk of OPV associated paralytic polio (estimated to be one case per million doses given) yet still ensuring good individual protection.

Acellular pertussis vaccines tend to cause less adverse reactions than whole cell pertussis vaccines, particularly at the injection site. Additionally there is no thiomersal in the new vaccines, and hence they satisfy the international aim of reducing the exposure of children to mercury from avoidable sources.

From 27 September 2004:

- DTaP/IPV/Hib (brandname: Pediacel) will be used for primary immunisation replacing DTwP-Hib and OPV vaccines.
- dTaP/IPV (brandname: Repevax) will be used for preschool boosters replacing DTaP and OPV vaccines
- Td/IPV (brandname: Revaxis) will be used for teenage boosters replacing Td and OPV vaccines.

The new vaccines are given to children at the same ages as the previous vaccines. Updated information for parents and health professionals will be issued shortly. Further information is available at: *www.immunisation.nhs.uk and www.dhsspsni.gov.uk/publichealth/*

(References: Childhood Immunisation Programme, HSS(MD)24/2004)

Enhanced Surveillance of Tuberculosis in 2002: Summary

- ***Rate of tuberculosis in NI continues to rise, but remains much lower than for England & Wales***
- ***Proportion of cases with pulmonary disease increasing***
- ***No increase in the incidence of drug-resistant strains***

Enhanced surveillance of tuberculosis was established in Northern Ireland in 1992, with the introduction of two customised data collection forms. The notification form, TBS1, continues to be used for the collection of clinical, demographic and microbiological information. The follow-up TBS2 form was, until relatively recently, used to collect details of treatment and outcome, together with any additional clinical and/or microbiological information not available at the time of initial notification. Outcome data, for all cases notified since 1 January 2001, is now collected on a standardised 'Tuberculosis Treatment Outcome Surveillance Form', which has been customised for local use. Once a case has been notified and the TBS1 details entered onto a secure database at CDSC (NI), 'Tuberculosis Treatment Outcome Surveillance Forms', are generated automatically. These forms are then forwarded, approximately 9 months after initial notification, to the appropriate CCDC for completion by the patients' clinician.

In 2002 as part of the enhanced surveillance of tuberculosis notification scheme, CDSC (NI) initially received 78 notifications of tuberculosis. Eight cases were later identified as having infections with mycobacteria other than tuberculosis complex (MOTTs) and a further three cases were subsequently diagnosed as having a condition other than tuberculosis. These 11 cases were removed from the main dataset, leaving a total of 67 notified cases of tuberculosis that have been subjected to detailed analysis. The annual notification rate of tuberculosis for 2002 is estimated at 3.9 cases per 100,000 population (based on the Northern Ireland revised mid-year 2002 estimated population figure). These figures indicate that the incidence of tuberculosis in Northern Ireland is continuing to rise, albeit slowly. In 2000, there were 51 notifications (rate of 3.0 cases per 100,000 population) and, in 2001, there were 55 notifications (rate of 3.3 cases per 100,000 population). However, Northern Ireland incidence rates are approximately four times lower than for England & Wales.

Of the 67 notified cases in 2002, 54 (80%) had pulmonary disease and 13 (20%) had non-pulmonary disease. The proportion of patients with pulmonary disease has also been increasing steadily over the past two years. In 2000, 55% of notified cases were pulmonary in origin. By 2001, this figure had risen to 65%.

Forty-eight of the 67 notified cases in 2002 were culture confirmed as *M. tuberculosis* infection. In addition to the culture confirmed cases, 3 further cases were positive by histological examination of lymph nodes and 2 by histological examination of lung tissue. The outstanding 14 cases remain notified on the basis of clinical and other laboratory diagnosis. There were no laboratory confirmed cases of *M. bovis* infection during 2002.

Of the 54 pulmonary tuberculosis cases, 19 were both sputum smear and culture positive and a further 20 were culture positive only. Seven patients with pulmonary disease died. Tuberculosis was the cause of death in 2 cases and was cited as a contributing factor in a further 2 cases.

Nine of the 13 non-pulmonary tuberculosis cases were confirmed by culture. The sites of disease reported in these cases were: lymph nodes (3), pleura (4), genitourinary (1) and joint/bone (1).

Outcome data was provided for 61 of the 67 notified cases. Details of initial treatment were recorded on treatment outcome forms for 51 cases, of which 49 received a combination of rifampicin, isoniazid and pyrazinamide. Continuation therapy was recorded for 47 cases, of which 45 received a combination of rifampicin and isoniazid.

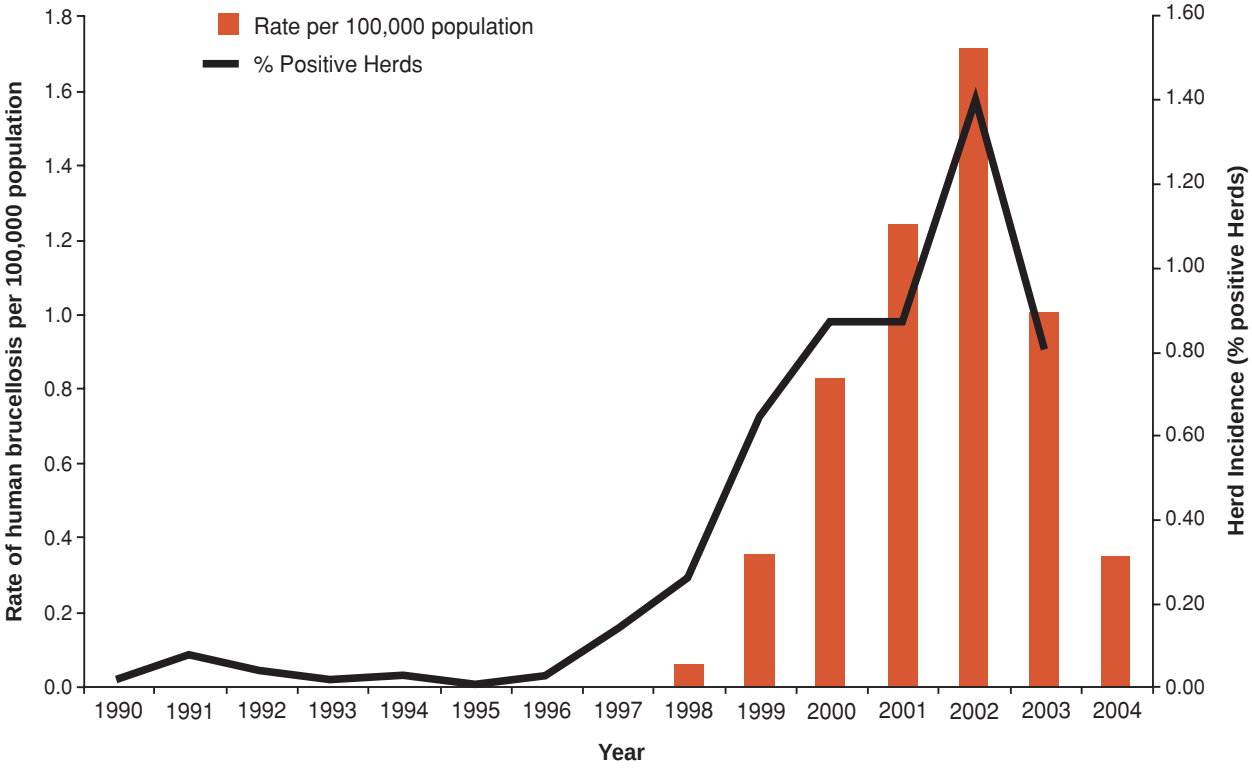
Antimicrobial sensitivity testing results were available for all 48 *M.tuberculosis* isolates. One isolate was found resistant to isoniazid only and a further isolate was found resistant to both isoniazid and streptomycin.

CDSC (NI) wishes to acknowledge the efforts of all involved in the collection of tuberculosis data and, in particular, for the successful implementation of the new outcome procedure. A full 2002 report will be presented shortly to the TB sub-committee of the Regional Advisory Committee on Communicable Disease Control. This report will be published, in due course, on the CDSC (NI) website. For further details please contact Dr Hilary Kennedy at CDSC (NI) or email hilary.kennedy@hpa.org.uk

Update on Human Brucellosis in Northern Ireland

Reports of human brucellosis fell by 42% between 2002 and 2003. A final total of 17 cases of human brucellosis were reported in Northern Ireland during 2003, compared with 29 cases the previous year. Thirteen cases are known to be farmers, or have associations with farming. A similar reduction in the detection of positive herds has been recorded by DARDNI during 2002. A final total of 0.79% of herds tested were positive for exposure to *B. abortus*, compared with 1.39% the previous year. To date during 2004, six cases have been reported to CDSC (NI). Although these figures represent a significant reduction in reported disease, the need for vigilance, amongst farmers, abattoir workers and General Practitioners in affected areas, remains.

Figure 2: Human and Bovine Brucellosis in Northern Ireland, 1990-2004



Eurosurveillance:

A new look for an enlarged Europe

Since 1995 *Eurosurveillance* has been providing a publishing service for the prompt exchange of peer-reviewed scientific information from a Europe-wide perspective, to all those who are directly concerned with communicable disease surveillance, prevention and control.

From 2004 *Eurosurveillance* is drawing on the benefits of electronic dissemination of information; the quarterly *Eurosurveillance* has been created to respond to this challenge. The electronic format of *Eurosurveillance* will be maintained and strengthened to offer public health readers regular and rapid publication on both a monthly and weekly basis, free of charge. These updates are available on the *Eurosurveillance* website at www.eurosurveillance.org and will also be emailed to all subscribers. Original articles, outbreak reports and articles relating to policy issues will be updated on the website as *Eurosurveillance Monthly*; shorter weekly reports and important news, with occasional ad hoc electronic alerts to respond to international outbreaks or any other major event threatening public health, will be on the website as Eurosurveillance Weekly.

In parallel, the new quarterly journal of *Eurosurveillance* will gather a wide selection of articles already published online over the previous quarter and in a completely redesigned print journal free of charge; original articles, surveillance reports and policy items, together with a selection of the weekly short reports and news.

If you wished to be placed on the electronic mailing list, please contact Elizabeth Hoile <elizabeth.hoile@hpa.org.uk>

Conference on Sexually Transmitted Infections

The DHSSPS is hosting a conference "Sexually Transmitted Infections – addressing the agenda in Northern Ireland" on 18 October in Belfast. This conference is intended to increase awareness of sexually transmitted infections locally, discuss related issues, and to inform the DHSSPS sexual health strategy. Speakers include Dr Kevin Fenton, from the Health Protection Agency Colindale and Dr Angela Robinson, President of the British Association of Sexual Health and HIV.

There are limited spaces available and further information can be obtained from Jeff Dudgeon at DHSSPS (tel: 028 9052 0083 and e-mail: jeff.dudgeon@dhsspsni.gov.uk).

Vaccination Coverage Statistics for Children in Northern Ireland

The vaccination coverage statistics for Northern Ireland (COVER/Körner Programme) are now available for the first quarter of 2004. 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 (Jan-Mar 2004)

	% Coverage at 12 months								% Coverage at 24 months							
Board	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	1795	91.6	91.6	91.4	91.1	91.8	0.2	92.1	1787	95.5	95.5	95.1	95.3	95.2	84.7	95.5
Northern	1256	95.9	95.9	95.5	95.5	95.8	0.2	96.0	1276	98.0	98.0	98.0	97.4	98.1	90.0	98.4
Southern	1035	95.7	95.8	95.7	95.5	96.0	0.2	96.1	1076	97.1	97.1	97.1	96.4	97.2	90.5	97.3
Western	906	96.2	96.1	96.0	95.7	96.4	0.1	96.5	907	97.2	97.2	96.9	96.9	96.7	86.4	96.9
NI Total	4992	94.4	94.0	94.2	94.0	94.5	0.2	94.7	5046	96.8	96.8	96.6	96.4	96.6	87.6	96.9

Uptake rates for all vaccines at 12 months have decreased by 1.0 – 1.4 percentage points. However, at 24 months, all with the exception of MMR have remained stable. Although MMR uptake has fallen by 1.3 percentage points to 87.6%, the uptake levels in Northern Ireland remain considerably higher than the UK average. The lowest MMR uptake in Northern Ireland was 86.9% in the January – March period 2003.

	% Coverage at 12 months				% Coverage at 24 months				
Country	Dip3	Pert3	Hib3	MenC	Dip3	Pert3	Hib3	MenC	MMR
England	90.2	89.8	90.1	89.4	93.3	92.9	93.2	92.1	81.0
Wales	94.4	93.6	94.1	94.1	96.1	95.0	96.1	95.6	81.9
Scotland	95.4	95.1	95.0	94.2	97.1	96.8	96.6	96.2	88.0
UK	90.9	90.5	90.8	90.1	94.1	93.6	93.9	92.9	81.9

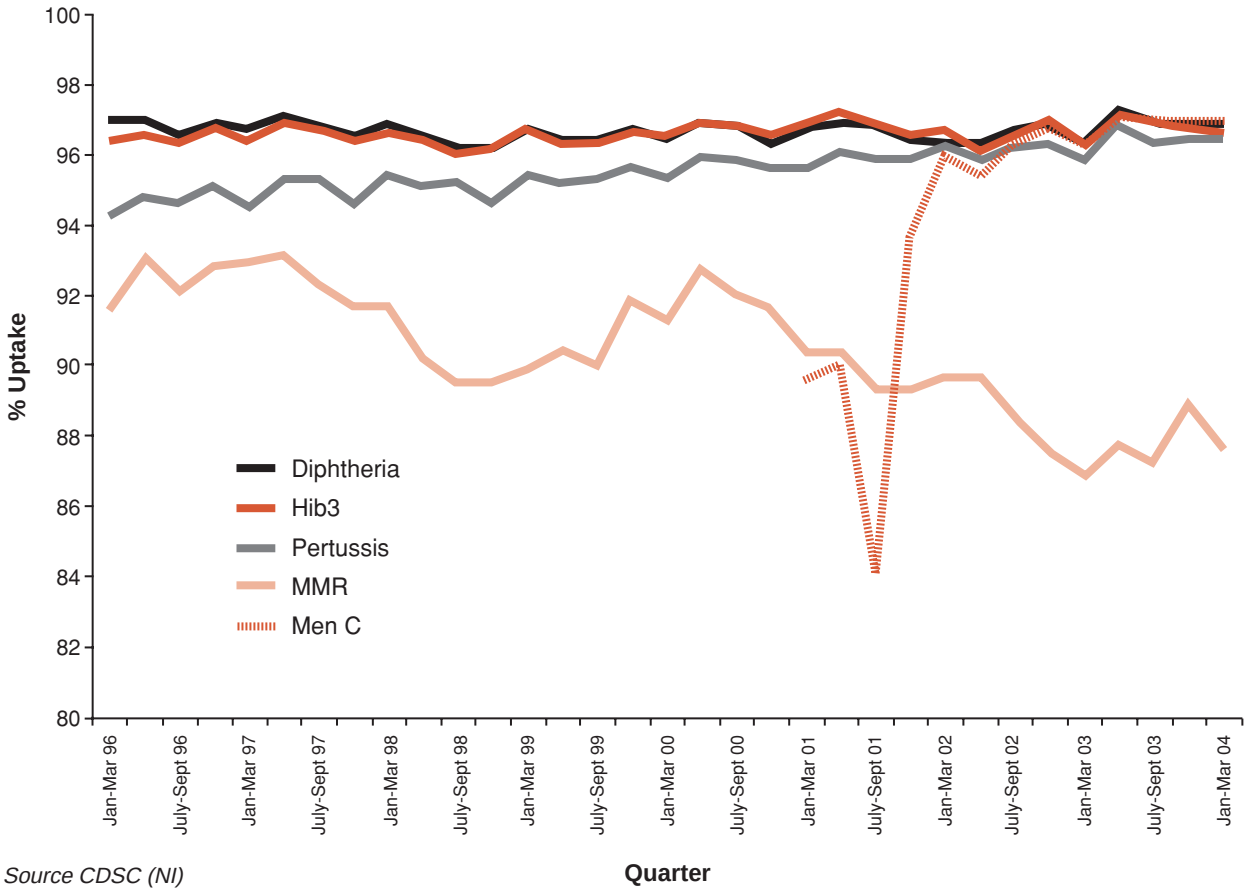
Vaccine Coverage at 5 years (Jan–Mar 2004)

Board	Dip3	Pert3	Hib3	Dip4	MMR1	MMR2	MenC
Eastern	97.4	96.4	96.4	85.4	95.6	82.8	91.3
Northern	98.0	97.2	97.7	91.8	97.1	89.8	93.5
Southern	97.2	96.2	96.5	88.1	96.5	87.9	90.9
Western	97.5	96.5	96.5	89.8	94.8	85.8	92.2

NI	97.5	96.6	96.8	88.4	96.0	86.2	91.9
England	93.7	92.7	93.0	80.1	89.8	75.1	86.4
Wales	95.0	93.1	94.4	83.2	90.4	75.3	91.8
Scotland				Not available			
England, Wales & NI	93.9	92.9	93.2	80.6	90.1	75.5	87.1

With the exception of Dip3, which has remained stable, uptake rates for all vaccines at 5 years have decreased by 0.1 – 1.7 percentage points.

Figure 3: Vaccination uptake rates at 24 months, Northern Ireland: 1996-2004



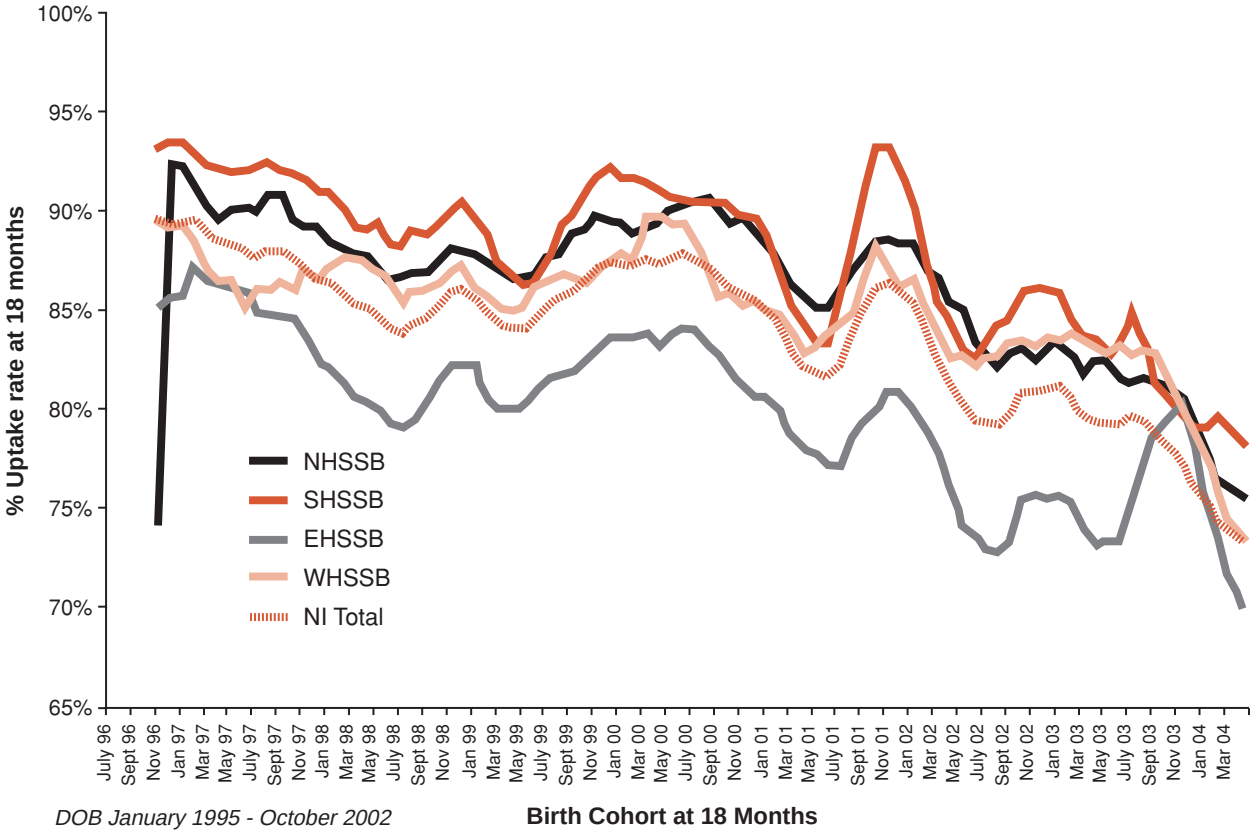
Source CDSC (NI)

Enhanced MMR Uptake Surveillance

As well as using the quarterly COVER statistics which monitor MMR uptake at 24 months of age, CsCDC undertake 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 second birthday.

Enhanced monitoring of MMR vaccination uptake rates in those aged 18 months shows an overall downward trend: 73% of children who were 18 months in April 2004 received MMR vaccination compared to 79% who were 18 months in April 2003. The latter group of children reached their second birthday in October 2003 and the October – December COVER statistics shows the uptake rates to have reached 89%. Analysis of uptake by Board reveals a decline within all four Board areas from November 2003.

Figure 4: Enhanced MMR Vaccine Surveillance at 18 months of age by Board, July 1996-April 2004, Northern Ireland (5 Month Rolling Average)



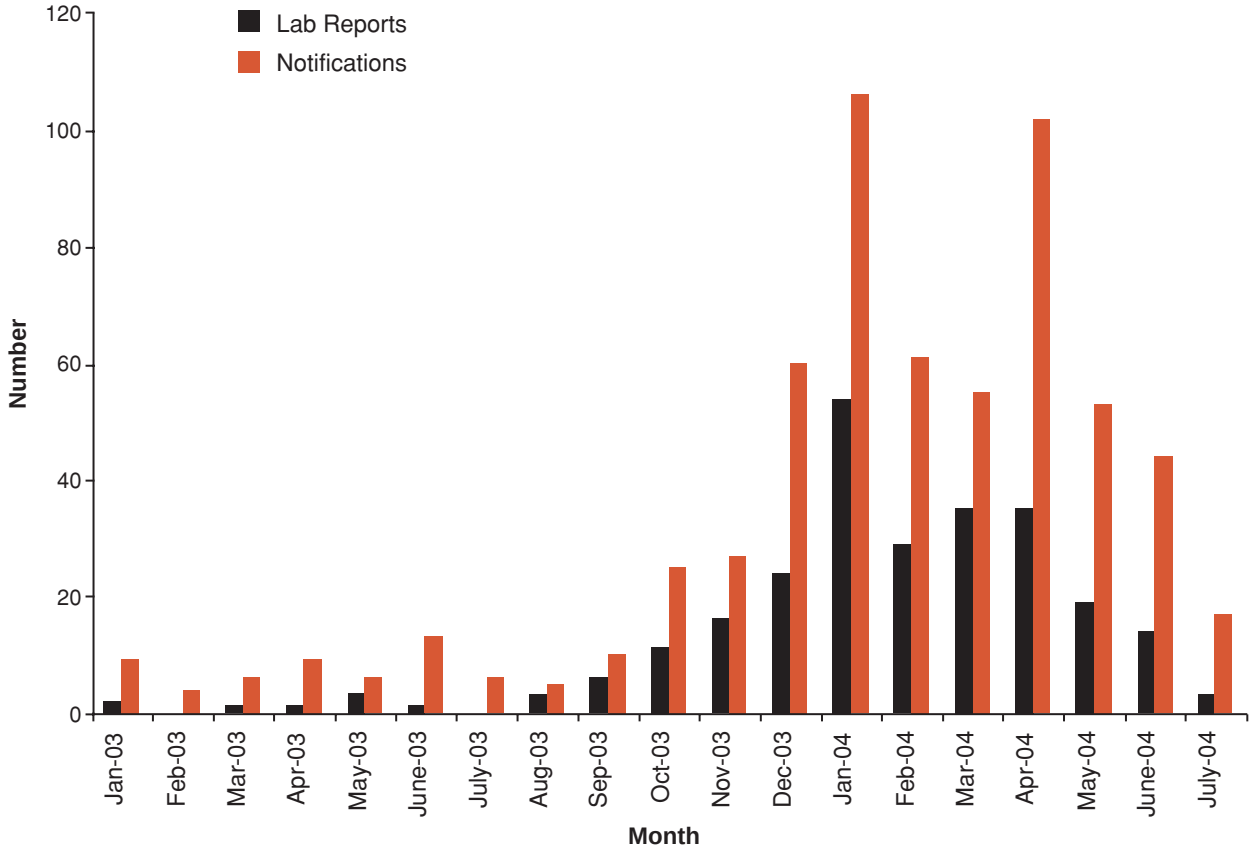
Mumps outbreak

The mumps outbreak which began last autumn continues but with fewer new cases reported during May - July. As transmission was primarily among teenage children the school holidays will further interrupt transmission of infection. Similar mumps outbreaks have been reported throughout the UK.

Four hundred and thirty eight notifications have been received this year to week 30 (25 July) compared with 180 for all of 2003. Of these 438 clinical notifications, 189 were serologically confirmed. The 15-19 year age group accounts for the greatest proportion of cases with 57% of all confirmed cases this year in this age range. Rates of mumps infection are highest in the Southern Board area. Details of vaccination status are available on 154 confirmed cases: 23 had never received a mumps containing vaccine; 117 had received either MMR, MR or MMR and MR vaccines; and 14 had received two doses of MMR.

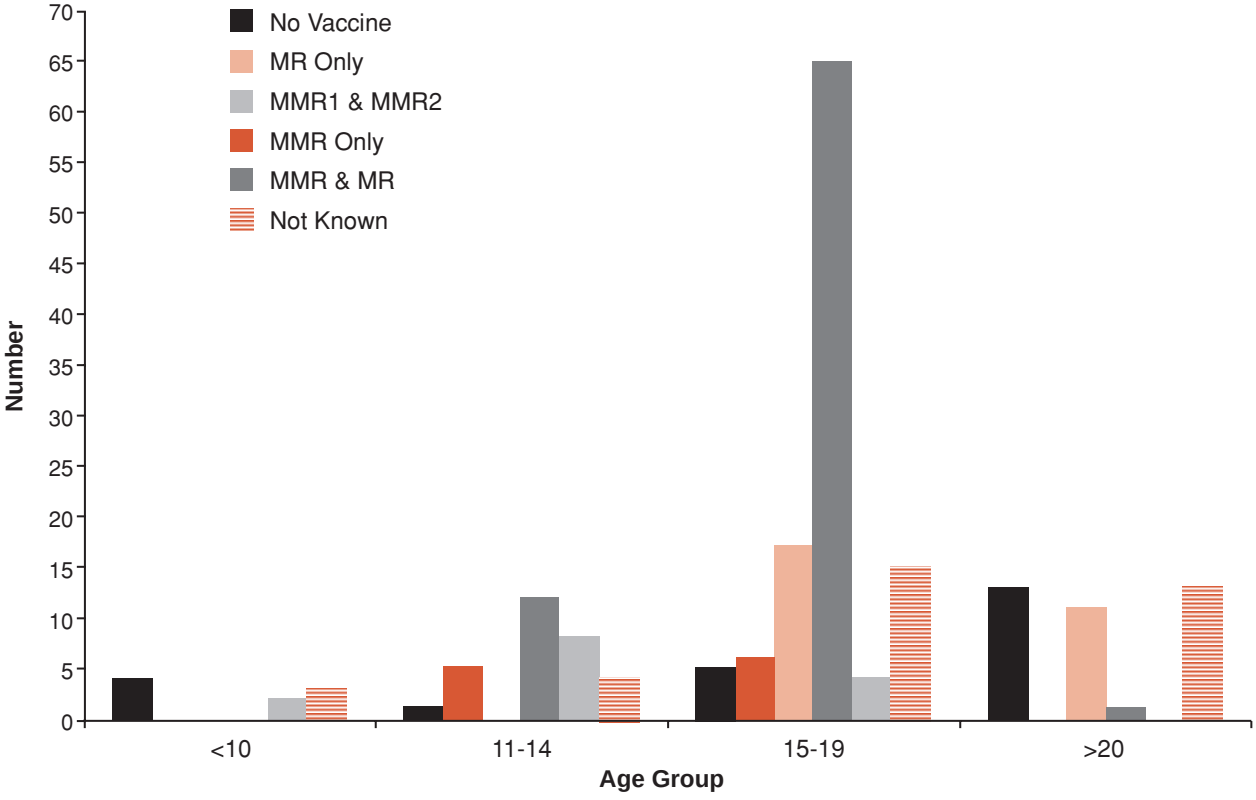
Since 1996 all children, except those with valid contra-indications, have been recommended to receive two doses of MMR vaccine. Children born before this time may not therefore be adequately protected against mumps infection and these children should be offered MMR vaccine before leaving school.

Figure 5: 'Epidemic' Curve: Mumps laboratory reports* (salivary and blood), by month of specimen date, 2003 – 2004 (end July), Northern Ireland.



*includes 167 cases for which no lab report has been received at CDSC (NI) but has been confirmed by CCDC

Figure 6: Vaccination status of provisional laboratory confirmed mumps cases, by age group, 2004, Northern Ireland to end July 2004 (n=189)*



*includes 130 cases for which no lab report has been received at CDSC (NI) but has been confirmed by CCDC

Monthly Surveillance Figures for Creutzfeldt-Jakob Disease

Table 1 shows surveillance figures for definite and probable cases of Creutzfeldt-Jakob disease (CJD) in the United Kingdom up to 2 June 2004. In 2003, there were 159 referrals to the CJD Surveillance Unit with 18 confirmed as vCJD. To date in 2004 there have been 44 referrals to the unit with 2 confirmed as vCJD.

While this version of the table does not show figures for years prior to 1995 (the first year for which there are vCJD confirmations), a more extended version can be accessed on the Department of Health website (most easily at the Department's press release page http://www.dh.gov.uk/PublicationsAndStatistics/PressReleases/fs/en).

Table 1: Definite and probable CJD cases in the UK from 1995 to 2 June 2004

Year	Referrals for investigation	Deaths					vCJD Probable still alive
		Sporadic	Iatrogenic	Familial	GSS*	vCJD confirmed	
1995	87	35	4	2	3	3	-
1996	134	40	4	2	4	10	-
1997	161	60	6	4	1	10	-
1998	154	63	3	4	1	18	-
1999	170	62	6	2	0	15	-
2000	178	49	1	2	1	28	-
2001	180	58	5	3	2	20	-
2002	163	72	0	4	1	17	-
2003	159	72	5	4	2	18	-
2004	44	13	0	0	1	2	5
Total	**-**	**-**	**-**	**-**	**-**	**141**	**-**

**Gerstmann-Straussler-Scheinker syndrome*

Laboratory Reports

Foodborne and Gastrointestinal Tract Infections: Laboratory Reports, Weeks 17-24

	Number of Reports received		Cumulative total	
	04/17-24	03/17-24	04/01-24	03/01-24
Campylobacter	152	144	350	318
C. difficile Toxin	193	168	650	469
C. perfringens	1	3	6	11
E. coli O157	3	3	6	4
Salmonella total	12	23	32	49
S. enteritidis (PT 4)	8 (1)	11 (2)	16 (3)	13 (2)
S. typhimurium (DT 104)	1	6 (2)	4	22 (4)
Salmonella other	3	6	12	14
Shigella	0	4	3	6
Cryptosporidium	46	33	84	57
Giardia	1	4	8	6
Adenovirus (faeces)	21	28	73	53
Enterovirus (faeces)	0	1	5	8
Rotavirus	153	121	323	519
SRSV	7	6	45	94

Comment:

Salmonella other than enteritidis or typhimurium:

Salmonella sp 2
S. dublin 1

The following was associated with foreign travel:

Campylobacter, male, age 38 years, France; *Campylobacter*, male, age 80 years, Spain; *Campylobacter*, female, age 40 years, Dominican Republic; *S. enteritidis*, male, age 14 years, Portugal; *S. enteritidis*, male, age 18 years, Spain; *S. enteritidis*, female, age 52 years, Italy; *S. enteritidis*, female, age 44 years, Sri Lanka.

Reports of *C. perfringens* have exhibited a reduction of 45%. Cumulative reports of Enterovirus, Rotavirus and SRSV have also shown a decrease of 38%, 38% and 52% respectively.

There have been 3 reports of *Shigella* to week 24 of 2004 – this compares with 6 reports for the same period in 2003. All 3 were associated with travel abroad. Eight reports of *Giardia* have been reported this year compared with 6 to week 24 in 2003. One was associated with travel to Spain.

Reports of *S. enteritidis* have increased by 23% although the overall Salmonella total has decreased by 35% compared to the same period last year with *S. typhimurium* decreasing by 80%.

There have been 6 reports of *E. Coli* O 157 compared with 4 for the same period last year.

Laboratory reports of *Campylobacter*, *C. difficile* Toxin, *Cryptosporidium* and Adenovirus have increased by 10%, 39%, 47% and 38% respectively.

Mycobacteria: Laboratory Reports, Weeks 13-20

	Number of Reports received		Cumulative total	
	04/13-16	04/17-20	04/01-20	03/01-20
M. abscessus	0	0	2	0
M. avium-intracellulare group	4	6	14	4
M. chelonae	0	0	0	3
M. gordonae	0	0	1	0
M. kansasii	2	0	2	3
M. malmoense	1	2	3	6
M. tuberculosis	1	4	15	9
Mycobacterium. sp	0	0	1	0
Total	**8**	**12**	**38**	**25**

Comment:

There were ten reports of *M. avium intracellulare* during weeks 13-20 of 2004. Seven cases were isolated from sputum, two from skin/wound and one from pus (source unknown). Seven cases were male aged between 4 years and 78 years; three cases were female aged between 3 years and 85 years.

Two cases of *M. kansasii* were isolated from sputum in this reporting period: both patients were male aged 28 years and 63 years.

There were three cases of *M. malmoense* recorded during this reporting period. Two were isolated from sputum and one from lower respiratory tract. Two cases were male and one was female. Ages ranged from 49 years to 76 years.

Five cases of *M. tuberculosis* were recorded during this eight-week period. Three were isolated from sputum, one from lower respiratory tract and the other from upper gastrointestinal tract. Two cases were male, aged between 4 years and 68 years, three were female, aged between 24 years and 70 years.

Respiratory Tract Infections: Laboratory Reports, Weeks 09- 24

	Number of Reports received				Cumulative total	
	04/09-12	04/13-16	04/17-20	04/21-24	04/01-24	03/01-24
Coxiella burnetii	1	1	1	0	3	6
Mycoplasma pneumoniae	0	2	1	0	8	16
Respiratory *Chlamydia*	0	0	0	0	3	3
Adenovirus (excluding faeces)	9	12	8	1	37	9
RSV	81	39	10	1	278	104

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Antrim
Belfast Link Laboratories
Causeway
Craigavon
Mater
Musgrave Park
Sperrin Lakeland
Ulster

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