Clinical information to support HSE Immunisation Teams to deliver MMR Catch-up Vaccination

March 2024

Version 2.0

28th March 2024

Contents

The MMR Catch-up Vaccination Programme

Introduction

Measles is a highly infectious disease that can cause serious complications, particularly in children under the age of 12 months, pregnant women, and the immunosuppressed.

The uptake of the MMR vaccine in Ireland is below optimum levels. According to HPSC data, the uptake rate for both the first and second doses of the MMR vaccine is <90%, which is below the 95% recommended by WHO. In addition, approximately 10% of children from each birth cohort may be missing one or two doses of MMR, based on HPSC uptake statistics from 2016-2021.

An MMR Catch-up Vaccination Programme in General Practice was introduced in November 2023. Under this programme, GPs with capacity began offering catch-up MMR vaccines to their patients aged between 14 months and 10 years old (inclusive), who are not age appropriately vaccinated with MMR vaccine.

There has been a recent rise in measles cases internationally. In Europe there have been increasing numbers of measles cases notified since the beginning of 2023. Outbreaks were reported in Romania, France, Austria and UK, with other European countries reporting mainly sporadic cases. The first case in 2024 in Ireland was confirmed in February.

Given the susceptibility of Ireland to measles, an extended MMR Catch-up Vaccination Programme is now required in the context of suboptimal measles vaccination coverage.

The MMR Catch-up Vaccination Programme forms an important part of national efforts to increase coverage of MMR vaccination, in line with WHO targets. Under this programme, the HSE is now providing eligible individuals with an opportunity to avail of catch-up MMR vaccination.

HSE Staff and General Practitioners are involved in delivering the MMR Catch-up Vaccination Programme.

Statement

The Health Service Executive (HSE) is providing MMR catch-up vaccination for children and adults who are not age-appropriately vaccinated with MMR vaccine. Immunity to measles is lowest in young people under the age of 25 years, so the target groups include younger people. It is estimated that at least ninety percent of people born in Ireland before 1978 are likely to have had measles infection and are

thus immune to measles. Where there is uncertainty about measles status, the MMR vaccine should be offered on request to individuals born in Ireland before 1978 particularly if they are considered at high risk of exposure or disease as outlined later in this document. The MMR Catch-up Vaccination Programme aims to protect the public from vaccine preventable diseases (VPDs) and prevent outbreaks of VPDs, with particular concern for measles. Over 99% of those who receive two doses of measles vaccine ≥12 months of age and ≥4 weeks apart will develop measles immunity which is lifelong in most people.

Purpose

The MMR Catch-up Vaccination Programme is aligned with the guidance issued by the National Immunisation Advisory Committee (NIAC) of the Royal College of Physicians of Ireland (RCPI) and contained in the Immunisation Guidelines for Ireland, available at https://www.rcpi.ie/Healthcare-Leadership/NIAC/Immunisation-Guidelines-for-Ireland.

The clinical information in this document has been prepared to inform and support relevant HSE staff, in the safe delivery of MMR catch-up vaccination to eligible individuals.

MMR Catch-up Vaccination Programme – Priority Groups

Unvaccinated or partially vaccinated individuals are eligible for age-appropriate catch-up MMR vaccination as per NIAC guidance. Under the MMR catch-up programme catch-up clinics should aim to target the below priority groups*:

- Children (Catch-up MMR vaccination of those over the age of 5 years may be delivered by a combination of HSE Immunisation Teams and General Practitioners. Children aged less than 5 years requiring catch-up MMR vaccination may attend their General Practitioner for vaccination)
- Young people up to age 24 years
- Healthcare workers
- Underserved populations, such as Travellers, Roma, people who are homeless, Refugees and Applicants Seeking Protection and other vulnerable migrants, and those in custodial settings

*Please note that the prioritisation groups are not weighted or in an ordinal ranking

The next priority group would be those aged 25 to 46, and then also opportunistic offering of vaccination for older people with additional risks.

Clinical Recommendations

People born in Ireland before 1st of January 1978 are likely to have been exposed to measles and have immunity. The National immunisation Advisory Committee advise that where there is uncertainty about measles status, the MMR vaccine should be offered on request to individuals born in Ireland before 1978 particularly if they are considered at high risk of exposure or disease (as outlined further in the section on **Vaccination of Adults (≥18 Years) with MMR Vaccine** later in this document).

The NIAC recommendations for vaccination of healthcare workers (HCW) are outlined in Chapter 12 and Chapter 4 of the Immunisation Guidelines for Ireland and are unchanged.

Of note: Staff administering MMR catch-up vaccinations under this programme should advise all patients of the importance of being up to date with all of the recommended vaccinations in the Irish Immunisation Schedule. It is important to take every opportunity to reinforce this important public health message to prevent outbreaks of vaccine preventable diseases, even though other catch-up vaccinations are outside the scope of this particular programme.

NIAC Recommendations regarding MMR vaccine schedule (January 2024)
Routine Childhood Vaccination Children should be age-appropriately vaccinated. All children at 12 months of age should receive an MMR vaccine, with a second dose at 4-5 years of age. There is no recommendation to give the 2nd MMR dose earlier than 4-5 years of age. Children receiving their first dose of MMR vaccine ≥ 4-5 years of age should be given a second dose four weeks later.

In Ireland MMR is given as follows:

- Dose 1 is given at 12 months in General Practice
- Dose 2 is given by HSE School Immunisation Teams in Junior Infants, when children are 4-5 years of age. In Sligo, Leitrim and Donegal, dose 2 is given in General Practice at age 4-5 years.

Unvaccinated or partially vaccinated children and adults are eligible to receive MMR vaccine(s) to catch-up with the recommended MMR vaccination schedule in Ireland and be deemed age-appropriately

vaccinated. In line with NIAC advice, eligible individuals may receive MMR vaccine(s) as outlined overleaf:

Number of MMR doses received	Recommended Action
0 doses (unvaccinated)	- If aged ≥ 12 months old and less than 4-5 years (i.e., have not yet entered Junior Infants), administer 1 dose of MMR vaccine - If aged ≥ 4-5 years (i.e., older than Junior Infants age and are no longer in Junior Infants class), administer 2 doses of MMR vaccine at least 28 days apart.
1 dose (i.e., have received MMR1)	- If aged ≥ 12 months old and less than 4-5 years (i.e., have not yet entered Junior Infants), do not administer a further dose of MMR vaccine as this child is deemed age-appropriately vaccinated and will be offered their second dose of MMR vaccine (MMR2) when they enter Junior Infants, unless advised by public health as part of specific outbreak response. - If aged ≥ 4-5 years (i.e., older than Junior Infants age and are no longer in Junior Infants class), administer 1 dose of MMR vaccine (this MMR2 dose should be given at least 28 days after the first dose of MMR vaccine/MMR1 was received).
2 doses (i.e., have received MMR1 and MMR2 and are therefore fully vaccinated)	No further MMR vaccination necessary

OF NOTE:

- **There is no requirement to vaccinate children earlier than the usual vaccination schedule** of MMR1 at 12 months and MMR2 in Junior Infants, unless specifically advised by public health as part of an outbreak response.
- Those who have received two MMR vaccines over the age of 12 months are fully vaccinated and do not require a third dose of MMR vaccine.
- MMR vaccine can be given to those who have a history of measles, mumps or rubella infection.

2024 National Immunisation Advisory Committee Updated Recommendations for the Vaccination of Adults against Measles

Vaccination of Adults (≥18 Years) with MMR Vaccine

MMR vaccine should be promoted and offered opportunistically to unvaccinated or partially vaccinated adults. The decision on whether to vaccinate adults needs to take into consideration likelihood of immunity from natural infection, country of birth, past vaccination history and future risks of exposure and disease. Where there is uncertainty about vaccination status MMR should still be given if indicated as MMR vaccine can be safely given to those who are immune.

NIAC recommends that adults in the following groups who are partially vaccinated, unvaccinated or unsure about their vaccination status should receive 1 or 2 doses of MMR vaccine as indicated by their vaccination history:

a) All adults aged under 25 years of age.
b) Adults considered at high risk of exposure to measles (e.g., those living in congregate settings or members of underserved communities).
c) Adults living with people who are vulnerable to severe consequences of measles infection. (e.g., non-immune pregnant women, severely immunocompromised people, and infants under one year of age).
d) Migrants from low resource settings (migrants from low resource settings are less likely to have been vaccinated with MMR and should be offered two doses of MMR vaccine unless documented evidence of vaccination).
e) Adults of all ages who are planning to travel to an area where measles is endemic or where outbreaks are occurring.

It is estimated that at least ninety percent of people born in Ireland before 1978 are likely to have had measles infection and are thus immune to measles. Where there is uncertainty about measles status, the MMR vaccine should be offered on request to individuals born in Ireland before 1978 particularly if they are considered at high risk of exposure or disease as outlined in b) and c) above.

Vaccination of Healthcare Workers

All healthcare workers, both clinical and non-clinical, who have direct patient contact should be immune to measles, mumps and rubella. This applies to roles in which:

- their work requires face to face contact with patients, or
- their normal work location is in a clinical area such as a ward, emergency department or outpatient clinic, or
- their work frequently requires attendance in clinical areas.

Acceptable presumptive evidence of immunity against measles includes at least one of the following:

- written documentation of vaccination with two doses of MMR vaccine at least four weeks apart

Or

- serological evidence of measles immunity (i.e., detectable measles specific IgG from an INAB accredited laboratory or equivalent*)

Or

- birth in Ireland before 1978. It is estimated that at least ninety percent of adults born in Ireland before 1978 are likely to have had measles infection. MMR vaccine should be offered to such individuals on request if they are considered at high risk of exposure.

NIAC recommends that all HCWs born outside of Ireland (regardless of age) or born in Ireland after 1978 without evidence of two doses of MMR vaccine or measles immunity (i.e., detectable measles specific IgG from an INAB accredited laboratory or equivalent*) be offered one or two doses of MMR vaccine as required at least four weeks apart so that a total of two doses are received.

Vaccination of Adults during Outbreaks or Following a Measles Close Contact

PLEASE NOTE: Advice on MMR vaccination in an outbreak setting will be provided by Public Health – the below NIAC advice is included here for information purposes

NIAC recommendations for vaccination of adults during outbreaks or following a measles exposure are unchanged, additional language is added below to provide clarity. Presumptive immunity by birth before 1978, should not be used to confirm immunity in those identified by public health to be close contacts with a measles case.

a) When measles outbreaks occur, susceptible persons should be given MMR vaccine, unless contraindicated, within 72 hours of contact with a case. A person should be considered susceptible if they have not received two doses of MMR vaccine or do not have serological evidence of measles immunity (i.e., detectable measles specific IgG from an INAB accredited laboratory or equivalent[1]). If there is uncertainty about vaccination status, MMR vaccine should be given as MMR vaccine can be safely given to those who are immune. If vaccination within 72 hours of exposure is not achievable, MMR vaccine should still be offered to susceptible persons as this is a good opportunity to vaccinate previously unvaccinated individuals.
b) In the case of an outbreak or close contact with a measles case in a healthcare setting, either written

[1] Acceptable laboratories to be determined by local occupational health and/or public health teams. Only international laboratories that are accredited to the same international standard (ISO15189) as INAB should be accepted.

documentation of vaccination with two doses of MMR vaccine at least four weeks apart or serological evidence of measles immunity (i.e., detectable measles specific IgG from an INAB accredited laboratory or equivalent[2]) are acceptable evidence of confirmed measles immunity as outlined in Chapter 4 of the immunisation guidelines of Ireland. (Table 4.1).

c) Pregnant women without measles immunity and those who are severely immunocompromised who have been exposed to measles may be eligible for post exposure prophylactic HNIG. Guidance in Chapter 12 of the immunisation guidelines of Ireland should be followed.

NIAC recommendations may be updated when more information becomes available.
For more information please see NIAC Updated Recommendations for the Vaccination of Adults Against Measles 05.03.2024.

NIAC Recommendations Regarding Vaccination History
NIAC recommends if there is no documented or reliable verbal history of immunisation or disease, a person should be assumed to be unimmunised.

NIAC Recommendations Interrupted Vaccination Course
NIAC guidelines recommend: **If an immunisation course is interrupted, it should be resumed as soon as possible. It is not necessary to repeat the course, regardless of the interval from the previous incomplete course. See http://bit.ly/NIACCh2**

MMR Vaccination in an Outbreak Setting
In an outbreak situation, vaccinations may be recommended by a HSE Outbreak Control Team outside of the routine immunisation schedule. The Public Health Team will provide advice and guidance on outbreak management, including vaccination.

Post Exposure Prophylaxis of Measles in the Event of an Outbreak

In the event of an outbreak of measles, the Public Health Team will provide advice on vaccination of contacts post exposure. Immunity to measles from MMR vaccine develops more rapidly than immunity from infection and thus MMR vaccine can be successfully used to prevent measles infection following exposure.

- When measles outbreaks occur, the Public Health Team managing the outbreak may advise that

[2] Acceptable laboratories to be determined by local occupational health and/or public health teams. Only international laboratories that are accredited to the same international standard (ISO15189) as INAB should be accepted.

susceptible contacts aged ≥6 months receive the MMR vaccine.

- Maternal antibodies can interfere with an infant's response to MMR vaccine for up to 12 months of age. Thus, Infants who receive MMR vaccine <12 months of age need two additional doses of MMR vaccine, at ≥12 months (at least 4 weeks after first dose) and at 4-5 years of age, in accordance with the national schedule.
- **Infants aged less than 6 months cannot receive the MMR vaccine.** The Public Health Team will provide appropriate advice for management of contacts of measles aged under 6 months.

The Public Health Team will advise on the outbreak control measures required.

Additional Information Resources

- National Immunisation Office available at www.immunisation.ie
- Immunisation Guidelines for Ireland are available at https://www.rcpi.ie/Healthcare-Leadership/NIAC/Immunisation-Guidelines-for-Ireland
- Summary of Product Characteristics (SmPCs) for Priorix and M-M-RvaxPro MMR vaccines are available at www.medicines.ie and also available under the relevant schools vaccination programme
- Each vaccinator should be familiar with the Medicine Protocol for administration of Priorix or M-M-RvaxPro vaccines, available at https://www.hse.ie/eng/health/immunisation/hcpinfo/mmrcatchup24/mmrcuinfohps.html
- Healthcare professionals FAQs are available at https://www.hse.ie/eng/health/immunisation/hcpinfo/frequentlyaskedquestions/mmrcatchupcampaignfaqshcp.html
- Each vaccinator must be familiar with techniques for resuscitation of a patient with anaphylaxis and have completed a Basic Life Support training course within two years.
- Initial National Anaphylaxis Education Programme for Health Care Professionals accessible on www.HSELanD.ie followed by a two hour classroom based skills workshop. Recertification is required every two years by completing the on-line National Anaphylaxis Education Programme for Health Care Professionals accessible at www.HSELanD.ie
- Each vaccinator should be familiar with the NIAC "Anaphylaxis: Immediate Management in the Community" protocol, in the Immunisation Guidelines for Ireland available at https://www.rcpi.ie/healthcare-leadership/niac/immunisation-guidelines-for-ireland
- Health Protection Surveillance Centre available at http://www.hpsc.ie
- Health Products Regulatory Authority available at http://www.hpra.ie
- Medicines Information online available at http://www.medicines.ie
- European Medicines Agency available at http://www.ema.europa.eu/

Medicine Protocol for Registered Nurses (RNs) and Registered Midwives (RMs):

The Nursing and Midwifery Board of Ireland defines medicine protocols as "written directions that allow for the supply and administration of a named medicinal product by a nurse or midwife in identified clinical situations. A medicine protocol involves the authorisation of the nurse/midwife to supply and administer a medicine to groups of patients in a defined situation meeting specific criteria and who may not be individually identified before presentation for treatment. An individually named prescription is not required for the supply and administration of medicine when a medicine protocol is in effect" (An Bord Altranais, 2007).

- Registered nurses and registered midwives employed in the voluntary and statutory services of the Health Service Executive (HSE) including Central Vaccination Centres (CVCs), congregated settings, temporary clinics and mobile units who have undertaken the required education and training programmes can administer vaccines under medicine protocol.

The Medicine protocols for the MMR vaccines, Priorix and M-M-RvaxPro are available at the following link. https://www.hse.ie/eng/health/immunisation/hcpinfo/mmrcatchup24/mmrcuinfohps.html

- The master medicine protocols for the MMR vaccines were developed by the NIO in consultation with the Office of the Nursing and Midwifery Services Director (ONMSD)
- All eligible nurses must read and sign the master medicine protocols to vaccinate
    - Master Medicine Protocol for the Administration of Priorix (MMR - Measles, Mumps and Rubella) live vaccine for MMR catch-up vaccination programme and in the event of an outbreak
    - Master Medicine Protocol for the Administration of MMRVAXPRO (MMR - Measles, Mumps and Rubella) live vaccine for MMR catch-up vaccination programme and in the event of an outbreak
- All eligible nurses must complete the Self-Assessment of Competency to administer vaccines* under Medicine Protocol for registered nurses and registered midwives to vaccinate eligible recipients. https://www.hse.ie/eng/health/immunisation/hcpinfo/botpipa/clinicalinfobotpipa.html

Other registered professionals may be authorised to administer MMR as part of the HSE vaccination programme. They should follow appropriate training and guidance from their professional organization and regulatory body and master medicine protocol.

Education and Training Requirements for Vaccinators

All vaccinators should ensure that they have training in Basic Life Support and Anaphylaxis and that retraining is provided in accordance with best practice i.e. every 2 years. They should be competent in the correct intramuscular injection technique for administration of vaccines and the injection site used according to age group.

They should be familiar with the following documents:

- National Immunisation Advisory Committee Immunisation Guidelines for Ireland available at: https://www.rcpi.ie/Healthcare-Leadership/NIAC/Immunisation-Guidelines-for-Ireland
- National Immunisation Office (2022) Supporting Information for Vaccinations in General Practice available at https://www.hse.ie/eng/health/immunisation/infomaterials/gpsupportingdocpci.pdf
- National Immunisation Office (2023/2024) Supporting Information for Staff: Schools Immunisation Programme available at: https://www.hse.ie/eng/health/immunisation/hcpinfo/schoolproghcp/supportingdoc.pdf
- Summary of Product Characteristics (SmPCs) for each of the vaccines available at www.hpra.ie or www.medicines.ie
- Nursing and Midwifery Board of Ireland (2021) Code of Professional Conduct and Ethics for Registered Nurses and Registered Midwives. Dublin: Nursing and Midwifery Board of Ireland available at: https://www.nmbi.ie/NMBI/media/NMBI/Code-of-Professional-Conduct-and-Ethics.pdf
- Nursing and Midwifery Board of Ireland (2020) Guidance for Registered Nurses and Midwives on Medication Administration available at: https://www.nmbi.ie/NMBI/media/NMBI/NMBI-Medication-Administration-2020.pdf?ext=.pdf
- Nursing and Midwifery Board of Ireland (2022) Practice Standards for Midwives. Dublin: Nursing and Midwifery Board of Ireland available at: https://www.nmbi.ie/Standards-Guidance
- Nursing and Midwifery Board of Ireland (2015) Recording Clinical Practice. Guidance to Nurses and Midwives. Dublin: Nursing and Midwifery Board of Ireland available at: https://www.nmbi.ie/Standards-Guidance/More-Standards-Guidance/Recording-Clinical-Practice

Managing Anaphylaxis

- National Immunisation Advisory Committee (2023) Anaphylaxis: Immediate Management in the Community available at: https://www.rcpi.ie/Healthcare-Leadership/NIAC/Immunisation-Guidelines-for-Ireland

(RMs/RNs):

Must have completed the following:

1. Be a Registered Nurse or Registered Midwife, on the active register maintained by the NMBI

2. Education programme for nurses and midwives on Primary Childhood Immunisation Programme and any updates for nurses and midwives accessible on www.HSELanD.ie
3. Education programme for nurses and midwives on Schools Immunisation Programme and any updates for nurses and midwives accessible on www.HSELanD.ie
4. An approved Basic Life Support for Health Care Providers Course within the last two years (i.e. Irish Heart Foundation (IHF))
5. Initial National Anaphylaxis Education Programme for Health Care Professionals accessible on www.HSELanD.ie followed by a two hour classroom based skills workshop.
6. Critically examining the evidence and practice of holding children for clinical procedures (masterclass recording-6th Dec 2022) available at www.HSELanD.ie
7. Immunisation Foundation Programme available at www.HSELanD.ie
8. The registered nurse/midwife must complete the Competency Self-Assessment Form available at www.immunisation.ie

Administration of Vaccines under Medicine Protocol

- Registered vaccinators working under medicine protocols will be accountable for their own clinical practice and should be familiar with and adherent to the practices as set out in this document.
- Vaccinators working under medicine protocols should report to their relevant line manager.
- In assessing an individual's suitability for vaccination the vaccinator working under medicine protocol should also pay particular attention to the advice on vaccine administration included in this document.
- All individuals meeting the exclusion criteria of a medicine protocol must be referred to the Medical Practitioner or Registered Nurse Prescriber for an individual clinical assessment (unless the reason for exclusion is pregnancy and the patient is clinically well i.e. there is no requirement for a well pregnant individual to be referred for a clinical assessment. MMR vaccine is contraindicated in pregnancy.).
- Where the Medical Practitioner or Registered Nurse Prescriber prescribes the vaccine, a vaccinator may administer the vaccine within the vaccinator's scope of practice.
- When recording the administration of a vaccine under medicine protocol the vaccinator should enter "Med P" in the prescriber box and enter signature and PIN in the vaccinator box.

Vaccine Administration

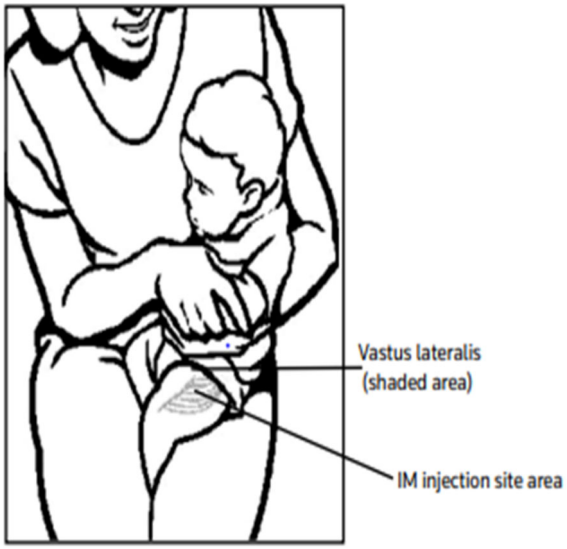
Prior to administration of the vaccine the vaccinator must adhere to the following:

- Follow the Infection Prevention Control (IPC) standard precautions all the time i.e. hand hygiene, sharps management and healthcare risk waste management available at National Clinical Guideline No. 30 – Infection Prevention and Control (IPC) available at https://www.gov.ie/en/publication/a057e-infection-prevention-and-control-ipc/
- Verify the client's name, date of birth and ensure that informed consent for vaccination has been given. The vaccine consent form is available at https://www.hse.ie/eng/health/immunisation/hcpinfo/mmrcatchup24/mmrcuinfohps.html
- Ensure that there are no contraindications to vaccination present. Vaccinators must be familiar with the contraindications and precautions for each vaccine to be administered – please see the appropriate NIAC chapters available at: https://bit.ly/NIACGuide
- The skin does not require cleaning before the vaccine is administered unless visibly dirty. In this instance the skin can be cleaned with soap and water. If an alcohol wipe is used the skin should be allowed to dry before the vaccine is injected.
- Gloves are not normally required when administering intramuscular injections. However, if the client's skin or the vaccinator's skin is not intact gloves should be worn.
- Check the name and expiry date of each vaccine to ensure that it is the correct vaccine.
- Ensure that the vaccine colour and composition is in accordance with the Summary of Product Characteristics (SmPC) for the vaccine - if not discard the vaccine.
- To avoid injecting into subcutaneous tissue in adults, it is necessary to spread the skin of the selected vaccine site taut between the thumb and forefinger in order to isolate the muscle. In small infants and others with little subcutaneous tissue or muscle mass the tissue around the injection site may be gently bunched up.
- The needle should be inserted fully into the muscle at a 90° angle and the vaccine injected into the muscle tissue, in the centre of the inverted triangle (see Figure 2). When the needle is withdrawn, light pressure should be applied to the injection site for several seconds with a dry cotton ball or gauze.
- Give information on common side effects after the vaccination.
- Request the vaccine recipient to wait in the clinic waiting area for 15 minutes following vaccination.

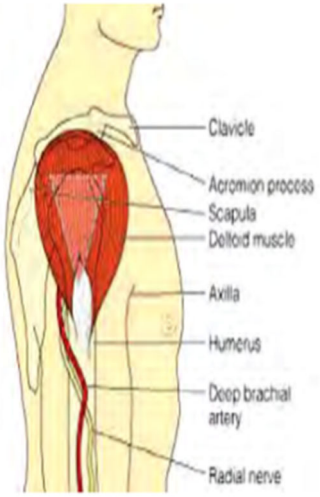
Recommended sites for Intramuscular (IM) injection

- There are only two routinely recommended IM sites for administration of vaccines, the vastus lateralis muscle (anterolateral thigh) and the deltoid muscle (upper arm).

- The recommended site for vaccination of children aged 6 months to <12 months is Vastus lateralis (see Figure 1)
- Vaccines can be administered to children aged 12months to <36 months into the Vastus lateralis or deltoid muscle (depending on muscle mass)
- The vastus lateralis muscle is located on the antero-lateral aspect of the thigh, from one of the patient's hand breadths below the greater trochanter to one hand's breath above the knee. The middle third of the muscle is the site for injections. The width of the Injection site extends from the mid-line of the thigh anteriorly to the mid-line of the outer thigh.
- The injection site is the middle third of the Vastus lateralis, in the anterolateral thigh (shaded area)
- Figure 1 Vastus lateralis site for IM injection, birth to 36 months



- The recommended site for vaccination of children aged ≥36 months and adults is the deltoid muscle
- Figure 2. Deltoid site for IM injection, older toddlers, children and adults



- Using these sites reduces the chance of involving significantly sized nerves or blood vessels. The

site depends on the age and muscle mass of the recipient.

- Please refer to the NIAC Immunisation Guidelines, chapter 2 for more detailed information about "How to administer intramuscular (IM) injections", available at https://rcpi.access.preservica.com/uncategorized/IO_812f584c-e1b8-4dd0-9aab-a4370f9b9f83/

Recommended site, needle length and size for an Intramuscular vaccination according to the age of the vaccine recipient

Birth to <12 months	Vastus lateralis muscle	25 mm* 23-25 gauge
12 to <36 months	Vastus lateralis or deltoid muscle (depending on muscle mass)	25 mm 23-25 gauge
3 years and older	Deltoid muscle**	25 mm*** 23-25 gauge

- Use a 16 mm needle in infants under 2.5-3 kg.
- ** The anterolateral thigh may also be used.
- *** Use 40 mm needle in females >90 kg, males >120kgs.

Consent

- The Guide to Professional Conduct & Ethics for Registered Medical Practitioners, 8th Edition, 2019 (Medical Council) states in section 11.1 that:
- "(You must) give patients enough information, in a way that they can understand, to enable them to exercise their right to make informed decisions about their care." See http://bit.ly/MC8thEd
- Consent is not valid if the patient has not been given enough information to make a decision" See http://bit.ly/MC8thEd
- Informed consent must be obtained prior to vaccination.
- HSE consent policy is here: http://bit.ly/ConsentQID
- Read "Who can give consent for vaccination of a young person aged under 16 years?" From https://bit.ly/ConsentU16
- Watch this video from Dr. Siobhan Ni Bhriain, HSE National Lead Integrated Care covering Consent for vaccination in under 16 year olds. https://youtu.be/8uKqmkFe8hs?si=Gs_XCdXOv411uVvM

Post Vaccination Documentation & Advice

- Record the vaccine administration details in the system and the recipient's immunisation passport where an immunisation passport is being used, including:
  - Vaccine name, batch number, manufacturer and expiry date
  - Dose administered
  - Site used
  - Date vaccine was given
- Provide the completed vaccination passport to the vaccine recipient/parent/legal guardian before they leave the vaccination clinic.
- Vaccinators must print and sign their name on the paper consent form and record PIN/MCRN.
- Ensure the vaccine recipient remains in the clinic under observation for 15 minutes as most anaphylaxis episodes begin within 15 minutes of vaccination.
- Give the post vaccination advice sheet to the vaccine recipient/parent/legal guardian before they leave the vaccination clinic.
- Answer any queries about possible adverse reactions that occur post vaccination.
- Provide appropriate contact details if there are any concerns following vaccination.
- Report adverse events to the HPRA.

MMR vaccines:

Two MMR vaccines are available from the national cold chain service:

- M-M-R VaxPro - powder and solvent for suspension for injection in pre-filled syringe
- Priorix – Powder and solvent for solution for injection in a pre-filled syringe

The vaccines are interchangeable.

Vaccine Storage, Handling and Transport

MMR vaccines supplied by the National Cold Chain Services (NCCS):

- M-M-RvaxPro - powder and solvent for suspension for injection in pre-filled syringe
- Priorix – Powder and solvent for solution for injection in a pre-filled syringe

Vaccine name	M-M-RvaxPro	Priorix
Pack Size	 1 single dose vial (powder) + 1 prefilled syringe (solvent) + 2 needles	 10 single dose vials (powder) + 10 prefilled syringe (solvent) + 20 needles
Storage and Transport	Store and transport refrigerated between +2°C and + 8°C. Do not freeze. Keep the vial of powder in the outer carton in order to protect from light.	Store and transport refrigerated between +2°C and + 8°C. Do not freeze. Store in the original package in order to protect from light.
Pharmaceutical form	Powder and solvent for suspension for injection. Before reconstitution, the powder is a light yellow compact crystalline cake and the solvent is a clear colourless liquid.	Powder and solvent for solution for injection in a pre-filled syringe. The lyophilised Measles-Mumps-Rubella component is a white to slightly pink powder. The solvent is a clear and colourless solution.
After reconstitution	After reconstitution, the vaccine should be used immediately; however, in-use stability has been demonstrated for 8 hours when refrigerated at +2 °C and +8 °C.	The vaccine should be injected promptly after reconstitution. If this is not possible, it must be stored at +2°C and +8°C and used within 8 hours of reconstitution.

Link to SmPC

- M-M-RvaxPro https://www.medicines.ie/medicines/m-m-rvaxpro-32909/spc
- Priorix https://www.medicines.ie/medicines/priorix-powder-and-solvent-for-solution-for-injection-in-a-pre-filled-syringe-33443/spc

Ordering of Vaccines

- Vaccine deliveries are twice monthly. Please check your online HSE National Cold Chain Service (NCCS) delivery calendar for order and delivery dates.
- Vaccines should be ordered online at https://www.ordervaccines.ie/Account/Login?ReturnUrl=%2F
- E-mail vaccines@udd.ie

Quantity of vaccine ordered should reflect anticipated cohort expected during the two weeks between delivery dates.

Maintenance of the Cold Chain

- The 'Cold Chain' is the system of correct storage, transport and maintenance of vaccines. All vaccines are sensitive to heat, cold and light. They must be kept at temperatures between +2°C and 8°C to maintain their potency and comply with regulations.
- The electricity supply to the vaccine storage fridge should not be accidentally interrupted. This can be achieved by using a switchless socket or by placing cautionary notices on plugs and sockets and using a dedicated circuit for the fridge and also label the fuse.
- A temperature monitoring chart should be on each vaccine fridge door. These charts should be kept indefinitely unless data logger recordings are being stored indefinitely.
- Current, maximum and minimum temperatures must be checked twice daily with time of reading and sign/initial.
- A temperature data logger should be placed in the fridge as a second monitor independent of the fridge thermometer. This provides a continuous temperature record and should be set to record at 5 minute intervals.
- Vaccines should be stored in a pharmaceutical grade fridge at all times. They should not be stored in non-pharmaceutical fridges.
- The fridge should not be overfilled to allow air to circulate around the vaccines' packages. Vaccines should be stored in containers that will prevent them touching the sides or back of the fridge.
- Door opening should be kept to a minimum.
- Vaccine should always be stored in their original packaging and should not be removed from their packaging until required for use.
- The inside of the fridge should be regularly cleaned with warm slightly soapy water. Dry thoroughly and only restock once the temperature is within the recommended range. The fridge seals should be regularly inspected. The seal should not be torn or brittle and there should be no gaps between the seal and the body of the unit when the door is closed.

- If the temperature recorded is less than +2°C or greater than +8°C please ensure that the vaccines are quarantined between +2 ˚C and +8 ˚C. Please do not use or discard the vaccines until advised by the National Immunisation Office. by emailing pharmacynio@hse.ie A risk assessment will be carried out and a recommendation made. The use of a vaccine stored at an incorrect temperature is based on a thorough understanding of the likely impact of the temperature variation on the vaccine and must be made on a case-by-case basis.

Transport of Vaccines

- **Domestic cool boxes should not be used to store, distribute or transport vaccines. Cool boxes should be purchased from medical equipment suppliers.**

Note: The box does not cool. It relies on ice/gel packs to maintain the correct temperature of +2˚C to +8˚C. In the cool box, air does not circulate to create an even temperature zone therefore the temperature needs to be monitored at regular intervals by the user via the external display.

- It is important to test and validate the method of packing vaccines by simulating the process and recording the cold chain for a similar period required for a typical transportation and clinic duration.
- Ice packs/Gel packs must not come in direct contact with the vaccines. The packs must be sufficiently wrapped or separated by insulating material to prevent direct contact with the vaccines and to avoid the risk of freezing or the temperature to drop to less than 2°C.
- Position the ice packs/gel packs appropriately above, below and at the sides of the vaccines as space in the cool box allows (as recommended by the manufacturer and local SOP).
- Thermometer probe (or data logger) should be placed in the middle of vaccines and should not touch ice packs/gel packs. To prevent probe from moving during transport, it can be placed in an empty vaccine box, placed in the middle of the vaccines.
- The vaccines must be transported in their original packaging.
- Only the number of vaccines estimated for administration on any particular day should be brought to the site.
- Record the temperature in the cool box:
  - when vaccines are packed,
  - upon arrival at the immunisation clinic,
  - throughout the immunisation clinic,
  - when returning vaccines to the fridge.

- The cool box should be placed in,
  - An appropriately ventilated room,
  - Away from any heat source,
  - Away from direct sunlight.

- If there are any unused vaccines remaining at the end of a vaccination session, providing that the cold chain has been maintained, the vaccines can be returned to the vaccine fridge. They must be marked and should be used first at the next vaccination session.
- If temperatures outside the permitted range are recorded, first check the position of the temperature probe. The temperature probe should be in a vaccine box in the middle of the vaccines – if it is not correctly positioned reset the probe and ensure it is positioned correctly away from ice packs or at the lid of cool box then close the box firmly and recheck the temperature in 15 minutes.
- If the temperature is still outside the permitted range, place the vaccine under quarantine in the fridge, and contact the NIO for further advice. The NIO will carry out a risk assessment and will advise on a case by case basis whether it is appropriate to use the vaccines or whether they should be discarded.
- **Do not use or dispose of any vaccine which has been exposed to temperatures outside the permitted range. Quarantine and maintain these vaccines between +2°C and +8°C until advised by the National Immunisation Office.**

For more information on Vaccine Ordering and Storage, and accessing HSELand online module please refer to link below: https://www.hse.ie/eng/health/immunisation/hcpinfo/vaccineordering/

Contraindications to MMR Vaccination

- Anaphylaxis to a previous dose of MMR or to any of the vaccine constituents.
- MMR is contraindicated in significantly immunocompromised persons e.g., primary immunodeficiency or acquired immunodeficiency (from disease (including HIV/AIDS), or from immunosuppressive therapy (including biologics)). See chapter 3 and chapter 12 NIAC Immunisation Guidelines.
- If there is uncertainty please advise the parents that the child's specialist should be contacted/the individual that they should contact their treating specialist.
- Pregnancy - MMR vaccine is not recommended in pregnancy. Furthermore, pregnancy should be avoided for one month after MMR vaccine.
- Infants of mothers who took infliximab or other TNFα blocking agents throughout the second or third trimester.

Of note: Priorix contains 334 micrograms of phenylalanine per 0.5ml dose. Though phenylalanine may be harmful to individuals with phenylketonuria (PKU) the amount of phenylalanine contained in Priorix is negligible and vaccination with Priorix is advised in individuals with PKU.

Pregnancy could be an issue for some adolescents and women. Parent(s) are advised to discuss the possibility of pregnancy with their daughter prior to giving consent for vaccination for those aged < 16 years.

The consent form for the MMR Catch-up Vaccination Programme includes the statement "I understand that MMR vaccine is not recommended during pregnancy" (Appendix A). If the parent(s)/guardian consent is required and they indicate that their daughter is pregnant then vaccination should be withheld. If the consent form is signed then vaccination is appropriate. Questioning the girl about her last menstrual period or performing a pregnancy test is not indicated.

If an older female (aged 16 years or older) providing consent for herself indicates on the consent form that she is pregnant, then vaccination should be withheld.

Before the MMR vaccine is given, for each dose required (if more than 1 dose is required) the vaccinator should ask the girl / woman the following questions:

- Have you read on the consent form where it says that vaccination is NOT recommended in pregnancy?
- This means that if you think there is any possibility you might be pregnant then you should not be vaccinated today.
- Do you understand this? OR Are you clear about this?

- Do you want to ask me anything more about this before I prescribe the vaccine for you? OR a similar question to check that it is ok to proceed.
- Performing a pregnancy test in the vaccination clinic prior to vaccination is not indicated.

If there is any possibility of pregnancy vaccination should be postponed.

Where there is a possibility of pregnancy and the female is aged under 17 years of age, the vaccinator should notify their line manager and seek further advice in relation to their legal obligations under child protection legislation. For further detail, see http://bit.ly/C1stTusla

If a female who was vaccinated subsequently finds out that she was pregnant at, or conceived around, the time of vaccination, then if a second MMR vaccination appointment is required it should be postponed. Pregnancy should also be avoided for one month after MMR vaccination.

Precautions for Vaccination

- **Acute severe febrile illness**: defer until recovery.
- Injection with another live vaccine within the previous four weeks. Two live vaccines can be administered on the same day without causing interference e.g., MMR and Varicella. However, MMR vaccine should not be routinely administered on the same day as yellow fever vaccine as co-administration of these two vaccines can lead to suboptimal antibody responses to yellow fever, mumps and rubella antigens. If rapid protection is required, the vaccines should be given on the same day or at any interval and an additional dose of MMR should be given at least four weeks later.
- **Bleeding disorders:** Vaccines should be administered with caution to individuals with coagulation defects.
  - If vaccines are given intramuscularly to those with a bleeding disorder or receiving anticoagulant treatment NIAC has recommended that it is prudent to use a 23 (blue) or 25 (orange) gauge needle to reduce the pressure gradient and cause less trauma to the tissue. The vaccine should be injected slowly (≥5 seconds) to reduce the risk of tissue damage. Apply firm pressure to the vaccine site for 5 to 10 minutes after the injection.
  - In those with a severe bleeding tendency vaccination can be scheduled shortly after administration of clotting factor replacement or similar therapy.
  - MMR vaccine can be given by the subcutaneous route. Administration by the subcutaneous route may be considered in those with severe bleeding disorders. However, immunogenicity of vaccines recommended for IM administration may not be as long lasting if they are given subcutaneously, except MMR which can be given SC. The patient or parent should be advised of this.

- Family history of primary immunodeficiency (e.g., severe combined immunodeficiency syndrome

(SCID)) defer vaccination until immune status is determined.

- Recent administration of blood, blood products, HNIG or specific immunoglobulin could prevent vaccine virus replication. MMR should be deferred for specific intervals depending on product received as outlined in Chapter 2 Table 2.6. NIAC Immunisation Guidelines.
- Tuberculin skin testing should be deferred for at least four weeks after MMR vaccine as the vaccine can reduce the tuberculin response and could give a false negative result.
- Patients who developed thrombocytopaenia within six weeks of their first dose of MMR should undergo serological testing to decide whether a second dose is necessary. The second dose is recommended if the patient is not fully immune to the three component viruses.

Additional notes

If there are cases of chickenpox in the child's school, the MMR vaccine can be given at any time provided the child does not have an acute febrile illness.

NIAC guidelines advise that any child who has received two doses of MMR vaccine over the age of 12 months and at least 28 days apart are up to date with MMR immunisations and do not require another dose.

See Measles chapter 12 in the Immunisation Guidelines for Ireland available at https://bit.ly/NIACGuide

MMR (Priorix or M-M-RvaxPro) vaccine does NOT contain latex.

Use of topical tacrolimus does not affect the immunogenicity of the MMR vaccine.

Information on MMR (Priorix or M-M-RvaxPro) vaccine

The MMR vaccines currently used in Irelandare:

- Priorix (manufactured by GlaxoSmithKline (Ireland) Limited) is a live, attenuated vaccine.
- M-M-RvaxPro (manufactured by Merck Sharp & Dohme B.V.) is a live, attenuated vaccine.

The constituents of Priorix are:

- Measles virus Schwarz strain (live, attenuated)
- Mumps virus (RIT 4385 strain, derived from Jeryl Lynn strain) (live, attenuated)
- Rubella virus (Wistar RA 27/3 strain) (live attenuated)
- Excipients :
    - Amino acids (containing phenylalanine)
    - Lactose (anhydrous)
    - Mannitol (E 421)
    - Sorbitol (E 420)
    - Medium 199 (containing phenylalanine, para-aminobenzoic acid, sodium and potassium)
    - Water for injection

The constituents of M-M-RvaxPro are:

- Measles virus Enders' Edmonston strain (live, attenuated)
- Mumps virus Jeryl Lynn™ [Level B] strain (live, attenuated)
- Rubella virus Wistar RA 27/3 strain (live, attenuated)
- Excipients:
    - Sorbitol (E 420)
    - Sodium phosphate (NaH2PO4/Na2HPO4)
    - Potassium phosphate (KH2PO4/K2HPO4)
    - Sucrose
    - Hydrolysed gelatine*
    - Medium 199 with Hanks' salts Minimum Essential Medium, Eagle (MEM)
    - Monosodium L-glutamate
    - Neomycin
    - Phenol red
    - Sodium bicarbonate (NaHCO3)
    - Hydrochloric acid (HCl) (to adjust pH)
    - Sodium hydroxide (NaOH) (to adjust pH)
    - Water for injections

MMR VaxPro (but not Priorix) contains Gelatin.

People may have concerns because of religious reasons as gelatin is made from animal products (pork).

*For further information please see:

Vaccine Ingredients: Gelatin https://www.hse.ie/eng/health/immunisation/hcpinfo/vaccineingredients/

Read the Irish Council of Imams statement here.

Read 2001 letter from the World Health Organization Regional Office for the Eastern Mediterranean here.

Of note:

- Fainting is a recognised side effect of vaccines given in adolescence.

When there are doubts about giving a vaccine contact the Clinical Lead for further advice.

Adverse Events

MMR (Priorix or M-M-RvaxPro) vaccine is considered safe and well tolerated. Full details of the side effects of MMR vaccine can be found in the Summary of Product Characteristics (SmPC) available on www.hpra.ie or www.medicines.ie . The relevant immunisation leaflet contains details on adverse reactions and their management.

Parents/legal guardians/students/individuals post vaccination should seek medical advice if they experience an adverse reaction to the vaccine. There is no evidence to date that MMR vaccine causes long-term adverse events.

General Side Effects

These can occur with most vaccines:

- A local reaction at the injection site which can consist of redness, swelling, pain and increased skin temperature is the most common side effect.
- Systemic symptoms e.g., fever Syncope can occur after vaccination, especially in adolescents. See Appendix B
- Anaphylaxis is an extremely rare event that could occur with the administration of any vaccine. Detailed advice on the management of anaphylaxis is contained in the Immunisation Guidelines for Ireland. http://bit.ly/NIACAnA
- In the event of anaphylaxis or suspected anaphylaxis, epinephrine (adrenaline) should be given promptly and repeated as indicated. As with any episode of anaphylaxis, the patient should be transferred to hospital as soon as possible.

Other Side Effects of the MMR Vaccine

- "Mini-measles" may occur 6-10 days after immunisation and consists of mild pyrexia and an erythematous rash. This is non infectious and is self-limiting,
- 'Mini-mumps' with salivary gland swelling may rarely occur during the third week after immunisation. This is non infectious.
- The rubella component may occasionally produce a rash, mild arthralgia, and lymph-node swelling 2-4 weeks post-vaccination, particularly in post-pubertal females (up to 25% of recipients). The incidence is lower than after natural disease.
- Febrile convulsions occur rarely (<1/1,000 children).
- Very rarely, erythema multiforme, thrombocytopenia and nerve deafness have been reported.
- There is no evidence of congenital rubella syndrome or increase in other teratogenic effects in women inadvertently given MMR vaccine. However, pregnancy remains a contraindication to its administration.

For full list of adverse events, please see SmPC for Priorix and M-M-RvaxPro.

Adverse Reaction - Anaphylaxis

The vaccinators should refer to and be familiar with NIAC algorithms/protocol Anaphylaxis: immediate management in the Community (2023) available at: https://www.rcpi.ie/Healthcare-Leadership/NIAC/Immunisation-Guidelines-for-Ireland.

The NIAC algorithms/protocol "Anaphylaxis: immediate management in the Community (2023" from the Immunisation Guidelines must be kept with anaphylaxis kit.

Reporting of Adverse Reactions

The vaccinator should report relevant suspected adverse reactions to the HPRA. Details of adverse events may be recorded on the adverse event clinical record (Appendix C). When reporting suspected adverse reactions to the HPRA, details of the brand name and batch number of the vaccine should be included in the report. An adverse reaction report form can be accessed by:

- Following the links to the online reporting options accessible from the HPRA website at http://bit.ly/HPRAar
- Using a downloadable report form also accessible from HPRA website, which may be completed manually and submitted to the HPRA via "freepost" available from the HPRA website http://bit.ly/HPRAIssue
- By using the traditional "yellow card" report which can be requested in bulk from the HPRA. The

"yellow card" also utilises the free post system.

- By telephoning the HPRA Pharmacovigilance Section 01-6764971.

Incident Reporting

In the event of an incident occurring during a vaccination session, an incident report must be completed by the professional primarily involved in the incident and forwarded to the relevant manager.
If there is a vaccine administration error, e.g., an incorrect vaccine is administered to one or more students/individuals, the National Immunisation Office must also be informed. Such an error must be reported to the relevant line manager. The incident and all actions taken must be recorded and the relevant National Incident Management Report Form completed (National Incident Report Form - NIRF-01-V 12 November 2021) https://www.hse.ie/eng/about/who/nqpsd/qps-incident-management/nims/nirf-01-v12-person-interactive.pdf

Data Management & Statistical Reporting

Consent forms must be managed in accordance with the General Data Protection Regulations (GDPR) along with the Data Protection Acts 1988 – 2018. See https://bit.ly/HSEGDPRInfo
Recording of vaccination should take place, using the agreed process, including ICT systems if applicable.

Revision

This guidance document will be reviewed and updated as necessary if research, legislation, standards, practice, guidelines or the environment or role of personnel alters.

Information Resources:

- Immunisation Guidelines for Ireland. National Immunisation Advisory Committee available at: https://www.rcpi.ie/Healthcare-Leadership/NIAC/Immunisation-Guidelines-for-Ireland
- NIAC Immunisation Guidelines. Anaphylaxis (2023)Immediate Management in the Community available at: https://www.rcpi.ie/Healthcare-Leadership/NIAC/Immunisation-Guidelines-for-Ireland
- National Immunisation Office (2023/2024) Supporting Information for Staff: Schools Immunisation Programme available at: https://www.hse.ie/eng/health/immunisation/hcpinfo/schoolproghcp/supportingdoc.pdf
- National Immunisation Office (2022) Supporting Information for Vaccinations in General Practice available at https://www.hse.ie/eng/health/immunisation/infomaterials/gpsupportingdocpci.pdf
- Children First 2011 – National Guidance for the Protection and Welfare of Children. https://www.hse.ie/eng/services/publications/children/cf2011.pdf
- Guidance for providers of health and social care services Communicating in plain English HIQA and NALA 2015 www.hiqa.ie
- Healthcare professionals FAQ National Immunisation Office https://www.hse.ie/eng/health/immunisation/hcpinfo/frequentlyaskedquestions/mmrcatchupcampaignfaqshcp.html
- National Clinical Guideline No. 30 – Infection Prevention and Control (IPC) available at https://www.gov.ie/en/publication/a057e-infection-prevention-and-control-ipc/
- HSE Guidelines for maintaining the vaccine cold-chain including maintenance of vaccine fridges and management of vaccine stock. National Immunisation Office HSE 2020 https://bit.ly/CCSOP1
- HSE Guidelines for maintaining the vaccine cold-chain in vaccine cool boxes. National Immunisation Office HSE 2020 available at https://bit.ly/CCSOP2
- Policy for Health Boards on Record Retention Periods including outline of issues in records management/National Freedom of Information Liaison Group 1999, http://bit.ly/RetRec
- Patient Information Leaflet (PIL) for the Priorix. Visit https://www.hpra.ie/docs/default-source/vaccine-pils/priorix-pil-12-2017.pdf?sfvrsn=0#:~:text=Priorix%20is%20presented%20as%20a,10%2C%2025%20or%20100%20%2D%20without
- Patient Information Leaflet (PIL) for M-M-RvaxPro. Visit https://www.hpra.ie/docs/default-source/vaccine-pils/mmrvaxpro-pil.pdf
- Information on HSE ICT security https://bit.ly/HSEITSec
- Information on HSE electronic communications https://bit.ly/HSEITCom
- Information on HSE encryption policies https://bit.ly/HSEITEnc
- Information on how to communicate clearly http://bit.ly/CommClear

- Information on HSE's open disclosure policy http://bit.ly/OpenDis
- Information on HSE consent policy http://bit.ly/ConsentP
- Data Protection Commission website www.dataprotection.ie
- HSE Data Protection policies http://bit.ly/HSEdatapro
- Information on Subject Access Requests (SAR) http://bit.ly/SARhse
- GDPR Frequently Asked Questions Health Service Executive (2018) http://bit.ly/GDPRhse
- Who can give consent for vaccination of a young person aged under 16 years? https://bit.ly/ConsentU16
- An Bord Altranais 2007 Guidance to Nurses and Midwives on Medication Management. Dublin
- https://www.nmbi.ie/nmbi/media/NMBI/Publications/Guidance-Medicines-Management.pdf?ext=.pdf
- Nursing and Midwifery Board of Ireland (2020) Guidance for Registered Nurses and Midwives on Medication Administration. Dublin: Nursing and Midwifery Board of Ireland
- https://www.nmbi.ie/NMBI/media/NMBI/NMBI-Medication-Administration-2020.pdf?ext=.pdf

Glossary of Terms and Definitions

A Registered Nurse Prescriber is a nurse or midwife who is registered in the Division of the Register of Registered Nurse Prescribers of the Nursing and Midwifery Board of Ireland (An Bord Altranais, 2007). The Registered Nurse Prescriber will use prescriptive authority in a safe and effective manner in the prescribing of vaccinations in accordance with his/her collaborative practice agreement (CPA) and must adhere to the National Policy for Nurse and Midwife Medicinal Product Prescribing (2012).

CVC: Community Vaccination Clinic

Health Protection Surveillance Centre (HPSC): the HPSC are responsible for collating, analysing and publishing the national immunisation uptake statistics for all national immunisation programmes in Ireland.

Medicine Protocols are written directions that allow for the supply and administration of a named medicinal product by a nurse or midwife or trained vaccinator in identified clinical situations without the requirement for individual prescription.

School Immunisation Team: The multidisciplinary team of staff who provide the Schools Immunisation Programme, composition can vary between local areas.

SmPC: The Summary of Product Characteristics (SmPC) of a medicine is part of the licensed documentation and provides specific product information for prescribers and healthcare professionals on how to use that medicine safely and effectively.

Vaccine is a suspension of live attenuated or non-live micro-organisms or fractions thereof, or microorganism like particles administered to induce immunity and thereby prevent infectious disease. Non live vaccine is a vaccine that contains killed or fractions of microorganisms or microorganism like particles. The response may be weaker than for a live vaccine and so repeated doses are often needed. Live attenuated vaccine is a vaccine that contains a weakened strain of live bacteria or viruses that replicate in the body and induce a longer- lasting immunity than non-live vaccines.

Vaccination is the term used to refer to the administration of any vaccine or toxoid.

A **vaccinator** is a trained healthcare professional who has completed training in the administration of

vaccinations and is administering vaccinations prescribed by a Registered Nurse Prescriber or Doctor or under a Medicine Protocol.

Vaccine abbreviation:

MMR vaccine: Measles Mumps and Rubella vaccine

Appendix A: MMR Vaccination Consent Form

MMR available here

https://www.hse.ie/eng/health/immunisation/hcpinfo/mmrcatchup24/mmrcuinfohps.html

Appendix B: Considerations for Prevention and Management of Syncope in Vaccination Clinics

Available from https://www.hse.ie/eng/health/immunisation/hcpinfo/mmrcatchup24/mmrcuinfohps.html

Appendix C: Adverse event clinical record

Available from: https://www.hse.ie/eng/health/immunisation/hcpinfo/mmrcatchup24/mmrcuinfohps.html

Appendix D: Emergency Drugs and Equipment

Emergency Anaphylaxis Kit –as per updated section Feb 2023 in Immunisation Guidelines

NB Updated advice from NIAC no longer recommend the use of autoinjectors
Adrenaline auto-injectors are not recommended as first line treatment by health professionals for the immediate management of anaphylaxis or suspected anaphylaxis following vaccination unless they are the only source of adrenaline available, as they may not allow IM delivery of an age-appropriate dose.

The availability of protocols, equipment and drugs necessary for the management of anaphylaxis should be checked before each vaccination session

- Copy of "Anaphylaxis: Immediate Management in the Community" from Immunisation Guidelines for Ireland
- 3 x 1ml ampoules of Adrenaline (1:1,000, 1mg/ml)
- 3 x 1 ml syringes
- Needles 3 x 25mm, 3 x 38 – 40mm
- 1 pocket mask
- Sphygmomanometer (optional)
- Stethoscope (optional)
- Pen and paper to record time of administration of Adrenaline

The kits should be kept closed to ensure the drugs are not exposed to light and stored at room temperature. The kits require regular verification to replace drugs before their expiry date.

There should also be a back-up emergency anaphylaxis kit so that a vaccination session can continue in the event that a student has been treated for anaphylaxis using up the anaphylaxis kit.

- Emergency equipment
- Access to a telephone to call an ambulance.
- Copy of "Anaphylaxis: Immediate Management in the Community" from Immunisation Guidelines for Ireland.
- Adverse event clinical record (Appendix E) and pen to record time of administration of adrenaline and clinical condition of patient.
- Headed notepaper to write referral letter for hospital.
- Sphygmomanometer x 1 with adult and paediatric cuff.
- Stethoscope x 1.

Appendix E: Post MMR Vaccination Advice

Available here https://www.hse.ie/eng/health/immunisation/hcpinfo/mmrcatchup24/mmrcuinfohps.html

Appendix F: Packshot of MMR Priorix and M-M-RvaxPro vaccine used in the MMR Catch-up Vaccination Programme