EPI-INSIGHT

IONAD NAISIUNTA FAIRE GALAIR

Disease Surveillance Report of NDSC, Ireland

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IN THE NEWS

The Scottish Executive's MMR Expert Group Report

In June 2001, the Scottish Executive agreed to establish an Expert Group to report on immunisation against measles, mumps and rubella. Their remit included:

- Describing the consequences of pursuing an alternative vaccination policy to MMR.
- Reviewing evidence of the apparent rise in the incidence of autism.
- Describing the process of vaccine testing and the monitoring of adverse side effects.

The Expert Group has recently published their report.[1] They found no evidence of an association between MMR and autism or Crohn's disease. They recommended that services should be improved for people with autistic spectrum disorders (ASD), that further research should be undertaken into ASD and inflammatory bowel disease, and the level and quality of information available to parents of children due to be immunised should be improved.

The Scottish Executive has accepted their recommendations and concluded that there should be no change in current immunisation policy, confirming that MMR remains the safest and most effective way to protect children against measles, mumps and rubella.[2]

A recent in-depth analysis of the scientific literature on MMR and single measles vaccination undertaken by Donald and Muthu found no evidence that MMR or single measles vaccines are associated with autism or inflammatory bowel disease.[3] Both vaccines were associated with a small risk of a self-limiting fever within 3 weeks of vaccination but measles itself causes acute fever in all children who become infected. In populations where vaccine coverage is high they found that MMR and monovalent measles vaccine reduce the risk of measles and measles complications to almost zero. However, MMR unlike measles vaccine alone protects against rubella and mumps which themselves have serious complications including death.

References

1. MMR Expert Group. Report of the MMR Expert Group. Edinburgh: Scottish Executive Health Department, 2002. Available at http://www.show.scot.nhs.uk/mmrexpertgroup/
2. CDSC. Report of the MMR Expert Group established by the Scottish Executive. *Commun Dis Rep CDR Wklly* 2002; **12**(19): 2. Availabe at http://www.phls.org.uk/publications/CDR%20Weekly/PDS% 20files/2002/cdr1902.pdf
3. Donald A, Muthu V. Measles: the effects of prophylactic interventions. Clinical Evidence online, June 2002; 7. Available at http://www.clinicalevidence.com/measles/measles.html

Campylobacteriosis in Norway, 2001

Campylobacter infections increased in Norway from 2331 cases notified in 2000 to 2890 cases in 2001, an increase of 24%.[1] This increasing trend has been evident since the mid-90s. More cases were reported in males (53%) than females (47%), similar to the pattern found in other countries. It was reported that half the cases were acquired abroad, with 43% acquired in Norway and place of infection was unknown in 7% of cases. The incidence of campylobacteriosis was highest in the 0-4 year age group in cases acquired in Norway, while in imported cases the incidence was highest in the 20-29 year age group. Most case occurred during the summer months with a peak incidence in July. As in other European countries, including Ireland *Campylobacter* is the single biggest cause of bacterial gastroenteritis in Norway in recent years.

Case-control studies in Norway have identified a number of risk factors for *Campylobacter* infection. Drinking water that had not been disinfected, eating at barbecues, eating poultry that was bought raw, and occupational exposure to animals, particularly cows, sheep and poultry, were independently associated with an increased incidence of *Campylobacter* infection. A recent study in Australia identified ownership of pet puppies and pet chickens and consumption of mayonnaise to be independently associated with *Campylobacter* infection in infants and young children.[2]

The Food Safety Authority of Ireland have identified the prevention and control of foodborne illness due to *Campylobacter* as a key priority and have set up a multidisciplinary group to identify control measures to combat *Campylobacter* infections from farm to fork.

References

1. Nygard K, Vold L, Kapperud G. Campylobacteriosis in Norway, 2001: incidence still rising. *Eurosurveillance Weekly*, [Serial online] 2002 [cited, 13 June 2002] **24**. Available at http://www.eurosurv.org/2002/020613.html
2. Tenkate TD, Stafford RJ. Risk factors for *Campylobacter* infection in infants and young children: a matched case-control study. *Epidemiol Infect* 2001; **127**(3): 399-404.

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Enhanced Surveillance of Syphilis.

Introduction

Syphilis progresses in four stages: primary, secondary, latent (early and late) and tertiary. Early syphilis (primary, secondary and early latent) is infectious. Late syphilis (late latent and tertiary) is non-infectious.[1]

Recently concern has been raised over a resurgence of sexually transmitted infections (STIs), particularly among men who have sex with men (MSM). The rising incidence of gonorrhoea and syphilis reported from 1995 across Europe is consistent with an increase in unsafe sex, perhaps reflecting an increase in risk behaviour associated with the availability of highly active retroviral therapy for HIV infection and a loss of impact of the HIV prevention campaigns of the 1980s and early 1990s.[2 3] Syphilis, like other genital ulcer diseases, increases the risk of transmitting and acquiring HIV. Concurrent HIV infection may also increase the risk of neurosyphilis.[1] Additionally, STIs have been shown to increase genital HIV viral load and could affect the resistance patterns of genital HIV-1.[3]

Outbreaks of syphilis among MSM have been reported across Europe and the US over the last few years. Since early 2000 there has been a dramatic increase in syphilis amongst MSM in Dublin.[4 5 6 7] This was against a low incidence of syphilis throughout the 1990s, which in 1999 reached its lowest level in 10 years.[8] The Director of Public Health in the Eastern Regional Health Authority (ERHA) established an outbreak control team (OCT) in October 2000. Interventions to control the outbreak have been targeted primarily at MSM in Dublin. This report presents the epidemiology of all notified syphilis cases in the Republic of Ireland, with a particular emphasis on the recent outbreak.

Materials and Methods

An enhanced surveillance system was implemented by NDSC to capture data on all syphilis cases from January 2000. Demographics recorded on all cases included age, sex, country of birth, occupation and health board area of diagnosing clinic. Clinical details and at risk behaviour data were also collected. The form was redesigned in December 2001 to include country and county of residence.

Results

All syphilis cases

Between January 2000 and May 2002, 458 cases of syphilis have been notified to NDSC. Of the 458 cases, 323 (70.5%) were early (infectious) syphilis, 127 (27.7%) were late latent syphilis and 8 (1.7%) were of unknown syphilis stage. Three hundred and sixty one (78.8%) cases were male and 95 (20.7%) were female. Three hundred and eighty-eight (84.7%) of the 458 cases attended STI clinics/general practitioners in the ERHA area (Table 1). Data on the health board of residence is currently being collected and a more comprehensive analysis of the area of residence will be known in the forthcoming months.

Table 1. Number of notified cases of syphilis by notifying health board (January 2000 to May 2002)

Health Board /Authority	Total Syphilis Cases	Early Infectious Syphilis	Late Syphilis	Unknown Syphilis Stage
ERHA	388	276	107	5
MHB	3	2	1	0
MWHB	17	6	9	2
NEHB	9	9	0	0
NWHB	8	6	2	0
SEHB	15	9	6	0
SHB	8	6	1	1
WHB	10	9	1	0
Total	**458**	**323**	**127**	**8**

Early (infectious) syphilis cases

Three hundred and twenty three early syphilis cases were notified to NDSC between January 2000 and May 2002, peaking in July 2001 (Figure 1). Between January and May 2002, 59 early syphilis cases were notified to NDSC. It should be noted that there is a lag time of approximately 8 weeks between the date of diagnosis and the date of notification, therefore the data for January to May 2002 should be interpreted with caution.

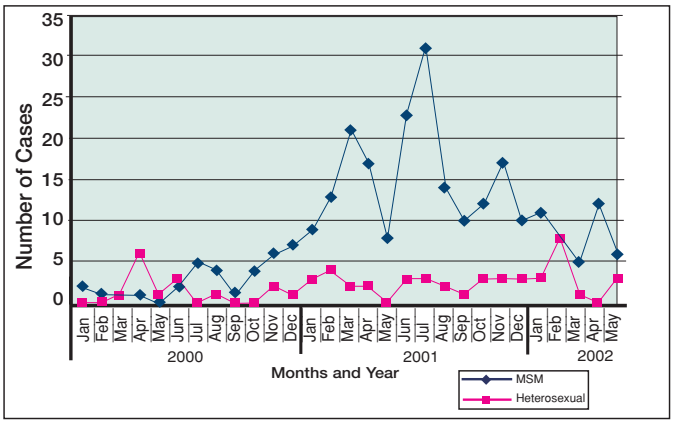

Figure 1. Early syphilis cases by sexual orientation and month of diagnosis

(9 cases were of unknown sexual orientation)

Staging and symptoms

Since January 2000, 150 (46.4%) early syphilis cases were primary, 112 (34.7%) were secondary, 50 (15.5%) were early latent and 11 (3.4%) were early syphilis of unknown stage. Two hundred and thirteen (65.9%) early cases were symptomatic, 89 (27.6%) were asymptomatic; data were incomplete for 21 (6.5%) cases.

Sexual orientation and demographics

Two hundred and sixty-one (80.8%) early cases were MSM [214 (66.3%) were homosexual and 47 (14.6%) were bisexual], 59 (18.3%) were heterosexual (34 male and 25 female cases) and 9 (2.8%) were of unknown sexual orientation (Figure 1). Two hundred and ninety eight (92.2%) early syphilis cases were male and 25 (7.7%) were female. The mean age for male cases was 35 years and 29 years for female cases (Figure 2).

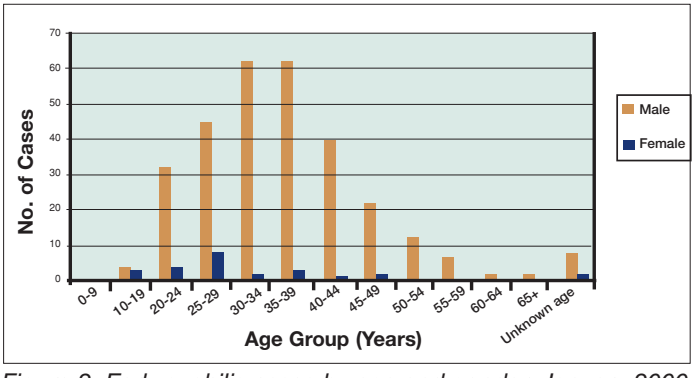

Figure 2. Early syphilis cases by age and gender, January 2000 to May 2002.

Two hundred and forty-eight (76.8%) early syphilis cases were born in Ireland (Table 2), of which 212 (85.5%) were MSM and 34 (13.7%) were heterosexual. Sixty-five cases were not born in Ireland; 45 (69.2%) of these were MSM and 19 (29.2%) were heterosexual.

Table 2. Percentage of total, early and late syphilis cases by geographic origin.

Geographic Origin	% Total (n=458)	% Early (N=323)	% Late (n=127)
Ireland	62.7	76.5	30.7
Western Europe (excl. Ireland)	8.5	10.5	3.2
Central Europe	3.0	0.6	8.7
Eastern Europe	7.6	2.5	19.7
Sub-Saharan Africa	8.3	1.9	24.4
Other	3.7	3.4	4.8
Unknown	6.1	4.6	8.7

Concurrent HIV/STIs

Fifty-eight (18.0%) early syphilis cases were HIV positive (55 male and 3 female). Fifty-one (87.9%) cases positive for HIV were MSM (39 homosexual and 12 bisexual) and 7 (12.1%) were heterosexual. HIV was newly diagnosed in 11 (19.0%) of the 58 HIV positive cases. Eleven cases infected with HIV were also infected with another STI. Six cases were concurrently infected with syphilis, HIV and gonorrhoea. Seventy-three (22.6%) early syphilis cases were concurrently infected with one of the following: ano-genital warts, chlamydia trachomatis, genital herpes simplex, gonorrhoea, hepatitis B virus, or non-specific urethritis. Seven (2.2%) early syphilis cases were concurrently infected with 2 or more STIs (other than HIV). Ninety-seven (30.3%) cases had an STI in the past, 92.8% of these cases were MSM.

Risk behaviour

Three early syphilis cases reported they either currently worked or had worked as a commercial sex worker (CSW). Five MSM had sexual contact with male CSWs and 3 male heterosexuals reported contact with female CSWs in the past. In attempting to identify the source of infection numerous networks were associated with the increase in early syphilis cases: 139 cases attended saunas, 121 cases implicated bars/clubs, 14 made contact through internet chat rooms, and 11 had sexual contact outdoors/parks. Sixty-five (20.1%) early syphilis cases had sex abroad three months prior to diagnosis; 18.6% of cases had sexual contacts in the UK (in particular in London and Manchester). Information on sexual contacts was available for 86.7% of early syphilis cases. The median number of sexual contacts in the 3 months prior to diagnosis was one for male heterosexuals; twelve for male homosexuals; twenty-one male and one female for male bisexuals; and one for female heterosexuals.

Late syphilis cases

One hundred and twenty seven late latent syphilis cases were notified to NDSC between January 2000 and May 2002. Fifty-nine (46.4%) of these were male, 66 (52.0%) were female and the gender was unknown for 2 (1.6%) cases. The mean age for female cases was 32 years (ranging from 21 to 84 years) and 40 years (ranging from 19 to 81 years) for male cases. One hundred and three (81.1%) of the late syphilis cases were heterosexual (36 male, 66 female and one unknown), 21 (16.5%) were MSM and 3 (2.4%) were of unknown sexual orientation.

Fifteen cases were reported as being identified through antenatal screening. Twelve of these 15 cases were non-nationals. Thirty-nine (30.7%) of the late syphilis cases were born in Ireland and 77 (60.6%) cases were non-nationals (24 male and 53 female) (Table 2). Of the 39 cases born in Ireland, 6 were female, 32 were male and one case was of unknown sex. Nineteen of the Irish-born late latent syphilis cases were MSM, 17 were heterosexual and one was of unknown sexual orientation. All of the 77 late latent syphilis cases in non-nationals were heterosexual.

Discussion

Two distinct groups have been associated with the increase in syphilis cases in Ireland (1) an outbreak of early syphilis mainly among MSM in Dublin and (2) late syphilis cases particularly among non-nationals. The large number of sexual contacts and other at risk behaviour associated with the Dublin outbreak reflects the change in sexual behaviour patterns observed in Europe.[2] Of further concern is the anonymous nature of many of the sexual contacts involved with the Dublin outbreak.[9] The number of notified infectious syphilis cases peaked in July 2001, which may have been due to an increase in diagnosis as a result of extensive media campaigns and 'onsite testing' in gay venues in Dublin implemented by the OCT. Although the numbers of notified infectious cases have decreased since July 2001, the incidence still remains at very high levels. Other worrying trends associated with this outbreak are the increase in newly diagnosed HIV cases and concurrent STI infections among early syphilis cases.

Peaks in congenital syphilis usually occur one year after peaks in primary and secondary syphilis in women.[10] It is therefore not unexpected that NDSC has been informed of a number of congenital syphilis cases. In Ireland, pregnant women are routinely screened for syphilis during the first trimester of pregnancy. Directors of Public Health have been requested to alert maternity hospitals to the outbreak suggesting that consideration be given to repeating syphilis serology in the third trimester.

Innovative strategies are being initiated by the OCT to control this epidemic, including an active educational campaign that has been ongoing since January 2001. The outbreak control measures are currently being evaluated in order to identify the impact of the interventions and to make recommendations as to how the OCT should progress.

The control and prevention measures implemented by the OCT will be described in the August edition of Epi-Insight.

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This report was written by the members of the epidemiology subgroup of the Syphilis Outbreak Control Team (above).

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References

1. Holmes K, Sparling F, Mårdh P, Lemon S, Stamm W, Piot P, Wasserheit J. Sexually Transmitted Diseases. Third Edition. New York: McGraw-Hill; 1999.
2. Nicoll A, Hamers FF. Are trends in HIV, gonorrhoea and syphilis worsening in Western Europe? *BMJ* 2002; **324**: 1324-1327.
3. Scheer S, Chu PL, Klausner JD, Katz MH, Schwarcz SK. Effect of highly active antiretroviral therapy on diagnoses of sexually transmitted diseases in people with AIDS. *Lancet* 2001; **357**: 432-435.
4. Doherty L, Fenton K, O'Flanagan D, Couturier E. Evidence of increased transmission of syphilis among homosexual men and heterosexual men and women in Europe. *Eurosurveillance Weekly*, [Serial online] 2000 [cited, 14 December 2000] **50**. Available at http://www.eurosurv.org/2000/001214.htm
5. Domegan L, Cronin M. Enhanced surveillance of syphilis in Ireland. *Epi-Insight*, June 2001; **2** (6). Available at http://www.ndsc.ie/Publications/EPI-Insight/
6. Domegan L, Cronin M, Hopkins S, Thornton L. Syphilis outbreak in Dublin. *Epi-Insight*, December 2001; **2** (12). Available at http://www.ndsc.ie/Publications/EPI-Insight/
7. Fenton K, Giesecke J, Hamers FF. Europe-wide surveillance for sexually transmitted infections: a timely and appropriate intervention. *Eurosurveillance* 2001: **6**(5): 69-70. Available at http://www.eurosurveillance.org/eurosurveillance/v06n05/0605-22.htm
8. National Disease Surveillance Centre, Ireland. Quarterly Report on Sexually Transmitted Infections, Quarter 4, 2000 (including annual summary).
9. Hopkins S, Lyons F, Mulcahy F, Bergin C. The great pretender returns to Dublin. *Sex Transm Inf* 2001; **77**:316-318.
10. Centers for Disease Control and Prevention. Tracking the hidden epidemics, trends in STDs in the United States 2000. Available at http://www.cdc.gov/nchstp/dstd/Stats_Trends/Trends2000.pdf

Month	HB	Organism	Likely mode of transmission	Location	No. ill
Jan	NEHB	Unknown	P to P	Hospital	7
Jan	MHB	Suspect viral	NK	Residential institution	14
Jan	ERHA	Suspect viral	P to P	Nursing home	12
Jan	ERHA	*Clostridium difficile*	Antibiotic use?	Hospital	6
Jan	ERHA	SRSV	P to P	Hospital	25
Jan	MHB	SRSV	P to P	General hospital	35
Jan	NEHB	SRSV	P to P	Hospital	56
Jan	WHB	SRSV	P to P	Hospital	60
Jan	MHB	Suspect viral	P to P	Geriatric hospital ward	27
Jan	International	SRSV	WB and P to P	Ireland, UK, Spain and Andorra	236
Jan	ERHA	*Salmonella*	NK	Hospital	6
Jan	ERHA	SRSV	P to P	General hospital	25
Jan	ERHA	SRSV	P to P	General hospital	21
Jan	ERHA	SRSV	P to P	Nursing home	31
Feb	ERHA	SRSV	P to P	Residential home	38
Feb	ERHA	Rotavirus	P to P	Crèche	12
Feb	NEHB	Suspect viral	P to P	General hospital	30
Feb	ERHA	Suspect viral	P to P	Community hospital	4
Feb	ERHA	SRSV	P to P	Centre for the elderly	4
Feb	WHB	SRSV	P to P	Hospital	75
Feb	NEHB	SRSV	P to P	General hospital	10
Feb	MWHB	SRSV	P to P	Regional hospital	3
Feb	WHB	SRSV	P to P	Hospital	20
Feb	WHB	SRSV	P to P	Hospital	16
Feb	MHB	SRSV	P to P	Geriatric hospital	27
Feb	SEHB	Suspect viral	P to P	Hotel	18
Feb	SEHB	*Salmonella, Cl. difficile*	P to P	Acute hospital and private house	11
Feb	SEHB	SRSV	P to P/AB	District hospital	7
Feb	SEHB	Salmonella		Residential home for the elderly	2
Feb	ERHA	SRSV	P to P	General hospital	8
Feb	ERHA	SRSV	P to P	General hospital	25
Feb	ERHA	SRSV	P to P	Residential home for the elderly	18
Feb	NWHB	SRSV	P to P/AB	Nursing home	13
Feb	SEHB	SRSV	P to P	Hospital	495
Feb	MHB	*Cryptosporidium*	WB	School	27
Feb	ERHA	SRSV	P to P	General hospital	50
Feb	ERHA	SRSV	P to P	Paediatric hospital	18
Feb	ERHA	SRSV	P to P	Nursing home	4
Feb	ERHA	SRSV	P to P	Hospital	34
Mar	NWHB	Suspect viral	P to P	Hospital	9
Mar	SEHB	Suspect viral	P to P	District hospital	6
Mar	ERHA	Suspect viral	P to P	Hospital (longstay ward)	13
Mar	SEHB	Suspect viral	P to P	Psychiatric hospital (part of wider OB)	7
Mar	WHB	SRSV	P to P	Hospital	N/A
Mar	SEHB	Suspect viral	P to P	Residential institution	12
Mar	ERHA	Suspect viral	P to P	Hospital	8
Mar	SEHB	Suspect viral	P to P	National school	22
Mar	SEHB	SRSV	P to P	Residential home	18
Mar	ERHA	SRSV	P to P	Hospital	15
Mar	SEHB	Suspect viral	P to P	Nursing home	16
Mar	SEHB	SRSV	P to P	Acute hospital	52
Mar	SEHB	Suspect viral	P to P	School	
Mar	SEHB	Suspect viral	P to P	Nursing home	22
Mar	SEHB	SRSV	P to P	Hospital	101
Mar	SEHB	Suspect viral	P to P	Creche	5
Mar	SHB	Suspect viral	? P to P	Secondary school	160
Mar	ERHA	SRSV	P to P	Hospital	8
Mar	ERHA	SRSV	P to P	Hospital	29
Mar	ERHA	SRSV	P to P	Care home	116
Mar	NEHB	Suspect viral	P to P	Nursing home for the elderly	14
Mar/Apr	International	Suspect viral	WB and P to P	Ireland, UK, Spain and Andorra	N/A
Mar	ERHA	SRSV	P to P	Geriatric hospital	43
Mar	ERHA	SRSV	P to P	General hospital	6
Mar	ERHA	SRSV	P to P	Nursing home	30
April	ERHA	SRSV	P to P	General hospital	77

Key: AB = airborne; WB =waterborne; P to P = person to person; NK = unknown; N/A = not available, OB = outbreak

The table above gives preliminary results on returns made to NDSC of enteric foodborne and waterborne outbreaks that were investigated and reported in Ireland during the first quarter of 2002. There were 65 outbreaks reported to NDSC during this period, 89% of which were confirmed SRSV or suspect viral in aetiology.

Dr Barbara Foley and Dr Paul McKeown, NDSC

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Salmonella Monthly Report (May 2002):

Strains are allocated to months based on the date of receipt of the isolate from the referring laboratory. These figures are provisional as work may not be finished on particular strains at the time of publication. Data are provided courtesy of Prof Martin Cormican and Dr Geraldine Corbett-Feeney, INSRL.

Health Board	E	M	MW	NE	NW	SE	S	W	Total
S. Typhimurium	5	0	1	2	0	1	0	3	12
S. Enteritidis	5	0	1	0	1	0	3	0	10
S. Bredeney	0	1	0	0	0	0	0	0	1
S. Kottbus	1	0	0	0	0	0	0	0	1
S. Rough	0	0	1	0	0	0	0	0	1
S. Urbana	1	0	0	0	0	0	0	0	1
S. Virchow	1	0	0	0	0	0	0	0	1
S. Worthington	0	0	0	0	0	0	1	0	1
Total	**13**	**1**	**3**	**2**	**1**	**1**	**4**	**3**	**28**