Clinical Notifications

The Department of Public Health collates the clinical notifications received by the Medical Officer of Health from Clare, Limerick, Tipperary North and sends a weekly report to the Health Protection Surveillance Centre (HPSC). The HPSC then produce a Weekly Infectious Disease Report providing provisional data on all notifiable infectious disease in Ireland by HSE area. The weekly report is available at www.hpsc.ie.

From January to September 2007 there were 153 clinical notifications of notifiable infectious disease in Clare, Limerick and Tipperary North (table 3) There were nine clinical notifications of meningococcal disease during the first nine months of the year, three cases were notified in each quarter. From January to March there were three cases reported from Limerick, two males and one female all under the age of five.

The three clinical notifications of meningococcal disease received from April to June were from Clare, two males aged five and under and a 50 year old female. There were three further clinical notifications in the third quarter, two children under two years of age, one from Clare, one from Limerick and an elderly male from Clare. OH

Table 3: Clinical Notifications HSE West Clare, Limerick and Tipperary North. Jan. - Sept. 2007

Acute infectious gastroenteritis	17
Bacterial meningitis (not otherwise specified)	1
Campylobacter infection	37
Chlamydia trachomatis infection (genital)	9
Cryptosporidiosis	25
Enterococcal bacteraemia	1
Enterohaemorrhagic *Escherichia coli*	2
Hepatitis A (acute)	1
Hepatitis B (acute and chronic)	8
Hepatitis C	1
Influenza	4
Legionellosis	1
Measles	2
Meningococcal disease	9
Mumps	1
Noroviral infection	2
Pertussis	3
Salmonellosis	8
Streptococcus pneumoniae infection (invasive)	3
Syphilis	2
Tuberculosis	15
Viral meningitis	1
Total	**153**

Vaccination Uptake

The '5 in 1' vaccine protects children from diphtheria, tetanus, pertussis (whooping cough), polio, and *Haemophilus Influenzae* type b. Uptake of the '5 in 1' vaccine in the Clare, Limerick and Tipperary North is up in the third quarter of 2007 to 92.6% from 91% in quarter 2 (fig 3). This vaccine is given at two, four and six months and is available free of charge from your GP. Uptake of Measles, Mumps and Rubella (MMR) vaccine in the region has also increased from 88% in quarter 2 2007 to 89.5%in quarter 3. Bacillus Calmette-Guerin (BCG) uptake in the region remains unchanged at 97%. OH

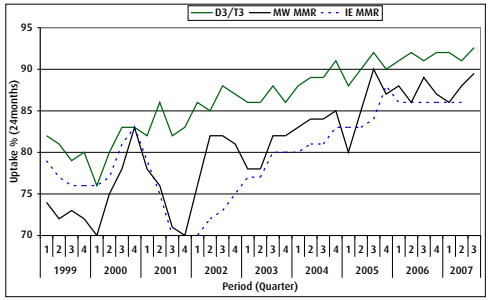


Figure 3: Percentage uptake of DT and MMR at 24mths in HSE MWA and MMR in Ireland 1999 - 2007.
(D3-Diphtheria T3-Tetanus MMR=Mumps Measles Rubella)

Healthcare Workers - Get the Influenza Vaccine, not the Flu!

Notice: We would encourage general practitioners to make a copy of ID-Link available in the surgery waiting area.

If your contact details have changed, please let the Department of Public Health know **(061-483337)** and this will ensure timely delivery of your copy.

This report is produced with the assistance of the Senior Medical Officers and the Mid-Western Regional Hospital Laboratory.

Some data are provisional and are subject to amendment.

ISSN No. 1649-1912. All rates calculated using 2002 or 2006 Census data where appropriate.

ID link

ISSUE 24
November 2007

HSE
Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

nsai
ISO 9001:2000 QUALITY

Compiled by ID-Link Editorial Group
Department of Public Health,
HSE West,
31-33 Catherine St., Limerick
www.mwhb.ie

Gonococcal (GC) Infections

For the nine months up to September 30th 2007, 16 isolates of *Neisseria gonorrhoeae* were reported by the Microbiology Laboratory, Mid-Western Regional Hospital, 10 of which were reported from July to September. Fourteen of the sixteen cases were male. Five were reported from Tipperary (four male), seven from Limerick (all male) and two from Clare (both male). Recent cases appear to have been acquired heterosexually, in Ireland, by the indigenous population. There is a wide geographical spread of cases, there are no obvious common links and they were not in high risk groups.

During 2006 there were 18 cases (all except one was male), one from Clare, one from Tipperary and the remainder were reported from Limerick.

While the number of cases annually is not statistically different from previous years, the average age of those affected is lower which is statistically significant. Half of the 2007 cases were reported by non-STD/GUM sources, compared to one third from non-STD/GUM sources in 2006.

Full Sexually Transmitted Infections (STI) screening of cases is essential as co-infection with other STIs is not uncommon. Patients with gonnorrhoea are also at increased risk of HIV infection. Partner notification and full STI investigation of contacts is also necessary.

Swabs for gonococcal culture need to arrive in the microbiology laboratory within four hours of being taken (and within normal daytime working hours). Clinical details, including risk factors, particularly recent travel history, are useful on request forms.

The frequency with which infection is caused by antimicrobial resistant strains of *N. gonorrhoeae* has made the traditional therapeutic regimens redundant, i.e. penicillin, ampicillin, amoxicillin and tetracycline. Local susceptibility patterns from 2002-07 suggest that isolates remain only fully susceptible to third-generation cephalosporins (ceftriaxone) and spectinomycin with just 75% and 40% of isolates remaining fully susceptible to fluoroquinolones (ciprofloxacin) and penicillin respectively. For uncomplicated anogenital or pharyngeal gonococcal infection, a single dose of intramuscular ceftriaxone 1g is recommended. Ciprofloxacin 500mg orally can be used where isolates remain fully susceptible. Treatment for gonorrhoea should also include an agent targeted against *Chlamydia* as it is commonplace for concomitant infection with this organism (10-30% of heterosexual men and 40-60% of women attending STD clinics).

Figures are likely to underestimate the real burden of disease, particularly in women, in whom infection is often asymptomatic. There may be a number of cases undetected in the community, especially in females and particularly where swabs do not get to the laboratory promptly and where STI screening is not requested as GC isn't tested for in routine high vaginal swabs.

Cases and contacts should be referred to STD/GUM clinics in Limerick, Ennis and Nenagh. For appointments contact the STD/GUM Clinic at (061) 482382 daily 2.30 to 4pm. The National AIDS Strategy Committee advises that HIV patients be referred to a Consultant in either Infectious Diseases or Genito-Urinary Medicine. RF / NOC

Age Group Year	15-19y	20-24y	25-34y	35-44y	45-54y	55-64y	Total
2006	3	2	7	2	3	1	18
2007	2	7	5	1	1	0	16
2006-7	**5**	**9**	**12**	**3**	**4**	**1**	**34**

Table 1: The age breakdown of cases of Gonococcal Infections in 2006/07

Hand Hygiene among Hospital Staff in the Mid-West

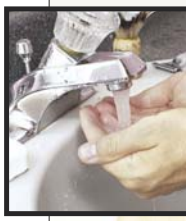
Patients in hospital are at risk of developing infections that they did not have prior to admission e.g. methicillin resistant *Staphylococcus aureus* (MRSA) wound infection and bacteraemia and *Clostridium difficile* associated diarrhoea. These healthcare associated infections may be due to spread of bacteria via hands of healthcare workers if adequate hygiene is not carried out.

Traditionally hand hygiene, such as washing hands or using an alcohol hand rub before and after seeing patients, has been considered the single most important way of reducing such infections. But compliance with hand hygiene is not as high as it should be. An observational study of hand hygiene carried out in four acute hospitals in the Mid-West in Summer 2006 showed an overall hand hygiene rate compliance rate among healthcare workers of 70%. However this rate compares favourably with a previously published Irish observational hand hygiene audit where overall compliance was 51% prior to intervention[1].

A recent Cochrane review[2] showed that there was not enough evidence to be certain about what strategies improved hand hygiene compliance. 'One off' teaching sessions about hand hygiene may improve hand hygiene, but there is not enough evidence to prove this.

Strategies for promoting hand hygiene[3] include education, routine observation and feedback, making hand hygiene convenient, provision of alcohol-based handrub (which is now available in all four acute hospitals) and avoidance of overcrowding, understaffing and excessive workload. MM

1. Creedon S, Healthcare workers' hand decontamination practices: *compliance with recommended guidelines*. Journal of Advanced Nursing, 2003, 51(3), 208-216
2. Gould DJ, Chudleigh JH, Moralejo D, Drey N. *Interventions to improve hand hygiene compliance in patient care.* Cochrane Database of Systematic Reviews 2007, Issue 2. Art. No.:CD005186. DOI: 10.1002/14651858. CD005186.pub2.
3. SARI Infection Control Committee, *Guidelines for Hand Hygiene in Irish Health Care Settings,* 2005.



Hepatitis A Virsus (HAV)

Hepatitis A is a viral infection that may give rise to jaundice, however it is very different from hepatitis B and C. HAV is primarily transmitted by contaminated food, water or human to human contact. Most people recover quickly after infection, some may have subclinical infection (without signs and symptoms) and are usually immune thereafter. HAV is a vaccine preventable disease. In recent years the incidence of HAV has been very low due to good sanitation, hygiene and food preparation practices. Occasionally, travel-related infections are reported.

The disease typically has a cyclical nature – with peaks recurring in waves, 3-5 years apart. The intervals of low incidence are marked by a growing proportion of the population becoming susceptible to HAV. It is likely that there will be a resurgence or outbreak of HAV in the future in Ireland. Public health, general practitioners and hospital clinicians should be aware of the potential for HAV to cause massive outbreaks of disease when introduced to susceptible communities. Early control measures may reduce and prevent more cases.

Suspected and laboratory confirmed cases of HAV should be promptly notified to the Medical Officer of Health to allow early intervention.

Travellers to areas where HAV incidence is high should seek advice on vaccination before they travel. DW

Influenza Vaccination

Influenza is an acute, usually self-limiting, viral illness lasting two to seven days. It is characterised by sudden onset of symptoms such as headache, fever, myalgia, cough, sore throat and malaise. In those with chronic underlying disease, especially the elderly, complications are common and hospitalisation rates high. The elderly comprise 80-90% of reported deaths due to influenza, mainly from bacterial pneumonia. Influenza is highly contagious especially among institutionalised populations.

Vaccination provides the best protection and is recommended for:

- all people aged 65 years and over
- adults and children over 6 months of age with:
  - chronic illness requiring regular follow up (e.g. chronic respiratory disease including cystic fibrosis, moderate or severe asthma, chronic heart disease, diabetes etc.)
  - a suppressed immune system due to disease or treatment including those with missing or non functioning spleens
- children and teenagers on long-term aspirin therapy
- residents of nursing homes, old peoples' homes and other long stay facilities
- healthcare staff and carers who have direct patient contact (Studies have shown that vaccination of staff offers protection against death from Influenza among patients with whom the staff work).

It is also recommended that poultry workers (those who come into close contact with poultry or their manure) be vaccinated with seasonal influenza vaccine. This is to prevent an individual being infected by both avian and human 'flu viruses at the same time which could result in mutation of the avian 'flu virus to one able to easily infect humans.

As circulating viruses vary from year to year annual immunisation with current influenza vaccine is required, usually in early autumn.

Because influenza virus vaccine is not live it is considered very safe in pregnancy. To avoid coincidental association with spontaneous early pregnancy loss, administration during the first trimester is usually avoided.

'Flu vaccine is provided free for all those in at-risk groups, healthcare staff and poultry workers. (Persons who do not have a medical card may be liable for GP consultation fees).

Maximising uptake among at-risk groups and front-line health care workers is critical in the prevention of morbidity and mortality due to influenza. RF

Influenza

Pandemic Influenza

Influenza A has the potential to cause pandemics – global epidemics of disease. Pandemics occur regularly, about every 35 years. Pandemics arise from the transmission of a novel virus that humans have little immunity against.

Many influenza viruses can cross the species barrier from birds and mammals (e.g. pigs). The pandemic strain will emerge from such a source or develop from some "reassortment" with a human influenza strain. The "H" and "N" referred to in Influenza A H5N1 are proteins on the virus (a lectin called haemagglutinin and an enzyme called neuraminidase). Countries around the world are ramping up preparations for the imminent emergence of a 'flu pandemic. Several strategies will be employed to mitigate what is expected to be a situation of high morbidity and mortality. New tools like vaccines and new anti-viral drugs may work to reduce transmission and fatalities. In Ireland, the HSE Health Protection Surveillance Centre published the advice of the expert group on pandemic influenza on pandemic preparedness.

Avian Influenza

Concern is greatest about influenza A H5N1 as this has crossed the species barrier and infected humans – however it is not a certainty that this virus will cause a pandemic. The so-called "bird 'flu virus", has caused 319 cases in humans and mortality remains high at 60% (Table 2). The burden of illness as well as attempts to controlling the spread of A/H5N1 is focussed on South Asia where both highly developed and least developed countries have been affected. In the EU, stringent measures are applied to premises where avian influenza is suspected.

Avian influenza due to A/H5N1 is a disease in domestic and wild birds and it continues to be a problem globally. Significant weight is given to global trade in poultry as a transmission mechanism over migrating birds. In the global context however, H7N7, H5N2, H7N3 all gave rise to outbreaks in poultry, some resulted in human cases. Good hand hygiene when handling raw poultry meat and proper cooking of poultry and eggs will kill any virus.

Reference: Collins R. Avian Influenza H5N1 – the global situation. The Biomedical Scientist. April 2007.
Gazette of the Institute of Biomedical Science.
www.ibms.org
World Health Organization. www.who.int
Health Protection Surveillance Centre (Ireland)
www.hpsc.ie.

Seasonal Influenza

The most common type of severe influenza to infect humans is Influenza A (Influenza B is less common and Influenza C is rare). Influenza is caused by an RNA virus – orthomyxoviridae – which is a different virus from the virus that causes colds. Antibiotics have no effect on viral infections. Because of the great diversity achieved in the make up of the influenza virus the World Health Organization creates a new vaccine against influenza strains circulating in the previous year (for the Northern hemisphere and the Southern hemisphere winters). The National Immunisation Advisory Committee in Ireland recommends specific groups receive free influenza vaccination every year which is safe and effective. An influenza surveillance system exists in most EU countries. In Ireland, sentinel general practitioners report cases of influenza-like illness on a weekly basis all year round. At a national level the Virus Reference Laboratory, Dublin, types all positive samples submitted from the surveillance system. In 2006/7 season the most common type in the Mid-West was A/H3N1.

There were 116 laboratory confirmed cases of influenza in HSE West – Clare, Limerick, Tipperary North during the 2006-2007 influenza surveillance season, 36 from swabs and 80 from serology. The peak in influenza like illness (ILI) activity reported by sentinel GP's occurred in week 9, the week commencing 26th February 2007, when 13 cases of ILI were reported. Throughout the season sentinel GP's sent a total of 42 swabs to the NVRL from ILI cases, 13 of which were positive.

Diagnostic testing for acute influenza at the Serology Laboratory, Mid-Western Regional Hospital, Limerick is ideally achieved by submission of special throat swabs for polymerase chain reaction (PCR) to detect influenza rather than blood for serology. DW/OH

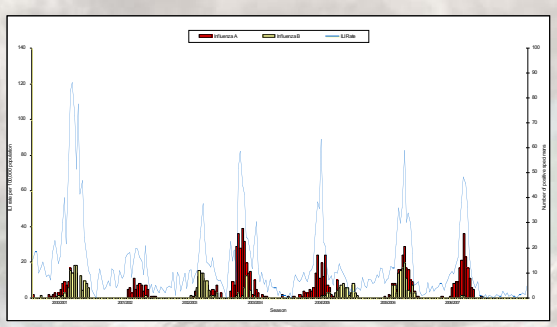


Figure 1: GP ILI consultation rate per 100,000 population and the number of positive Influenza specimens detected by the NVRL by week and season 2000/'01 - 2006/'07. (Courtesy of HPSC)

Country	2003		2004		2005		2006		2007		Total	
	case	death	case	death	case	death	case	death	case	death	case	death
Azerbaijan	0	0	0	0	0	0	8	5	0	0	8	5
Cambodia	0	0	0	0	4	4	2	2	1	1	7	7
China	1	1	0	0	8	5	13	8	3	2	25	16
Djibouti	0	0	0	0	0	0	1	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	20	5	38	15
Indonesia	0	0	0	0	20	13	55	45	27	23	102	81
Iraq	0	0	0	0	0	0	3	2	0	0	3	2
Lao PDR	0	0	0	0	0	0	0	0	2	2	2	2
Nigeria	0	0	0	0	0	0	0	0	1	1	1	1
Thailand	0	0	17	12	5	2	3	3	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	2	0	95	42
Total	4	4	46	32	98	43	115	79	56	34	319	192

Table 2:Cumulative Number of Confirmed Human Cases of Avian Influenza A/(H5N1) Reported to WHO up to 25th October 2007

(Total number of cases includes number of deaths. WHO reports only laboratory-confirmed cases. All dates refer to onset of illness.)

Medical Officer of Health

On the 30th of July 2007, the HSE National Director of Population Health, Dr Patrick Doorley, authorised the delegation of the function of Medical Officer of Health to Dr Tessa Greally, Acting Director of Public Health for the City of Limerick and Counties of Clare, Limerick and North Tipperary. All suspected or confirmed cases of the diseases scheduled as notifiable diseases in Irish law should be notified to the MOH in the Department of Public Health, 31-33 Catherine St. Limerick by general practitioners and hospital clinicians as well as the clinical directors of laboratories. The list of diseases are available from the Department and are on the website.

Notifications books with the required information are available also. DW

Gastroenteritis

In the last three months there have been few cases of cryptosporidium (consistent with the normal seasonal distribution of this pathogen). The number of laboratory confirmed isolations of campylobacter decreased in recent months and should continue to fall until next April. Salmonella in the Mid-West in 2007 has shown a strong summer peak. Perhaps unsurprisingly, ten of the 25 cases reported foreign travel as a risk factor. Nine cases involved *S*. Enteritidis and five involved *S*. Typhimurium (although five recent isolates remain untyped).

In addition to the 220 campylobacter, cryptosporidium and salmonella cases, there are a significant number of other acute infectious gastroenteritis cases, mostly in children under five years caused by rotavirus (61 cases). Almost 130 cases of confirmed norovirus (mainly in the healthcare setting) were notified, to date in 2007. Two cases of giardiasis in adults were notified in autumn 2007. While not specifically notifiable, the Dept. of Public Health receives notifications of confirmed *Clostridium difficile* (mainly in the healthcare setting too) and there were almost 170 cases notified in the region in the January to October period of 2007.

Many of these pathogens have the ability to cause large outbreaks of gastroenteritis and infection control measures in the healthcare setting are vital to control further transmission. The *Clostridium difficile* Subcommittee of the Health Protection Surveillance Centre have issued draft guidelines for closed consultation on the "Surveillance, Diagnosis and Management of *Clostridium difficile*-associated disease in Ireland". The HPSC have also released a document "Guidance on the Management of Outbreaks of Noroviral Infection in Tourist and Leisure Industry Settings" which is available on this website (www.ndsc.ie/hpsc/AZ/Gastroenteric/Norovirus/Publications/). DW

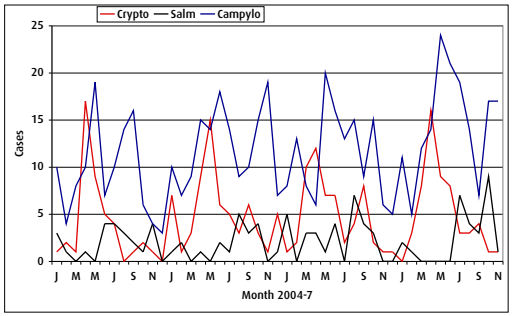


Figure 2: Monthly cases of laboratory confirmed campylobacter, cryptosporidium and salmonella notified in the Mid-West, January 2004 – October 2007.

Leptospirosis

Leptospirosis is a disease caused by infection with a spirochaete *(Leptospira spp.)*. Two types of disease in humans are possible: (1) Weil's Disease – a serious and potentially fatal infection caused by *Leptospira interrogans serovar* Icterohaemorrhagiae, and (2) cattle leptospirosis - a milder infection caused by *Leptospira Hardjo*. It is a zoonosis – a disease transmitted from animals (wild or domestic) to humans.

In 2002-3, there were 8-9 cases recorded in Ireland but the number of cases in recent years has shown a steady increase to 15 in 2003 and 2004 and 21 in 2006. It is possible that the increase is a genuinely higher incidence or it may be due to greater awareness, more complete notification and laboratory testing for leptospiral disease. The disease is predominantly seen in adult males in Ireland. One or two cases are reported in the Mid-West area each year.

Leptospirosis may begin as a flu-like illness (persistent severe headache) leading to vomiting and muscle pain, progressing to jaundice and in rare instances meningitis and kidney failure. The majority of infections are mild. The regional serology laboratory service can provide details of optimal diagnostic tests for leptospirosis in humans.

People in contact with rats, rat or cattle urine (and in rare situations dog urine) or to fetal fluid of cattle can be exposed to *Leptospira spp*. e.g. farmers particularly but sewer workers, vets and river/canal users, even golfers and gardeners in contact with stagnant water. The infectious dose is higher if the animal has recently urinated and warm weather prolongs viability in the environment.

The organism enters the body through cuts and scratches or through the lining of the mouth, throat and eyes after inadvertent contact with infected urine or water (e.g. dairy parlours, rat urine on animal feedstuffs on farms).

Leptospirosis is an occupational health issue. Try to get rid of rats and avoid touching rats with bare hands. Wash cuts and grazes with soap/water and wear protective plasters and clothing during work. Wash hands after handling animals or contaminated materials and before eating, drinking or smoking. Person-to-person spread is extremely rare. Farmers may wish to consult vets about infection and immunisation in cattle.

Early diagnosis and antimicrobial treatment are vital in Weil's Disease as jaundice may not be present in early stages. A good history of risk factors may heighten suspicion of this infection (farming, recent contact with rats/rat urine, river angling, canoeing etc). Sports recreationists involved in travel and "white-water rafting" should be aware of the potential risk of illness.

Leptospirosis is a notifiable disease under Irish law and suspected or confirmed cases should be reported by medical doctors to public health authorities. An information sheet on leptospirosis is available on the website (www.mwhb.ie). DW