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## Frequently Asked Questions to the NIO

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[www.immunisation.ie](http://www.immunisation.ie)

## Questions for the NIO

- 2373 queries asked to NIO in 2018
- 74% from healthcare professionals
  
- **Most common-**
- Catch-up queries
- HPV 4 schedule
- MMR esp. postnatal
- Cold chain
- Rotavirus vaccine
  
- NIO updates its information materials to reflect common queries

## Catch-up schedule

- NIAC guidelines:  
<https://www.hse.ie/eng/health/immunisation/hcpinfo/latentrant0818.pdf>
- Always look on the website as frequently updated
- If in doubt, start again
- Can't over immunise someone
- If have received some doses, don't give what they have had again, just give what they still need for their age
- Once re-established on Irish schedule catch-up complete
- Discount any MMR's given under the age of 1 year
- Discount tetanus containing vaccines given around 18 months
- Only need one dose of Hib, Men C and PCV over age 1 year

Vaccine	4 months to <12 months	12 months to < 2 years	2 years to < 4 years	4 to <10 years	10 to <18 years	18 years and older
<b>6 in 1<sup>1</sup></b>	3 doses 2 months apart	3 doses 2 months apart	3 doses 2 months apart	3 doses 2 months apart		
<b>Men B</b>	2 doses 2 months apart (1 dose if ≥ 10 months and booster at 12 months or older, 2 months after the first dose)	2 doses 2 months apart <i>(if born on or after October 1<sup>st</sup> 2016)</i>	2 doses 1 month apart <i>(if born on or after October 1<sup>st</sup> 2016)</i>			
<b>Men C</b>	1 dose	1 dose	1 dose	1 dose	1 dose (if given at ≥ 10 years, adolescent booster not required)	1 dose (up to 23 years )
<b>PCV</b>	2 doses 2 months apart	1 dose (omit if ≥2 years of age <sup>2</sup> )				
<b>MMR<sup>3</sup></b>		1 dose	1 dose	2 doses 1 month apart	2 doses 1 month apart	2 doses 1 month apart <sup>4</sup>
<b>Rotavirus<sup>5</sup></b>	2 doses 4 weeks apart <b>No dose after 8 months 0 days</b>					
<b>Tdap/IPV</b>					3 doses 1 month apart	1 dose <sup>6</sup>
<b>Td/IPV</b>						2 doses - 1 month apart (1 month after Tdap/IPV)
<b>NOTE</b>	<i>Continue with routine childhood immunisation schedule from 12 months</i>		<i>Continue with routine school immunisations</i> <i>Tdap/IPV at least 6 months and preferably 3 years after primary course MMR at least 1 month after previous</i>	<i>Continue with routine school immunisations</i> <i>Tdap/IPV at least 6 months and preferably 3 years after primary course]</i>	<i>Booster of Tdap/IPV 5 years after primary course and Tdap 10 years later</i>	

<sup>1</sup> One dose of single Hib vaccine may be given to children over 12 months of age and up to 10 years of age if this is the only vaccine they require

<sup>2</sup> Unless at increased risk

<sup>3</sup> 2<sup>nd</sup> dose of MMR is recommended routinely at 4-5 years but may be administered earlier. Children vaccinated <12 months in the case of an outbreak should have a repeat MMR vaccination at 12 months of age, at least one month after 1<sup>st</sup> vaccine with a further dose at 4-5 years of age. If a child aged <18 months receives a 2<sup>nd</sup> MMR vaccine within 3 months of the 1<sup>st</sup> MMR a 3<sup>rd</sup> MMR should be given at 4-5 years of age.

<sup>4</sup> For health care workers without presumptive evidence of immunity; for contacts in outbreaks born in Ireland or born outside Ireland and for adults from low resource countries, without evidence of two doses of MMR vaccine

<sup>5</sup> One dose if 7-<8 months

<sup>6</sup> Only one dose of Tdap/IPV is required due to likely previous exposure to pertussis infection

## Example

14 month old child

Had 2 doses of 6 in 1 aged 2 and 4 months of age

Men C and PCV aged 4 months of age

MMR aged 9 months

What do they need now?

Vaccine	12 months to < 2 years
6 in 1 <sup>1</sup>	3 doses 2 months apart
Men B	2 doses 2 months apart <i>(if born on or after October 1<sup>st</sup> 2016)</i>
Men C	1 dose
PCV	1 dose (omit if $\geq 2$ years of age <sup>2</sup> )
MMR <sup>3</sup>	1 dose
Rotavirus <sup>5</sup>	
Tdap/IPV	
Td/IPV	

14 month old child

Had 2 doses of 6 in 1 aged 2 and 4 months of age

MenC and PCV aged 4 months of age

MMR aged 9 months

1 dose of 6 in 1 includes Hib so have had their Hib booster in this

MenB 2 doses 2 months apart

MenC 1 dose

PCV 1 dose

MMR 1 dose (discount dose at 9 months)

Too old for rota

1<sup>st</sup> visit: 6 in 1, Men B, and MMR

2<sup>nd</sup> visit: 2 months later- Men B, PVC, Men C

Or 3 visits 1 month apart with Men B and 1<sup>st</sup> and 3<sup>rd</sup> visit

## Vaccine administration

- Giving 2 vaccines in the same limb-separate by at least 2.5 cm
- For catch-up or if fear parents may not return for 13 month visit, can give 4 vaccines in one visit. (routine at 12 months in the UK)
- Paracetamol must be given just after administration of Men B at 2 and 4 months of age (not 12 months) do not wait to see if fever develops

## Interval between live and non-live vaccines

**Table 2.5** Recommended intervals between vaccine doses

Antigen combination	Recommended interval between doses
MMR and yellow fever*	MMR and yellow fever should <b>not</b> 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	<b>Apart from the combinations listed above</b> , can be given on the same day or at any time before or after each other
Non live vaccines	May be administered simultaneously or at any interval between doses
Non live and live vaccines	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 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.



## Minimal Intervals

The 2, 4 6 months vaccines are recommended at 2 months and not 8, 16, 24 weeks.

The minimum age for giving the 2 months vaccines is 6 weeks (minus 4 days).

The minimum interval between the 2 and 4 months vaccines is 4 weeks

The minimum interval between 4 and 6 months vaccines is 8 weeks.

A minimum 16 week interval is required between the 1<sup>st</sup> and 3<sup>rd</sup> 6in1.

Minimum intervals: use only in exceptional circumstances (such as imminent international travel) *Only use once per child*

***“4 day rule” 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***



**Table 2.2 Optimal and Minimum recommended ages and intervals between doses of the Primary Childhood Schedule**

	Dose 1		Dose 1 to Dose 2		Dose 2 to Dose 3	
	Optimal age	Minimum age	Optimal Interval	Minimum Interval	Optimal Interval	Minimum Interval
DTaP, Hib Hepatitis B (as 6 in 1 vaccine)	2 months	6 weeks	2 months	4 weeks	2 months (and 4 months after Dose 1)	8 weeks (and 16 weeks after Dose 1)
MenB	2 months	6 weeks	2 months	4 weeks	2 months (and over 12 months of age)	8 weeks
Men C	6 months	6 weeks	2 months (and over 12 months of age)	4 weeks (and over 12 months of age)	> 2 years	8 weeks
MMR <sup>1</sup>	12 months	6 months <sup>1</sup>	1 month	4 weeks <sup>2</sup>		
PCV	2 months	6 weeks	2 months	4 weeks	2 months	8 weeks (and over 12 months of age)
Rotavirus	2 months	6 weeks	2 months	4 weeks	2 months	4 weeks (and less than 8 months 0 days of age)

<sup>1</sup> Children can be vaccinated with MMR before their first birthday during a measles outbreak. If so they should have a repeat MMR at 12 months of age, at least one month after the first vaccine, with a 3<sup>rd</sup> dose at 4-5 years of age.

<sup>2</sup> If a child aged <18 months receives a second MMR vaccine within 3 months of the first MMR, a third MMR should be given at 4-5 years of age.<sup>2</sup> If a child aged <18 months receives a second MMR vaccine within 3 months of the first MMR, a third MMR should be given at 4-5 years of age.

## MMR postnatal

- MMR is live so can't be given in pregnancy.
- All rubella seronegative women of child bearing age should be offered 1 dose of MMR vaccine.
- Satisfactory evidence of protection is **documentation** of having received at least **one dose** of rubella containing vaccine,
- Or a positive rubella antibody test (IgG level >10IU/ mL).
- Pregnancy should be avoided for 1 month after MMR.

## MMR travel advice

New NIAC advice 1<sup>st</sup> Dec 2018:

<https://www.hse.ie/eng/health/immunisation/hcpinfo/guidelines/measlesprophylaxis.pdf>

If traveling to area with measles outbreak Inc. whole of Europe:

**Infants 6 months to ≤11 months of age** should receive one dose of MMR vaccine. Still need 2 further doses at 12 months and junior infants

MMR vaccine can be obtained free from cold chain

- Older people e.g. “Wakefield generation” would benefit from 2 MMR’s if previously unvaccinated. (born after 1978)

## Menitorix/Bexsero

- **Menitorix** SmPC states Menitorix should not be used over the age of 2 years
- *NIAC and UK Joint Committee on Vaccination and Immunisation (JCVI) advise Hib/MenC can be given to all those over 2 years*
- **Bexsero** SmPC states a booster dose should be given to all children after 12 months interval.
- *NIAC and the UK JCVI advise this booster not required*

## National Immunisation Advisory Committee (NIAC)

Each chapter of the National Immunisation Advisory Committee (NIAC) Immunisation Guidelines state

*“In some circumstances, advice in these guidelines may differ from that in the Summary of Product Characteristics of the vaccines. When this occurs, the recommendations in these guidelines, which are based on current expert advice from NIAC, should be followed”.*

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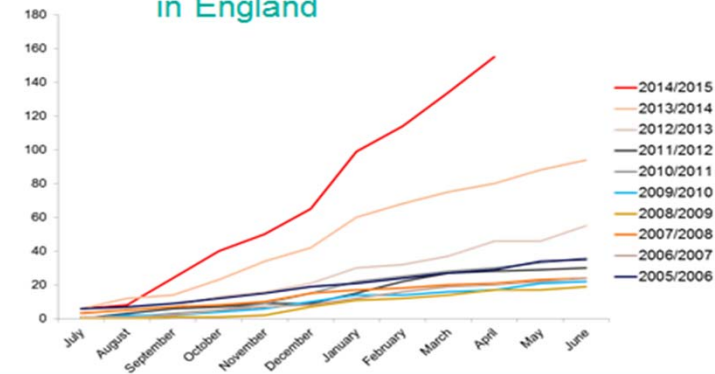
# Meningococcal ACWY vaccine

## Meningococcal ACWY vaccine

- Increased incidence of Men W disease- started in South America, then spread to UK, then to other European countries and now increasing cases in Ireland.
- Hypervirulent Wcc11.
- Cc11 was also responsible for the increase in Men C disease seen around 1990's and W in 2000 associated with Hajj.

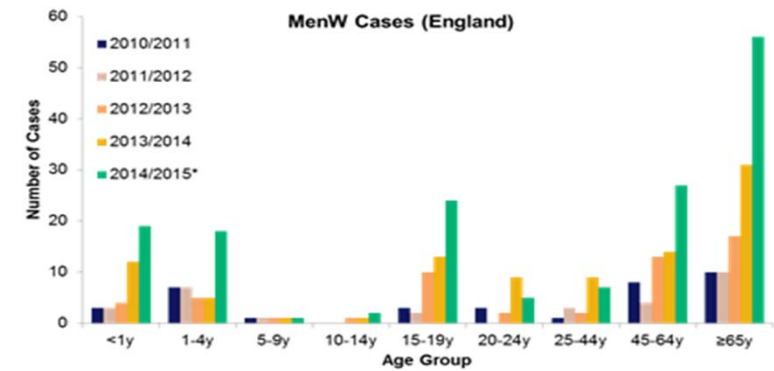


**Cumulative MenW cases by epidemiological year (July to June) in England**



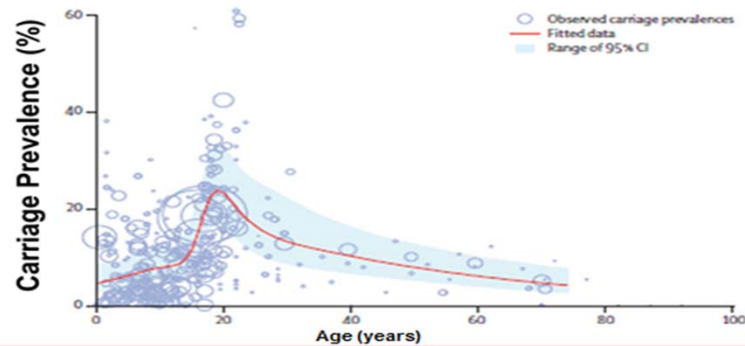
Source: PHE training slides

**MenW cases by age group**  
England, 2011/11-2014/15\*



**Meningococcal carriage by age: a systematic review and meta-analysis**

Hannah Christensen, Margaret May, Leah Bowen, Matthew Hickman, Caroline L. Trotter



Conjugate ACWY vaccine in adolescents

1. Provide direct protection to risk group
  2. Prevent carriage of meningococci therefore help to prevent spread
- Also Men B vaccine as subunit vaccine may provide some cross protection against W

## MenACWY vaccine in Ireland

- Minister for Health announced that Men ACWY would replace Men C vaccine in Ireland for first years at second level from academic year 2019-20
- Plans are progressing to implement this change
- Information materials will inform parents
- Only one dose needed for protection

## Contraindications MenACWY vaccine

Same as for Men C vaccines

1. A confirmed anaphylaxis to a previous dose of the vaccine **OR**
2. A confirmed anaphylaxis to any constituent or excipient of the vaccine

There are very few individuals who cannot receive meningococcal vaccines

## Cautions

- **Minor illnesses without fever** not reason to postpone immunisation
- **Pregnancy and breast-feeding**- can be given
- **HIV and immunosuppression**- Can be given but may not make full response

## Potential adverse reactions:

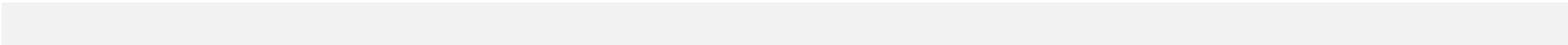
In adolescents, possible adverse reactions include:

- Pain, tenderness, swelling or redness at the injection site and mild fever
- Older children and adults: headaches, nausea, rash and malaise
- Neurological reactions such as dizziness, febrile/afebrile seizures, faints, numbness and hypotonia are very rare



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## MMR Egg allergy

*“Allergy to egg, including anaphylaxis following egg is not a contraindication to having the MMR vaccine” .*

(NIAC)

Since 2008 the NIAC states:

*"Currently-used measles, mumps and rubella vaccines do not contain significant amounts of egg cross-reacting proteins.*

*Recent data shows anaphylaxis following MMR is not associated with hypersensitivity to egg antigens but to other vaccine components e.g. Neomycin or Gelatin."*

Therefore there is no contraindication to this infant having the MMR in primary care.

## **Vaccine Expiry Date**

Where box has month and year only, vaccine expires on last day of month

## **Vaccination after the expiry date**

If a vaccine is given after the last day of expiry month there may be a reduced immune response and that dose should be disregarded.

Non live vaccine may be given at same visit or as soon as possible after error noticed.

Live vaccine should be repeated after one month



## Tetanus Boosters

Does a 4 year old child who is not in school require a tetanus booster after a dog bite?

If the child has received 3 doses of 6in1 vaccine  
the child is age appropriately vaccinated  
tetanus not required

Adults need tetanus if 10 years since last tetanus vaccination



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**Table 21.1 Risk assessment of wounds for use of vaccination and tetanus immunoglobulin (TIG)**

Vaccination status	Clean wound	Tetanus prone wound	
Fully immunised (5 doses of tetanus vaccine at appropriate intervals)	Nil	No vaccine required unless more than 10 years since previous tetanus vaccine	Consider TIG*
Primary immunisation and age appropriate boosters complete	Nil	Nil	Consider TIG*
Primary immunisation or age appropriate boosters incomplete	Age appropriate tetanus vaccine and complete vaccine schedule	Age appropriate tetanus vaccine and complete vaccine schedule	TIG
Unimmunised or unknown vaccine status	Age appropriate tetanus vaccine and complete vaccine schedule	Age appropriate tetanus vaccine and complete vaccine schedule	TIG

\* Consider TIG for fully vaccinated patients who are immunocompromised

Refer to GP for follow-up vaccines.

If both TIG and vaccine are required these should be administered at separate sites.

## **A 2-month-old given PPV23 instead of PCV13 in error**

Pneumococcal polysaccharide vaccine (PPV23) is not effective in children less than 24 months of age.

PPV23 given at this age should not be considered to be part of the pneumococcal vaccination series.

Pneumococcal conjugate vaccine (PCV13) should be administered as soon as the error is discovered.

Invasive pneumococcal disease is most common and most serious in children less than 2 years of age so it is important to protect this infant with the correct vaccine (PCV13) as soon as possible.

Any time the wrong vaccine is given, the parent/patient should be notified.

## What should happen if some of the vaccine spills?

When some of the vaccine is lost (patient moves, syringe leaks)  
You should not count this as a valid vaccination.

If the vaccine was non live,  
re-immunise the person as soon as possible,  
even at the same visit.

If the vaccine was live,  
a further dose should be given if you detect the error on the same day,  
otherwise wait 4 weeks to give the next dose.

## Hepatitis B vaccine

There is no catch up programme for hepatitis B vaccine.

When hepatitis B vaccine was added to the childhood immunisation schedule in 2008 there was no catch-up programme for children in Ireland already vaccinated with 5 in 1 unless they were in an at risk group.

The National Immunisation Advisory Committee did not recommend a catch up programme for children vaccinated with the 5in1.

HepB vaccine is recommended only if the child is in an at risk group.

The HepB vaccine is available from the National Cold Chain Service only for children in at risk groups.

