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Communicable Disease Update

Public Health Department, Health Service Executive South (SE)

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In this Issue

Infectious disease notifications can be sent to:

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If you wish to receive this newsletter by email please contact the administrator above.

Meningococcal Disease

Early recognition, treatment & infection control

Introduction

Meningococcal infection remains the most common cause of bacterial meningitis in Ireland, despite the success of the MenC vaccine. Serogroup B isolates account for the overwhelming majority of cases. *Streptococcus pneumoniae* or *Haemophilus influenzae* type b are the next most common cause of bacterial meningitis. In neonates, bacterial meningitis is most commonly caused by Group B streptococci, *Escherichia coli, S. pneumoniae* and *Listeria monocytogenes*.

Nasopharyngeal carriage of meningococci is common. About 10% of the population carry meningococci at any given time. The bacteria colonise mucosal surfaces causing no illness or occasionally mild symptoms and most people develop immunity. Rarely the organisms invade the bloodstream and cause severe invasive disease. It is not clear why some people develop invasive disease. Young children, especially those under one year, are most at-risk of meningococcal disease. Teenagers and young adults are the second most at-risk group. Serious meningococcal disease most commonly presents as bacterial meningitis or septicaemia but can present as both.

The Scientific Advisory Committee of the Health Protection Surveillance Centre has recently produced '**Guidelines for the Early Clinical and Public Health Management of Bacterial Meningitis (including Meningococcal Disease)**, January 2012', which can be found on at: www.hpsc.ie .

The following are some key points from this document.

Early Recognition & Management

- Early features can be non-specific and resemble those of other viral and bacterial infections, including self-limiting illness. However, meningococcal disease may have clinical features not normally encountered in children with acute systemic self limiting febrile illnesses.
- The five "Red Flag" symptoms (confusion, leg pain, photophobia, rash and neck pain/ stiffness) or classic clinical features are relatively late signs of meningococcal disease.
- Meningococcal septicaemia has a higher mortality rate than meningococcal meningitis. Septicaemia is often characterised by a rapidly evolving petechial or purpuric rash that does not blanch under pressure. However, in the early stage of development, the rash may blanch with pressure, thus resembling a viral rash or it may be absent, or may be atypical. If present, it may consist only of one or a few haemorrhagic spots located in a place such as the groin or feet.
- In any patient with a systemic febrile illness, particularly a child, **doctors should be encouraged to review the situation within 4-6 hours** if early meningococcal disease cannot be ruled out at first assessment. They should ensure that such patients can be seen without delay if their condition deteriorates.
- All GPs and advanced paramedics should have benzylpenicillin available and should be ready to administer it without delay to patients with a systemic febrile illness and a petechial or purpuric rash. For optimal benefit, benzylpenicillin should be given intravenously. Ceftriaxone or cefotaxime are suitable, if available, where there is a history of proven penicillin anaphylaxis.
- A presumptive diagnosis of bacterial meningitis is a medical emergency and immediate referral to hospital is required.
- If a patient has clinical signs or symptoms suggestive of invasive meningococcal disease (meningitis or septicaemia) they should be given parenteral antibiotics immediately.

Hospital Management

- Management priorities differ depending on the clinical presentation i.e. that of severe sepsis with or without associated meningitis, or that of meningitis.
- If there are no signs of meningeal irritation, or meningitis is not suspected, lumbar puncture is not required on initial assessment.
- Consider lumbar puncture for a person in whom meningitis is suspected only if there are no contraindications (the patient is neurologically stable and there are no signs of increased intracranial pressure or other contraindications).
- **Collect blood samples as soon as possible for PCR and culture**, and full blood count.
- Treatment should not be delayed while awaiting results of diagnostic tests.
- If petechiae or frank bleeding is evident, formal coagulation studies should be undertaken.
- **Further laboratory testing and treatment options are discussed in detail in the guidelines**.
- Household contacts should be given chemoprophylaxis (tablets or syrup, not a prescription) and an information leaflet and advised to be alert to the symptoms of meningococcal disease.
- **The Department of Public Health should be notified immediately**. A list of all contacts treated within the hospital should be provided to public health.
- The patient should be given chemoprophylaxis when able to take oral medication and before discharge from hospital, unless the disease had already been treated with ceftriaxone or cefixime.

Infection Prevention & Control

- *N. meningitidis* is transmitted person-to-person by aerosols, droplets or direct contact with respiratory secretions from a person carrying the organism.
- **Healthcare workers (HCWs) should wear appropriate masks** (surgical, or occasionally shield – see guidelines) when in close contact (within 1 metre) with a suspect or confirmed case of meningococcal disease during the first 24 hours of appropriate antibiotic treatment.
- Suspect or confirmed cases should be placed in a separate room for the first 24 hours after initiation of appropriate antibiotic treatment.
- Patients should wear a surgical mask during transport for the first 24 hours after initiation of appropriate antibiotic treatment.
- After 24 hours of appropriate antibiotic treatment, individuals with meningococcal disease are considered to be no longer infectious.
- The infection control team should be notified when a suspect or confirmed case is admitted.

Public Health Management

- The goal of chemoprophylaxis is to eliminate carriage of the organism from any carrier within a network of close contacts of a case. Cases of meningococcal disease are not efficient transmitters of the organism.
- Chemoprophylaxis should be given to close household contacts as soon as possible, ideally within 24 hours.
- It is important that **contacts are alert to the symptoms of meningococcal disease and advised to seek medical help, if concerned**, whether or not they received chemoprophylaxis.
- Public health will carry out a risk assessment of all non-household contacts and provide chemoprophylaxis where indicated.
- Public health will also provide information and re-assurance, as required, to those considered not to be close contacts, such as casual contacts and school or work colleagues.

Further Information & Useful Resources

www.hpsc.ie
www.immunisation.ie
www.meningitis-trust.ie
www.meningitis.org

Key Messages

- The five "Red Flag" symptoms (confusion, leg pain, photophobia, rash and neck pain/stiffness) are relatively late signs of meningococcal disease.
- Early features can be non-specific and resemble those of other viral and bacterial infections.
- Patients with a systemic febrile illness, particularly children, should be reviewed within 4-6 hours if early meningococcal disease cannot be ruled out when first assessed.
- Benzylpenicillin should be readily available and administered without delay to patients with a systemic febrile illness and a petechial or purpuric rash.
- In hospital settings blood should be drawn a.s.a.p. for PCR and culture.
- The Department of Public Health should be notified.
- Contacts should be given chemoprophylaxis (tablets or syrup, **not** a prescription) and an information leaflet.
- Contacts should be alerted to the symptoms of meningococcal disease and advised to seek medical help, if concerned.
- HCWs should wear appropriate masks when within 1 metre of a suspect or confirmed case of meningococcal disease during the first 24 hours of appropriate antibiotic treatment.
- In general HCWs do **not** require prophylaxis as cases of meningococcal disease are not efficient transmitters.

Summary of infectious diseases notified in Weeks 1 to 26, 2012[1]

The table below shows cases of infectious diseases notified in the **HSE (SE) area only** under Infectious Disease (Amendment) Regulations 2011 (S.I. No. 452 of 2011).

Disease	Number	Disease	Number
Bacterial Meningitis (not otherwise specified)	3	Measles	5
Campylobacter infection	141	Meningococcal Disease	3
Chickenpox – hospitalised cases[2]	9	Mumps	6
Chlamydia trachomatis[3]	324	Noroviral infection	16
Clostridium difficile	100	Pertussis	32
Cryptosporidiosis	72	Rotavirus	408
Giardiasis	3	Rubella	1
Gonorrhoea[3]	24	Salmonellosis	13
Haemophilis influenza (invasive)	5	Shigellosis	1
Hepatitis A (acute)	1	Streptococcus group A (invasive)	11
Hepatitis B acute and chronic	14	Streptococcus pneumoniae (invasive)	68
Hepatitis C	15	Syphilis[3]	17
Herpes Simplex (genital)[3]	25	Trichomoniasis[3]	6
Influenza[4]	57	Tuberculosis	13
Legionellosis	0	Typhoid	0
Leptospirosis	0	Verotoxigenic Escherichia coli infection	7
Listeriosis	0	Viral encephalitis	2
Malaria	2	Viral Meningitis	8

[1]Provisional data.
[2] Newly notifiable since 1st January 2012.
[3] STI data shown is from laboratory only and does not contain data for ano-genital warts or non-specific urethritis.
[4] Influenza figures contain all subtypes.

Invasive Group A Streptococcal (iGAS) Infections

There has been an increase in the number of iGAS cases notified in recent months, particularly in the East, North-East and South-East (SE) regions of the country. In the SE, 11 cases have been notified since January this year, the majority of these since May. This compares to a total of 7 cases in 2011 and 5 in 2010. It also appears that the number of non-invasive GAS infections has increased to date in the SE in 2012.

iGAS infections can be life-threatening. Prompt diagnosis and treatment are essential. Presenting symptoms include high fever, chills, rigors, sweats, myalgia and localised pain. The most common initial symptoms of streptococcal toxic shock syndrome (STSS) are fever and severe pain, which is abrupt in onset and usually, precedes tenderness or physical findings. In the community, patients with symptoms or physical findings consistent with iGAS infection should be immediately referred to hospital. In hospital settings, prompt advice should be sought from a medical microbiologist +/- infectious disease physician. Further information is available at www.hpsc.ie

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Immunisation uptake for children at 12 and 24 months of age

The table below shows the uptake rates for some of the vaccinations in the primary immunisation schedule for children who reached 12 and 24 months of age during Quarter 4, 2011. The South East uptake rates for all vaccines shown in the table were equal to or were higher than the national uptake rate for that vaccine. The target uptake rate of ≥95% was achieved across the South East for BCG_1 at 12 months and for D_3 at 24 months. No Local Health Area in the South East achieved a ≥95% uptake rate for PCV_3 at 24 months, while only Waterford reached the target uptake rate for D_3 at 12 months and South Tipperary exceeded the target for MMR_1 at 24 months. The uptake rate for $MenC_3$ at 24 months in the South East was only 87 to 90%, up to 10% less than the uptake rate at 24 months for the other vaccines shown.

Immunisation uptake rates

Local Health Area	% vaccine uptake, Q4 2011					
	BCG_1	**D_3**		**$MenC_3$**	**PCV_3**	**MMR_1**
	12 mths	**12 mths**	**24 mths**	**24 mths**	**24 mths**	**24 mths**
Carlow - Kilkenny	96	93	95	87	91	94
Tipperary South	95	94	97	90	94	96
Waterford	95	95	95	87	93	94
Wexford	96	92	95	87	92	92
Ireland	80	90	95	85	91	92

D_3: Three doses of Diphtheria containing vaccine. In this table, uptake of D_3 is indicative of uptake of vaccines contained in the 5in1 or 6in1 combined vaccine.

The primary immunisation schedule is available at www.immunisation.ie. The immunisation uptake rates presented in this report are for children who were 12 and 24 months of age in Quarter 4 - 2011, i.e. children born between 01/10/2010 - 31/12/2010 and 01/10/2009 - 31/12/2009

In the News

Measles

Many children attend activity camps, residential courses, and language schools during the summer months. Measles can cause significant outbreaks in such settings if children aren't appropriately vaccinated. Parents should be encouraged to ensure their children have had two doses of the MMR vaccine.

Driving change in immunisation

The National Immunisation Office (NIO) published a report outlining its role in driving and supporting immunisation programmes in this country. The report describes changes that have occurred and challenges that remain. See http://www.immunisation.ie/en/EXTRADOWNLOADS/Text_16998_en.html

European Region marks tenth anniversary of polio-free certification

The WHO European Region has marked 10 years since being certified free of poliomyelitis. Stopping transmission of indigenous wild poliovirus in the 53 countries in the Region is a landmark in global polio eradication.

Infectious Diseases Notification: Contact information

Medical practitioners and clinical directors of diagnostic laboratories are required to transmit a written or electronic notification of a notifiable infectious disease to a Medical Officer of Health (The Infectious Diseases (Amendment) Regulations, 2011 (S.I. No. 452 of 2011)). Case definitions for notifiable diseases are available at www.hpsc.ie and notification form booklets are available from regional public health department offices, to which notifications should be returned.

Notifications can be phoned: 056 7784142, faxed: 056 7784599 or posted to:
Public Health Department, HSE South (SE), St. Canice's Hospital, Lacken, Dublin Road, Kilkenny.

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

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