Communicable Disease Update

Public Health Department, Health Service Executive South (SE)

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In this Issue

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Tel.: 056 7784142
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www.hse.ie/publichealth

Data were provided by University Hospital Waterford Laboratory, Senior Medical Officers, Communicable Disease Control Nurses, General Practitioners, Hospital Clinicians, Environmental Health Officers, and the STI Clinic.

New Primary Immunisation Schedule -More Protection

The National Immunisation Advisory Committee (NIAC) has recommended the following changes to the primary childhood immunisation (PCI) schedule for babies:

- Introduction of meningococcal B (Men B) vaccine and rotavirus oral vaccine
- Introduction of combined Hib/Meningococcal C (MenC) vaccine at 13 months
- Changed timing of Men C and pneumococcal conjugate vaccines (PCV)

All children born on or after 1st October 2016 will receive the new schedule. Children born before 1st of October 2016 should receive the old schedule (Table 1).

Table 1: Old and New Primary Immunisation Schedules

Old schedule			New schedule Babies born on or after 1st October 2016	
Age (months)	**Vaccine**	**No. of injections**	**Vaccine**	**No. of injections**
2	6 in 1 + PCV	2	6 in 1 + PCV + MenB + Rotavirus	3 + oral vaccine
4	6 in 1 + MenC	2	6 in 1 + MenB + Rotavirus	2 + oral vaccine
6	6 in 1 + PCV	2	6 in 1 + PCV + MenC	3
12	MMR + PCV	2	MMR + MenB	2
13	MenC + Hib	2	Hib/MenC + PCV	2

Meningococcal B Vaccine

The vaccine being introduced for immunisation against *Neisseria meningitidis* group B is Bexsero (GSK). It is a recombinant multi-component vaccine, it is not a live vaccine.

Efficacy and safety

Research suggests the vaccine protects against 73-88% of circulating MenB strains. The vaccine was first licenced in 2013 and has been shown to be very safe and well tolerated.

Administration

Babies should receive three doses of Men B vaccine at 2, 4 and 12 months of age. Men B vaccine can be given at the same time as any of the other primary childhood vaccines. Men B vaccine should be given in to the left anterolateral thigh.

Men B vaccine and Fever

When Men B vaccine is given with the other PCI vaccines there is a higher risk that the baby will develop a fever.

NIAC has recommended that babies are given three 2.5 ml (60mg) doses of liquid paracetamol routinely 4- 6 hours apart following their 2 and 4 month vaccinations to reduce fever, see Table 2. Fever increases over the first 6 hours following vaccination and decreases over 24 hours. If a fever persists after the first three doses, it is possible to administer a 4th dose of paracetamol (4 doses within 24 hours). If the baby continues to have a fever parents are advised to seek medical advice.

Studies have shown no interference with immunogenicity of Men B or other PCI vaccines with administration of paracetamol.

Paracetamol is not routinely recommended after administration of the 3rd dose of vaccine at 12 months of age.

Table 2: Recommended Paracetamol Dosing

Liquid paracetamol (120mg/5ml)	2 month visit	4 month visit
Dose 1	At the time of injection	At the time of injection
Dose 2	4-6 hours after dose 1	4-6 hours after dose 1
Dose 3	4-6 hours after dose 2	4-6 hours after dose 2

Rotavirus

Rotarix is the vaccine to be used in Ireland against rotavirus infection. It is a live attenuated oral vaccine and comes in a prefilled syringe.

Efficacy and safety

It is 82-94% effective against rotavirus. The vaccine is safe and well tolerated in the majority of infants.

Administration

The vaccine should be offered at the 2 month and 4 month PCI visits. It is recommended that the vaccine is administered before other vaccines while baby is content for ease of administration.

If a baby is 8 months and 0 days of age or older then they should <u>NOT</u> receive any dose of rotavirus oral vaccine. This is because optimal protection is achieved by administering the vaccine at 2 and 4 months. In addition there is a slight elevated risk of intussusception in older babies.

Contraindications

- Any confirmed anaphylactic reaction to a previous dose of rotavirus vaccines or its constituents.
- A history of Severe Combined Immunodeficiency Disorder (SCID),
- Previous history of intussusception.
- Malformation of the gastrointestinal tract
- Hereditary fructose intolerance, sucrose-isomaltase deficiency or glucose-galactose malabsorption

Intussusception

Intussusception is as condition where a baby can get a blockage in the bowel. Approximately 1 in 1500 babies will develop this condition naturally, most commonly between the ages of 5 months and 1 year. Intussusception is a rare associated side effect of the rotavirus vaccine and occurs in approximately 1 in 50,000 vaccinated babies. This means potentially 1-2 extra cases per year of intussusception in Ireland would be related to rotavirus vaccine. Cases of suspected intussus-ception should be referred urgently to hospital for further investigation.

SCID (Severe Combined Immunodeficiency)

SCID is a rare inherited primary immune deficiency. There is a 1:70,000 risk of SCID in infants from non traveller families, compared to 1:1,200 in infants from a traveller family.

Prior to administering the rotavirus vaccine the following questions should be asked of ALL parents to see if their baby may be at risk of SCID:

Are there any diseases in the baby's family that affect the immune system?

Did anyone in either family need a bone marrow transplant as a baby?

If the answer to both is **No** – rotavirus vaccine should be given

If the answer is **Yes** to either question –

- Check if FBC was taken at birth and confirm results
- If FBC not taken, FBC with differential White cell including lymphocyte count should be arranged. If the Lymphocyte count is less than $2.0/10^9$ litre urgent referral to a consultant paediatrician is required.

More Information

http://www.hse.ie/eng/health/Immunisation/hcpinfo/hcppci/newschedule/

Ms Grainne Parker, Communicable Disease Control Nurse and Dr Catherine Lynch, Consultant in Public Health Medicine

Summary of Infectious Diseases Notified in 2016

Disease	Cases[1]	Disease	Cases[1]
Bacterial Meningitis (not otherwise specified)	4	Malaria	5
Campylobacter infection	341	Measles	5
Chickenpox – hospitalised cases	8	Meningococcal Disease	8
Chlamydia trachomatis	636	Mumps	66
Clostridium difficile	207	Noroviral infection	56
Cryptosporidiosis	117	Pertussis	29
Giardiasis	53	Rotavirus	290
Gonorrhoea	97	Rubella	0
Haemophilis influenza (invasive)	5	Salmonellosis	27
Hepatitis A (acute)	5	Shigellosis	8
Hepatitis B acute and chronic	33	Streptococcus group A (invasive)	15
Hepatitis C	26	Streptococcus pneumoniae (invasive)	52
Herpes Simplex (genital)	113	Syphilis	15
HIV	13	Tuberculosis	31
Influenza	942	Typhoid	0
Legionellosis	0	Verotoxigenic Escherichia coli infection	132
Leptospirosis	2	Viral encephalitis	4
Listeriosis	1	Viral Meningitis	27

[1] Provisional data.

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

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

Vaccines for Health Care Workers

Influenza vaccine

Annual influenza vaccination is strongly recommended for health care workers, both for their own protection and for the protection of patients who may have a suboptimal response to influenza vaccinations.

Pertussis vaccine

A booster dose of Tdap (tetanus, low-does diphtheria and pertussis) vaccine is recommended for health care workers who are in contact with infants, pregnant women and the immunocompromised. Boosters every 10 years may be considered.

Vaccines for Pregnant Women

Influenza vaccine

Influenza vaccine should be offered to all pregnant women at any stage of pregnancy. Pregnancy increases the risk of influenza complications because of alterations in heart rate, lung capacity and immunological function. Because influenza virus vaccine is an inactivated vaccine (not a live vaccine) it is very safe in pregnancy.
Influenza vaccination during pregnancy provides immunity to babies in the first six months of life.

Pertussis vaccine

Maternal antibodies from women immunised before pregnancy wane quickly and the concentration of pertussis antibodies is unlikely to be high enough to provide passive protection to newborn babies prior to primary vaccination. Pregnant women should be offered a booster dose of Tdap (tetanus, low-dose diphtheria and pertussis) vaccine as early as possible after 16 weeks and up to 36 weeks gestation in each pregnancy, to protect themselves and their infant.
Tdap can be given at any time in pregnancy after 36 weeks gestation although it may be less effective in providing passive protection to the infant.

Tdap should be offered in the week after delivery to those women who were not vaccinated during their pregnancy.

Immunisation Uptake for Children at 12 and 24 Months of Age

Local Health Office	% vaccine uptake, Q2 2016					
	BCG_1	D_3*		$MenC_3$	PCV_3	MMR_1
	12 mths	12 mths	24 mths	24 mths	24 mths	24 mths
Carlow-Kilkenny	9	91	95	86	92	92
Tipperary South	16	92	96	87	92	93
Waterford	24	92	94	85	90	92
Wexford	15	96	96	89	93	95
Ireland	9	91	95	87	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 5 in 1 or 6 in 1 combined vaccine.

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