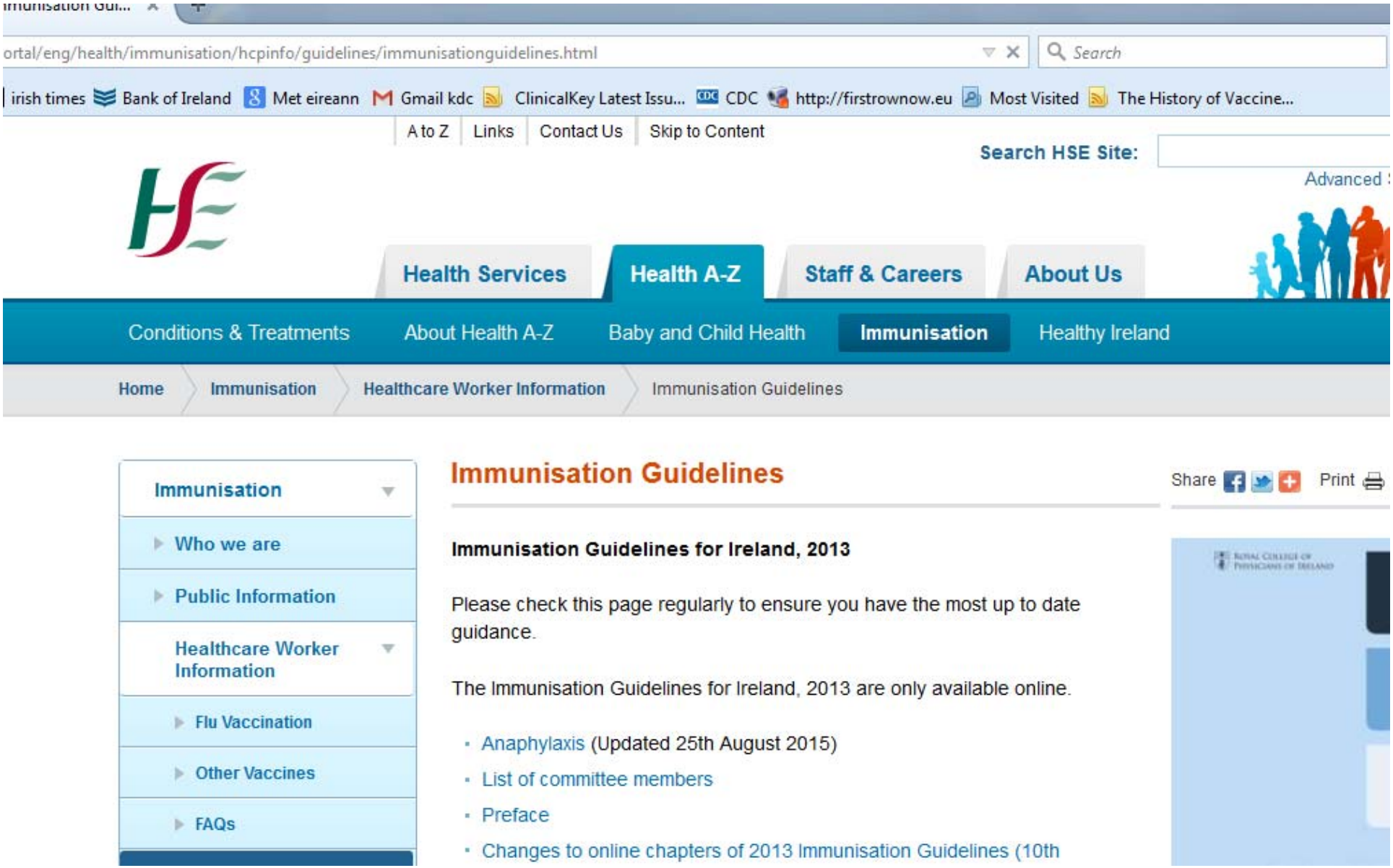
Recent Updates to the Guidelines

Tralee, Oct. 8th, 2015

Kevin Connolly

NIAC and the Guidelines

- Who?
- What?
- When?
- How?
- Feedback/feed-in
- Relationships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Immunisation Guidelines
Immunisation
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Flu Vaccination
Other Vaccines
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Immunisation Guidelines for Ireland, 2013
Please check this page regularly to ensure you have the most up to date guidance.
The Immunisation Guidelines for Ireland, 2013 are only available online.
Anaphylaxis (Updated 25th August 2015)
List of committee members
Preface
Changes to online chapters of 2013 Immunisation Guidelines (10th

Selected updates, part 1

- Epinephrine dose
- Definitions
- Latex allergy
- Interval between live vaccines
- Gloves and vaccination
- Site

Epinephrine, Definitions (poor slide)

170915

National Immunisation Advisory Committee (NIAC) Immunisation Guidelines August 2015				
Chapter	**Page**	**Previous text**	**New or added text**	**Reason for change**
Anaphylaxis	1	Epinephrine Adult 0.5 ml (500 micrograms)	Epinephrine Adult 0.5 -0.6 ml (500 - 600 micrograms)	To allow for dosage in pre filled epinephrine pens
	3	Anaphylaxis is a clinical syndrome characterised by • sudden onset AND • rapid progression of signs and symptoms AND • involving multiple (>2) organ systems, as follows:	Anaphylaxis is a clinical syndrome characterised by • sudden onset AND • rapid progression of signs and symptoms AND • involving 2 or more organ systems, as follows:	Clarification
1. General Information	6	*Inactivated vaccine* is a vaccine that contains killed bacteria or viruses, or a portion thereof. *Live attenuated* vaccine is a vaccine that contains a weakened strain of live bacteria or viruses that replicate in the body. *Recombinant vaccine* is a suspension of attenuated viruses or killed micro organisms developed through recombinant DNA techniques. *Sub unit vaccine* only contains the antigenic parts of the pathogen which are necessary to elicit a protective immune response. For convenience the term inactivated vaccine is used in these Guidelines to include all non live vaccines (e.g. inactivated, recombinant, subunit).	*Conjugate vaccine* is one where a protein or polysaccharide antigen is linked to a carrier protein e.g. meningococcal C conjugate vaccine. *Inactivated vaccine* is a vaccine that contains killed bacteria or viruses, or a portion thereof e.g. inactivated polio vaccine *Recombinant vaccine* is a vaccine produced through recombinant DNA technology e.g. hepatitis B and human papillomavirus vaccine *Sub unit vaccine* contains only specific antigenic proteins of an infectious agent e.g. acellular pertussis and some influenza vaccines. *Live attenuated* vaccine is a vaccine that contains a weakened strain of live bacteria or viruses that replicate in the body e.g.	Clarification

Latex anaphylaxis or allergy?

170915

			latex, vaccines supplied in vials or syringes that contain natural rubber should not be administered unless the benefit of vaccination outweighs the risk for a potential allergic reaction. For those with contact allergy to latex gloves, vaccines supplied in vials or syringes that contain dry natural rubber or rubber latex may be given.	
10	2. **Persons with bleeding disorders or on anticoagulants** When vaccines are given intramuscularly to persons with bleeding disorders or on anticoagulants, it is prudent to use a 23 gauge or finer needle and to apply gentle pressure to the vaccine site for 1-2 minutes after the injections.	2. **Persons with bleeding disorders or on anticoagulants** When vaccines are given intramuscularly to persons with bleeding disorders or on anticoagulants, it is prudent to use a 23 gauge or wider needle to reduce the pressure gradient and cause less trauma to the tissues, and to apply gentle pressure to the vaccine site for 1-2 minutes after the injections.	Rationale for using higher gauge needle Correction from finer to wider needle
12	MMR or varicella vaccine should not be given from 2 weeks before to 5 -11 months after injection of HNIG as they may interfere with the immune response (see Table 2.4).	MMR or varicella vaccine should not be given from 2 weeks before to 5 -11 months after injection of HNIG as it may interfere with their immune response (see Table 2.4). This does not apply to Zoster vaccine. The amount of antigen in zoster vaccine is high enough to offset any effect of circulating antibody. Also, studies of zoster vaccine were performed on patients receiving antibody-containing blood products with no appreciable effect on vaccine efficacy.	Addition of information re zoster vaccine and HNIG
13	Blood products Inactivated vaccines and some live vaccines (BCG, rotavirus and yellow fever) can be administered at the same time or at any interval before or after	Blood products, non-live vaccines and some live vaccines (BCG, rotavirus, yellow fever and zoster) can be administered at the same time or at any interval before or	Addition of information re zoster vaccine

Intervals between doses

Guidelines for time interval between killed and live antigens

The following table shows the recommended intervals between vaccines.

Table 2.5 Recommended intervals between vaccine doses

Antigen combination	Recommended interval between doses
MMR and yellow fever*	MMR and yellow fever should **not** be administered on the same day. They should be given at least 4 weeks apart
MMR, varicella and zoster vaccine	Can be given on the same day, if not they should be given at least 4 weeks apart
BCG, rotavirus, live attenuated influenza vaccine (LAIV), MMR, oral typhoid vaccine, varicella, yellow fever, and zoster	**Apart from the combinations listed above**, can be given on the same day or at any time before or after each other
≥2 non-live antigens	May be administered simultaneously or at any interval between doses
Non-live and live antigens	May be administered simultaneously or at any interval between doses

***MMR and yellow fever**. If these vaccines are given at the same time there may be reduced immune responses to the mumps, rubella and yellow fever antigens so a four week interval should ideally be left between them. If protection is required rapidly the vaccines may be given at any interval and an additional dose of MMR given at least 4 weeks later.

HPV –minimum interval

170915

			BCG and MMR vaccines. For convenience the term non live vaccine is used in these Guidelines to include conjugate, inactivated, recombinant and subunit vaccines.	
2. General Immunisation Procedures	3	**Vaccination before minimum recommended age or interval** However, giving a dose 4 days or less before the minimum recommended interval is unlikely to have a significant adverse effect on the immune response to that dose, and does not need to be repeated.	**Vaccination before minimum recommended age or interval** However, giving a dose 4 days or less before the minimum age or interval is unlikely to have a significant adverse effect on the immune response to that dose, and does not need to be repeated. (This does not apply to the second dose of HPV vaccine in a two dose schedule).	Clarification
	7	**Table 2.3** **12 months to <4 years** PCV 1 dose (omit if > 2 years of age **18 and older** MMR 2 doses 1 month apart[4] Td/IPV 1 month after Tdap/IPV [4] For health care workers born in Ireland since 1978 or born outside Ireland; and for adults from low resource countries, without evidence of two doses of MMR vaccine	**Table 2.3** **1 to <4 years** PCV 1 dose (omit if ≥ 2 years of age **18 and older** MMR 2 doses 1 month apart[4] Td/IPV 1 month after Tdap/IPV 2 doses 1 month apart [4] For health care workers born in Ireland since 1978 or born outside Ireland; for contacts in outbreaks born in Ireland since 1978 or born outside Ireland and for adults from low resource countries, without evidence of two doses of MMR vaccine	Erratum Addition of contacts in outbreaks
	8	Contraindications • All vaccines: Anaphylaxis to a vaccine or to one of its constituents or a constituent of the syringe, syringe cap or vial (e.g. Latex anaphylaxis).	Contraindications • All vaccines: Anaphylaxis to a vaccine or to one of its constituents or a constituent of the syringe, syringe cap or vial (e.g. Latex anaphylaxis). If a person has had anaphylaxis caused by	Clarification about latex anaphylaxis

HPV –minimum interval (bad slide)

170915

			BCG and MMR vaccines. For convenience the term non live vaccine is used in these Guidelines to include conjugate, inactivated, recombinant and subunit vaccines.	
2. General Immunisation Procedures	3	**Vaccination before minimum recommended age or interval** However, giving a dose 4 days or less before the minimum recommended interval is unlikely to have a significant adverse effect on the immune response to that dose, and does not need to be repeated.	**Vaccination before minimum recommended age or interval** However, giving a dose 4 days or less before the minimum age or interval is unlikely to have a significant adverse effect on the immune response to that dose, and does not need to be repeated. (This does not apply to the second dose of HPV vaccine in a two dose schedule).	Clarification
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2

Little bit about Latex anaphylaxis at the bottom

Gloves, Injection site

			Vaccines. Measles vaccines. Elsevier Saunders, China.
14	Small air bubbles (less than the internal diameter of the syringe) do not need to be expelled.	Small air bubbles (less than the internal diameter of the syringe) do not need to be expelled, except for intradermal injections.	Erratum
15	It is not necessary to use gloves for routine intradermal, subcutaneous and intramuscular injections	It is not necessary to use gloves for routine intradermal, subcutaneous and intramuscular injections, unless likely to come into contact with potentially infectious body fluids or unless the health	New recommendation

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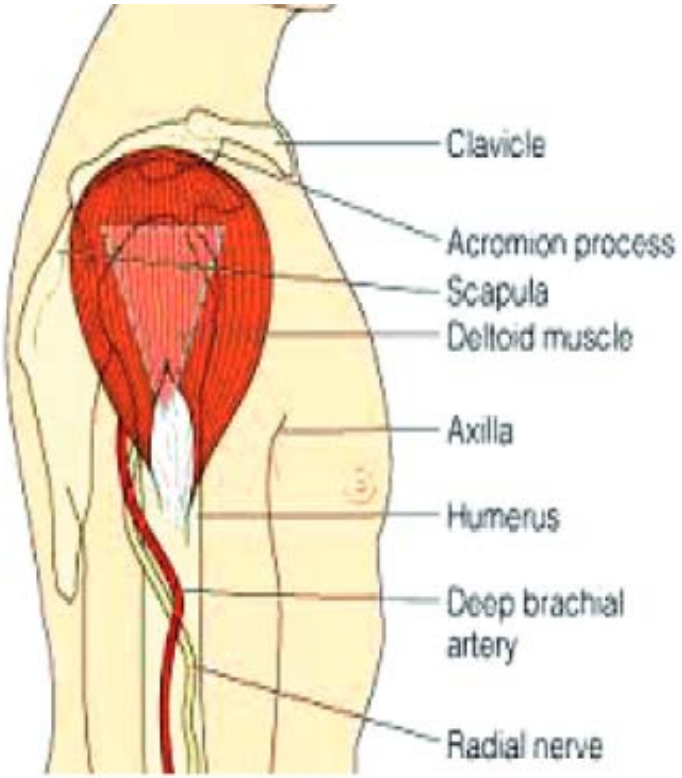
		care worker has a lesion on his or her hand. If gloves are worn they should be changed for each patient.	
17	Light triangle indicates site for IM injection into the deltoid (upper border of triangle is approximately 2 finger-breadths below the acromion process).	Light triangle indicates site for IM injection into the deltoid (upper border of triangle is approximately 2 finger-breadths below the acromion process and the apex is at the mid point of the humerus) The recommended site is in the middle of the triangle.	
18	There are only two routinely recommended SC sites for administration of vaccines, the fatty area of the anterolateral thigh and the deltoid region (upper arm).	There are only two routinely recommended SC sites for administration of vaccines, the middle third of the anterolateral thigh and the deltoid region.	Clarification
18	Table 2.7	the middle third of the anterolateral thigh	Clarification

Deltoid Site



Light triangle indicates site for IM injection into the deltoid (upper border of the triangle is approximately 2 finger-breadths below the acromion process and the apex is at the mid point of the humerus).

The recommended site is in the middle of the triangle.

Selected updates, part 2

- Antipyretics
- Reducing pain
- Hyposplenism and vaccines
- HBV non-responders
- New Meningococcal vaccines
- Tdap in pregnancy

Antipyretic and Men B vaccine*

170915

		injection site with moderate intensity may decrease pain in older children (4 years and older) and adults.	close to the injection site before and during injection may decrease pain in older children (4 years and older) and adults.	and Injection Techniques for Reducing Injection Pain During Routine Childhood Immunizations. Clin Ther. 2009;31[Suppl B]: S48-S76
	23	Analgesia, Antipyretics and Vaccines Fever is a normal part of the inflammatory response, and is well-known to occur after vaccination. It is associated with improved antigen recognition, increased T-cell activity and immune responses. Fever which occurs after vaccination is generally benign and self-limiting; it rarely rises above 39.5oC. Antipyretic drugs do not prevent febrile convulsions in at-risk children. Either paracetamol or ibuprofen may be considered for treatment of fever >39.50C or for a significant reaction at the site of vaccination. Prophylactic use of antipyretics such as paracetamol and ibuprofen, at or shortly after vaccination may result in significant reduction in the primary antibody responses to some vaccine antigens. It is likely that this reduction in the immune response is due to interference by antipyretics with the inflammatory response at the injection site. In light of the above it is recommended that prophylactic antipyretics should not be given at the time of vaccination.	Antipyretics and Vaccines Fever is a normal part of the inflammatory response, and is well-known to occur after vaccination. It is associated with improved antigen recognition, increased T-cell activity and immune responses. Fever which occurs after vaccination is generally benign and self-limiting; it rarely rises above 39.5oC. Antipyretic drugs do not prevent febrile convulsions in at-risk children. Either paracetamol or ibuprofen may be considered for treatment of fever >39.50C or for a significant reaction at the site of vaccination. As there is a high incidence of fever >39.5^{0}C following MenB vaccine, prophylactic use of paracetamol at the time of or closely after vaccination may be considered, as it has been shown to reduce the incidence and severity of fever in children under 2 years of age.	Ipp M et al (2009). Order of vaccine injection and infant pain response. Arch Pediatr Adolesc Med;163:469–472. Shah V et al (2015) HELPinKids&Adults. Pharmacological and combined interventions to reduce vaccine injection pain in children and adults: systematic review and meta-analysis. Clin J Pain (in press). Taddio A et al (2015), A randomized trial of rotavirus vaccine versus sucrose solution for vaccine injection pain. Vaccine 33 (2015) 2939–2943 New recommendation
3. Immunisation of Immunocompromised Persons			Revised chapter	New information

*This is the second-last crap slide

18	Table 2.7	the middle third of the anterolateral thigh	Clarification
22	**Ingestion of sweet-tasting liquids or breastfeeding** Several studies have demonstrated a reduction in crying after injections when children 1 year or younger ingest a small amount (a few drops to half a teaspoon) of a 24-30% sugar solution just prior to an injection. Breastfeeding has also been shown as a soothing measure for infants receiving injections, and there is some evidence that breastfeeding can decrease the incidence of fever after immunisations.	**Ingestion of sweet-tasting liquids or breastfeeding** Several studies have demonstrated a reduction in crying after injections when children 1 year or younger ingest a small amount (a few drops to half a teaspoon) of a 24-30% sugar solution just prior to an injection. Breastfeeding has also been shown as a soothing measure for infants receiving injections, and there is some evidence that breastfeeding can decrease the incidence of fever after immunisations. Both licensed rotavirus vaccines contain approximately 20% sucrose; if indicated, they should be administered just before recommended injections instead of a sucrose solution.	New recommendation
23	**Tactile stimulation** Rubbing or stroking the skin near the	**Tactile stimulation** Rubbing, stroking or applying pressure	Clarification Taddio A, et al. (2009). Physical Interventions

	injection site with moderate intensity may decrease pain in older children (4 years and older) and adults.	close to the injection site before and during injection may decrease pain in older children (4 years and older) and adults.	and Injection Techniques for Reducing Injection Pain During Routine Childhood Immunizations. Clin Ther. 2009;31[Suppl B]: 548-576

Reducing Injection Pain

- Skin-to -skin, holding
- Breastfeeding/sucrose/glucose/RVV
- Tactile stimulation
- Do not aspirate
- Inject more painful vaccine last

Hepatitis B Vaccine Non-responders

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	13	Anti-HBs levels above10 mIU/ml are accepted as protecting against HBV (Table 9.2 and Table 9.3).	Anti-HBs levels above10 mIU/ml are accepted as protecting against HBV for those at low risk (Table 9.2 and Table 9.3). For those at high risk of HBV infection • For those with a level of anti-HBs <10m IU/ml. 2 months after the third dose, a repeated course of vaccination, preferably with an alternative hepatitis B vaccine, is recommended. This results in protective anti-HBs titres in 50 to 100% of previous non-responders. • If there is still no response (anti-HBs <10m IU/ml. 2 months after the third dose) administration of a course of a double dose (2 mls) of combined hepatitis A and B vaccine (Twinrix) is recommended at 0, 1 and 6 months as this can induce a protective anti-HBs response in >90% of non-responders. • If there is still no response (anti-HBs <10mIU/ml two months after the third dose), a single dose of Fendrix should be offered and anti-HBs checked 2 months later.	Updated guidance
11. Influenza			Revised chapter	Updated information Reference to live attenuated influenza vaccine
12. Measles	6	**MMR** Those who do not have serological evidence of infection or documented evidence of 2 doses of MMR vaccine should be given 1 or 2 doses of MMR as required separated by at least 1 month.	**MMR** Those who do not have serological evidence of infection or documented evidence of 2 doses of MMR vaccine should be given 1 or 2 doses of MMR as required separated by at least 1 month, so that a total of 2 doses are received.	Clarification

Tdap in Pregnancy

15. Pertussis	2	Although vaccine uptake has increased since 2001 the number of notifications increased in 2012 (see Figure 15.2). These occurred in older children and adults and are most likely to be associated with waning immunity.	Although vaccine uptake has increased since 2001 the number of notifications increased in 2012 (see Figures 15.2 and 15.3). In 2012 the age group most affected was <12 months of age (infants), particularly those aged<6 months with 143 notifications. Many of the infants are infected before they have had an opportunity to start their immunisation schedule. It is for this group that maternal vaccination during pregnancy is particularly important, as it is only through maternal-foetal antibody transfer that they can obtain some protection against pertussis infection.	Moore DL et al. (2004). Lack of evidence of encephalopathy related to pertussis vaccine: active surveillance by IMPACT, Canada, 1993-2002. Pediatr Infect Dis J. 23(6):568-71. Pahud BA et al (2012). Lack of association between childhood immunizations and encephalitis in California, 1998-2008. Vaccine. 5; 30(2):247-53. doi: 10.1016/j.vaccine.2011.10.104. Epub 2011 Nov 12.
	7	Indications 1.Primary vaccination The primary course consists of 3 doses given at 2, 4 and 6 months as 6 in 1 vaccine (DTaP/IPV/Hib/Hep B).	Indications 1.Primary vaccination The primary course consists of 3 doses given at 2, 4 and 6 months as 6 in 1 vaccine (DTaP/IPV/Hib/Hep B). The 6 in 1 vaccine should be given before PCV, as it is less painful.	New recommendation

Read All the Updates

			varicella and rabies).	
5. Immunisations and Health Information for Travel	4	**Table 5.1** Hepatitis B (if born on or after 1/7/2008)	**Table 5.1** Hepatitis B (if born before 1/7/2008)	Erratum
	18	One dose confers life-long protection and a booster dose of yellow fever vaccine is not medically indicated. However, International Health Regulations (2005) require re-vaccination at 10 year intervals if indicated, in order to retain a valid International Certificate of Vaccination Prophylaxis.	Duration of protection: At least 35 years, with some exceptions.	Updated guidance

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	An up to date list of licensed vaccines can be accessed on the IMB website www.imb.ie Dose and route of administration The dose is 0.5 ml subcutaneously, for all ages Indications Mandatory vaccination presently concerns only yellow fever. Yellow fever vaccination is carried out for two reasons: 1. To protect the individual in areas where there is a risk of yellow fever infection. 2. To protect vulnerable countries from importation of the yellow fever virus.	An up to date list of licensed vaccines can be accessed on the HPRA website www.hpra.ie Dose and route of administration The dose is 0.5 ml subcutaneously,at least 10 days before entering an endemic area **Indications** Active immunisation against yellow fever in persons: • travelling to, passing through or living in an endemic area, • travelling to any country that requires an International Certificate of Vaccination for entry • handling potentially infectious materials (e.g. laboratory personnel) Re-vaccination (see Figure 5.1) should be offered to those:	

Selected updates (part 3)

- Epinephrine dose
- Definitions
- Latex allergy
- Interval between live vaccines
- Gloves and vaccination
- Antipyretics
- Hyposplenism and vaccines
- HBV non-responders
- New Meningococcal vaccines
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