Communicable Disease Update
Public Health Department, Health Service Executive South (SE)
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IN THE NEWS

South East sexually transmitted infection (STI) surveillance pilot project

As part of a national STI surveillance pilot project, Waterford Regional Hospital laboratory STI isolates and syphilis positive serology are being compiled in the south east. Initial summary data of infections and source of test requests for the six months April –September 2008 are shown in table 1. Hospital out-patient department (OPD) data is mainly from the STI Clinics. Overall 65% infections were in females. 62% of total were in age group 20-29 years.

Table 1. Infection and source of test request

Infection	GP	Hospital Inpatient	Hospital OPD*	Test source not available	Total
Chlamydia	264	16	148	3	431
Gonorrhoea	8	0	8	0	16
Herpes Simplex	8	1	6	0	15
Syphilis	4	0	8	1	13
Trichomoniasis	2	2	2	0	6
Total	**286**	**19**	**172**	**4**	**481**

* Hospital OPD mainly STI Clinic requests

Travel and acute hepatitis B

There have been a number of cases of acute hepatitis B associated with recent travel to South East Asia. It would be worthwhile reminding travellers of the risks associated with unprotected sex or dental or cosmetic procedures when travelling to areas with increased incidence of hepatitis B.

Salmonella Agona Outbreak in Ireland and Europe linked with Irish supplier

An outbreak of *Salmonella* Agona, first identified in Ireland on 15 July 2008, was later found to have cases originating from the UK, Austria, Finland, France and Sweden. As of 1st Oct 2008, 163 cases have been notified as confirmed, of whom 11 were from Ireland. The investigation showed that samples from a food processing plant in Co. Kildare and products from a retail outlet chain supplied by the company were associated with this outbreak. The products included chicken, beef and bacon products, all of which have been withdrawn from sale. Further information is available on the FSAI website www.fsai.ie.

Private well water and *E. coli*

An increased number of cases of Verotoxigenic *E. coli* (VTEC) have been reported this year compared to the same period last year. There is evidence that the increase in VTEC cases may be linked with the record rainfall this summer and the consumption of private well water. After periods of heavy rainfall, well users may need to consider boiling water intended for consumption or taking other appropriate measures. This is particularly important if vulnerable people, such as children, the elderly or immunocompromised persons, are drinking the water.

Householders with private wells should ensure that their wells are properly maintained. The 'How well is your water?' leaflet can be obtained from the Department of Public Health, your Environmental Health Officers or your local authority.

Change in recommendations for isolation following Mumps infection

A recent review of the evidence on the transmission of mumps infection showed that, after 5 days from the onset of parotitis, the risk of transmission of mumps infection was remote.
Therefore the advice for patients who contract mumps is that they should remain off work or school for 5 days after the onset of parotitis. Previously the advice was to remain off work or school for 9 days from the onset of symptoms.

Unknown disease in South Africa, causing 4 deaths, identified as Arenavirus infection

On 12 Sep 2008, a tourist guide organising safari trips, residing in Lusaka, Zambia, was evacuated in a critical condition to Johannesburg, South Africa, where she died 2 days later. The symptoms included a prodromal phase with fever, myalgia, vomiting, diarrhoea, followed by rash, liver dysfunction and convulsions. Cerebral oedema was detected on scan examination.

On October 2, CDC-Zambia notified CDC's Special Pathogens Branch about a cluster of 2 cases (including the tourist guide mentioned previously) of a fatal febrile illness suspected to be a viral hemorrhagic fever, with probable person-to-person transmission. Both patients had been medevaced from Zambia to South Africa and died there. During hospitalization, further transmission occurred in three other hospital workers, two of whom also subsequently died. Preliminary results indicate that the causative agent is a novel Old World arenavirus distinct from other arenaviruses such as Lassa and LCM. CDC's Special Pathogens Branch and Infectious Diseases Pathology Branch have been working closely with colleagues in CDC-Zambia, the Special Pathogens Unit, National Institute of Communicable Diseases (NICD) in South Africa, and CDC-South Africa as well as the respective National Ministries of Health to provide laboratory and epidemiologic support

Norovirus outbreak associated with travel to Lourdes

An outbreak of norovirus in elderly patients from the Netherlands is associated with travel to Lourdes in France. Two elderly patients returned home from France with symptoms and, on their return to their residential institutions, onward spread occurred leading to an outbreak of 91 cases, of whom four died. There are anecdotal reports that illness is being reported by pilgrims in other Lourdes hotels. French colleagues are currently investigating. If you become aware of any gastrointestinal illness in returning pilgrims, please send stool samples to the laboratory, with relevant details, so that characterisation and comparison with the Dutch sequences can take place

Lead and Drinking Water

Recent testing of public water supplies by Water Services Authorities (Local Authorities) has identified some instances where the level for lead was above the standard.
Information on the public health implications of lead in drinking water and a 'Frequently asked questions' document are available on the HSE internet website.
Information is also available on the HSE intranet at:
http://hsenet.hse.ie/HSE_Central/Population_Health/Health_Protection/Drinking_Water/

Human Avian influenza

The cumulative number of lab confirmed human cases of avian influenza A/(H5N1) reported to WHO as of 10 September 2008 is as follows: Since 2003 there have been 387 reported cases from 15 countries. 245 of these cases have been fatal.

Documents published since last Newsletter

Immunisation guidelines for Ireland, 2008. Available from www.HPSC.ie

Meningococcal Disease in Ireland

Introduction

Invasive meningococcal disease (IMD) was first described in 1805 during an outbreak in Switzerland. It was another eighty years before the causative agent, the organism that we now know as *Neisseria meningitidis*, was identified. In the early part of the 20th century, up to 80% of people who contracted IMD died from the disease. The introduction of antibiotics from the 1940s onwards has dramatically reduced mortality from this condition. Despite advances in treatment and prevention, IMD is still a leading cause of meningitis and septicaemia in children and young adults and causes significant mortality. It is estimated that there are 500,000 cases and 50,000 deaths per year worldwide.

N. meningitidis is an encapsulated organism and infects only humans. It is classified into 13 serogroups. There are five serogroups of *N. meningitidis* (A, B, C, Y and W135) which are responsible for most meningococcal disease.

There are significant geographical variations in the distribution of meningococcal disease worldwide. In developing countries, and particularly in sub-Saharan Africa, serogroup A is hyperendemic with incidence rates of up to 20 per 100,000 population occurring annually. Serogroup A, and also W135, have been associated with epidemics in this region.

In contrast, most developed countries have epidemic incidence rates of IMD which range from less than 1 to 5 per 100,000 population, with serogroups B and C being the most prevalent. Serogroup Y causes up to a third of cases in the United States, although it occurs infrequently in other developed countries.

Epidemiology of IMD in Ireland

The incidence of IMD in Ireland has changed over the last 20 years. In 1990 the annual incidence rate was 15 per 100,000 population, which was the highest in Europe. At that time serogroup B accounted for almost 2/3 cases and serogroup C for 1/3 cases This situation changed when Ireland introduced meningococcal C conjugate vaccine (Men C) in October 2002 into the routine childhood immunisation scheme. A catch-up programme for those less than 23 years of age was also introduced. The result of this was that there was a reduction of 75% in serogroup C disease within one year. At the end of 2003, the incidence of serogroup C disease had declined by 96% compared with the pre-Men C vaccine era.

Epidemiology of IMD in the South East

The incidence rates of meningococcal cases per 100,000 population and case numbers in 2005, 2006, 2007 and 2008 are shown in table 2 and Fig 1. A decline in the national crude incidence rate is noted for 2007 and so far this year. The number of cases of IMD in the South East in 2008 to date is the same as the total for the whole of last year.

Table 2. Crude Incidence rates (CIR) per 100,000 population meningococcal notifications

	2005		2006		2007		2008*	
	CIR	Cases	CIR	Cases	CIR	Cases	CIR	Cases
South East	4.1	19	5.2	24	3.9	18	3.9	18
National	4.8	203	4.9	209	4.2	179	2.8	119

*to 30/09/2008

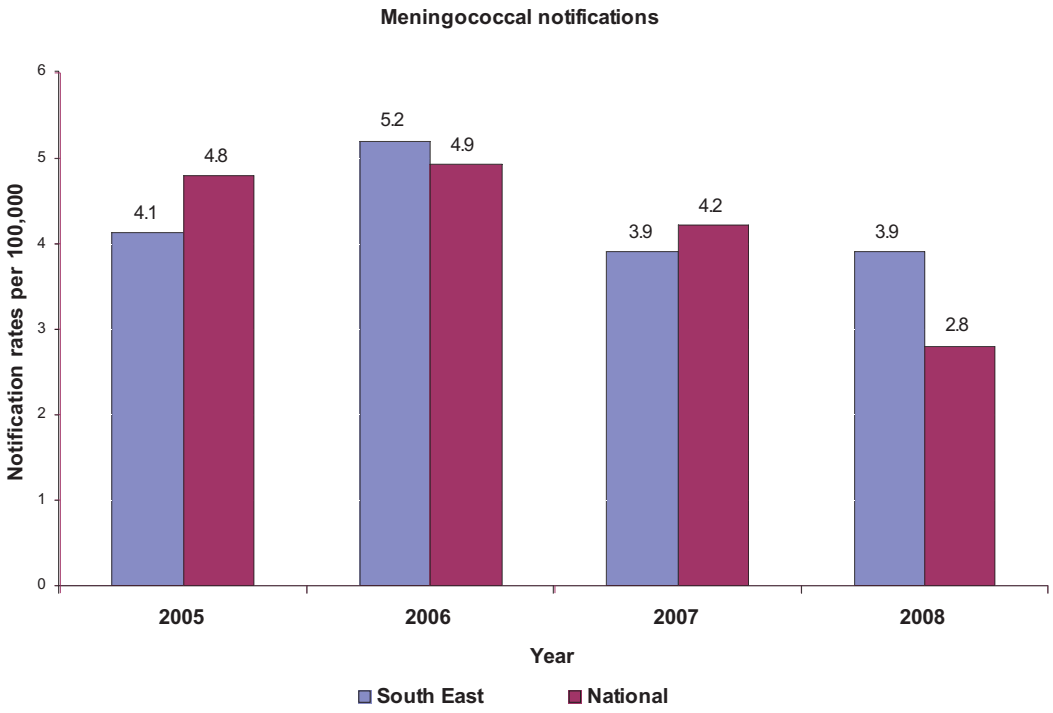

Fig 1. Crude incidence rates (per 100,000 population) of meningococcal infections over four years in Ireland and the South east. Note: the 2008 numbers are up to 30/09/2008

N. meningitidis, serogroup B, remains the serogroup that causes the majority of cases of IMD in the South East, with 6 deaths since 2000. Of IMD notifications for which a serotype has been identified, there have been no cases of serogroup C since 2002 in the South East (Table 3).

Table 3. Meningococcal Notifications by Group 2005-2008

	2005	2006	2007	2008*
Neisseria meningitidis Group B	11	16	11	13
Neisseria meningitidis Group Y	0	1	0	0
Not Specified	8	7	7	5

* to 30/09/2008

Public Health Perspective

Public Health Departments have a major role in the management of meningococcal disease by ensuring that there are adequate prevention and surveillance programmes and by the prevention of secondary cases through contact tracing and chemoprophylaxis.

Close contacts of cases are at increased risk of developing infection. This risk is greatest in the first 7 days following the onset of symptoms in the index case and falls during the following weeks. Contacts should therefore be identified as soon as possible and treatment given. Chemoprophylaxis can be given up to 1 month later if a contact is not immediately identified or traced.

The aims of chemoprophylaxis are, to eliminate carriage from recently colonised susceptible people in the period before invasive disease may develop, and to reduce the spread of the organism.

Future Possibilities

There is at present no reliable vaccine to protect against meningococcal B disease. Conventional methods of vaccine development have so far failed to produce a vaccine with a broad range of protection against serogroup B strains. There are at least 13 strains of serogroup B meningococci circulating and this makes the development of an effective vaccine very challenging. Colleagues from the Health Protection Agency in the UK and Oxford University presented work on a trial vaccine earlier this year. Further trials are pending and it will be some years before the results are available. In the meantime, continued awareness amongst the public and health professionals remains the best way to combat this serious condition.

Article by Dr P Lanigan and Dr A Rogers, Public Health, HSE SE.

Statutory Notification of Infectious diseases

The table below shows cases of infectious diseases notified in the **HSE/SE area only** under Infectious Disease (Amendment No.3) Regulations 2003 (S.I. No. 707 of 2003).

With the exception of STI, TB, Staphylococcus aureus bacteraemia, E. coli infection (invasive) and Enterococcal bacteraemia, data has been extracted from CIDR (computerized infectious disease reporting). For STI figures please see 'In the news' section (this issue) page 1.

Clinical notifications are notifications received directly from clinicians. Laboratory notifications are those received from the clinical director of a diagnostic laboratory.

Disease	2006 Weeks 1-39 Cases	2007 Weeks 1-39 Cases	2008 Weeks 1-39[1] Cases	2008 Weeks 1-39 Notification Source[2] Lab	Clinical
Acute infectious gastroenteritis [3]	241	403	422	408	222
Bacterial meningitis (not otherwise specified)	7	8	2	0	5
Brucellosis	2	0	0	0	0
Campylobacter infection	151	141	134	131	55
Cryptosporidiosis	44	68	55	100	109
E. coli infection (invasive)	87	91	113	113	0
Enterococcal bacteraemia	29	24	33	33	0
Enterohaemorrhagic E. coli	3	7	16	27	71
Giardiasis	3	8	8	4	17
Haemophilus influenzae disease (invasive)	3	4	3	6	11
Hepatitis A Acute	2	3	5	5	6
Hepatitis B Acute	10	1	7	45	45
Hepatitis B Chronic	31	38	38	45	45
Hepatitis C	33	28	35	36	70
Influenza	26	31	22	20	41
Legionellosis	0	0	0	0	0
Leptospirosis	1	3	2	1	5
Listeriosis	0	1	0	0	0
Malaria	1	7	10	9	16
Measles	4	5	5	0	22
Meningococcal disease	16	15	18	21	101
Mumps	15	10	62	34	236
Noroviral infection	63	104	62	56	10
Paratyphoid	0	0	0	0	0
Pertussis	4	8	4	3	13
Rubella	0	2	5	0	6
Salmonellosis	30	29	31	61	95
Shigellosis	0	1	4	3	7
Staphylococcus aureus bacteraemia	69	58	66	66	0
Streptococcus group A (invasive)	3	8	5	5	12
Streptococcus pneumoniae (invasive)	53	69	63	63	76
Toxoplasmosis	1	7	2	2	0
Tuberculosis	38	21	23	‡	23
Typhoid	1	0	1	1	1
Viral encephalitis	1	1	0	0	0
Viral Meningitis	12	4	9	6	11
Total	**984**	**1208**	**1265**		

† Provisional data

* Cases may be notified from a clinical source or a lab source or from both sources (multiple notifications included). Therefore figures for clinical and lab notifications may not equal the total number of cases.

‡ Since May 1st 2008 acute infectious gastroenteritis also now include Clostridium difficile cases

§ Although TB is also notified by the lab, this information is not quantified

There were no notified cases of tetanus, diphtheria, acute anterior poliomyelitis, anthrax, cholera, ornithosis, plague, rabies, smallpox, typhus, viral haemorrhagic disease, or yellow fever.

Immunisation uptake in the HSE- SE and in Ireland

Immunisation uptake rates for children at 12 months and 24 months of age.

	% Uptake at 12 months of age						
	BCG	D_3	P_3	T_3	Hib_3	$Polio_3$	$MenC_3$
HSE SE Q1 2008	**91.6**	**86.5**	**86.5**	**86.5**	**86.4**	**86.5**	**85.1**
CW/KK	92.2	85.3	85.3	85.3	85.3	85.3	85.1
TS	92.0	88.3	88.0	88.3	87.7	88.0	87.7
WD	89.5	85.6	85.6	85.6	85.6	85.6	85.6
WX	92.7	87.2	87.2	87.2	87.2	87.2	86.5
National Q1 2008	**94.0**	**87.0**	**87.0**	**87.0**	**87.0**	**87.0**	**87.0**
HSE SE Q1 2007	92.1	84.5	84.4	84.5	84.3	84.4	84.1

	% Uptake at 24 months of age						
	D_3	P_3	T_3	Hib_3	Pol_3	$MenC_3$	MMR_1
HSE SE Q1 2008	**89.4**	**89.4**	**89.4**	**88.9**	**89.3**	**88.1**	**86.2**
CW/KK	89.5	89.2	89.5	88.6	89.2	87.4	89.2
TS	91.2	91.2	91.2	90.6	91.2	89.6	87.9
WD	87.0	87.0	87.0	86.6	86.8	86.0	81.6
WX	90.7	90.7	90.7	90.5	90.7	89.9	87.0
National Q1 2008	**92.0**	**92.0**	**92.0**	**92.0**	**92.0**	**92.0**	**88.0**
HSE SE Q1 2007	89.8	89.6	89.8	89.6	89.6	89.2	84.6

Uptake of primary immunisations in the South East at 12 months of age increased by 2% for Q1 2008 compared with the same period in 2007. For children aged 24 months of age in the South East in Q1 2008, uptake of MMR1 increased 2% compared with Q1, 2007. There was no real change in uptake of D3, P3 and T3, and uptake of Hib3, Pol3 and MecC3 at 24 months decreased by 1 - 2% over the same time period. The target uptake rate of ≥ 95% has not been achieved in the South East..

This report is produced with the data provided by the Senior Medical Officers, Environmental Health Officers, Waterford Regional Hospital Laboratory, Hospital Clinicians, Regional STI Clinics and General Practitioners.

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