

MMRV- one vaccine. Four protections. A healthier future

By Emily Jones



What is MMRV ?

- MMRV is a **combined vaccine** that protects against **four highly infectious viral diseases**. The MMRV vaccine is a combined vaccine that protects against **measles, mumps, rubella (German measles), and varicella (chickenpox)**. These are highly contagious viral diseases that can lead to serious health complications, particularly in young children, pregnant women, and people with weakened immune systems.
- M – Measles
- M – Mumps
- R – Rubella (German measles)
- V – Varicella (chickenpox)



Measles

- Measles spreads through coughing and sneezing and is one of the most infectious viral diseases. Early symptoms include fever, cough, runny nose, sore eyes, and a distinctive rash. Serious complications include:
- Pneumonia (lung infection)
- Encephalitis (swelling of the brain)
- Permanent brain damage in rare cases
- Death in severe cases



Mumps

- Mumps is a viral infection that causes painful swelling of the salivary glands. Although many people recover fully, complications can include:
- Meningitis (inflammation of the lining around the brain and spinal cord)
- Encephalitis
- Inflammation of the testicles (orchitis), which can rarely affect fertility
- Hearing loss in uncommon cases



Rubella

- Rubella is usually a mild illness in children, but it can be extremely dangerous during pregnancy. If a pregnant woman becomes infected, especially during the first trimester, the virus can cause **Congenital Rubella Syndrome (CRS)**, leading to: Miscarriage or stillbirth
- Heart defects
- Deafness
- Cataracts
- Developmental delays in the baby



Varicella (chickenpox)

- Chickenpox usually causes an itchy rash and fever, but complications can occur, particularly in babies, adults, pregnant women, and people with weakened immune systems. These include:
- Severe skin infections
- Pneumonia
- Encephalitis
- Secondary bacterial infections



How does the vaccine work ?

The MMRV vaccine contains weakened forms of the viruses. These weakened viruses cannot cause disease in healthy people, but they stimulate the immune system to produce antibodies and memory cells. If the person is later exposed to the real viruses, the immune system recognises them quickly and mounts a rapid defence, helping to prevent infection or reduce the severity of illness.



Why is a GP Setting Ideal for Promoting the MMRV Vaccine?

General practice is one of the most effective settings for promoting childhood immunisations because it is where most children receive their routine vaccinations. GP surgeries provide regular contact with families from birth onwards, allowing healthcare professionals to educate parents, answer questions, and encourage informed decision-making.

Most childhood vaccinations are delivered in GP surgeries

The NHS childhood immunisation programme is primarily delivered through GP practices. Parents are invited to attend appointments when their child reaches the appropriate age, making GP surgeries a key location for preventing infectious diseases through vaccination.



Health Promotion Strategies to Improve MMRV Vaccine Uptake

Active listening

Some parents may have fears or concerns about vaccines. By listening carefully without judgement, nurses can understand these concerns and respond with empathy and factual information. This helps build trust and encourages open communication.

Addressing myths and misinformation

Many parents are exposed to incorrect information through social media or word of mouth. Healthcare professionals should respectfully explain that extensive research has shown there is **no evidence that the MMR vaccine causes autism**. Correcting misinformation with evidence can reduce vaccine hesitancy.

Shared decision-making

Parents should be involved in decisions about their child's healthcare. Nurses should discuss the risks and benefits of vaccination, answer questions honestly, and support parents in making informed choices rather than pressuring them.

Using NHS leaflets and trusted resources

Providing written information allows parents to review the facts after the appointment. Directing them to NHS resources also helps ensure they access reliable information rather than inaccurate online sources.



Health promotion models

- Making Every Contact Count (MECC) MECC is an NHS approach that encourages healthcare professionals to use every interaction with patients as an opportunity to promote healthier behaviours. During routine GP appointments, nurses can discuss the importance of childhood immunisations, answer questions and encourage parents to keep vaccinations up to date.



Staffordshire area

- Although Staffordshire has relatively high MMR vaccine uptake compared with the national average, second-dose coverage remains below the WHO target of 95%. This means a proportion of children remain unprotected due to a combination of missed appointments, delayed vaccinations and parental vaccine hesitancy, highlighting the importance of health promotion within general practice.
- **MMR first dose (2023/24): 94.8%** of eligible children were vaccinated by age 5.
- **MMR second dose (2022/23): 89.3%** in Staffordshire, compared with 84.5% across England.

▪ The World Health Organization recommends **95% coverage** with two doses to achieve herd immunity, so Staffordshire still has a gap for the second dose.



The Role of the Nurse in Promoting MMRV Vaccination

- Educate parents using evidence-based information.
- Build trust through effective communication.
- Address vaccine hesitancy and correct misinformation.
- Obtain informed consent before vaccination.
- Administer the vaccine safely following national guidelines.
- Maintain accurate documentation and vaccination records.
- Promote equality by ensuring all families can access immunisation services.



Barriers to Vaccination and How They Can Be Overcome

Barriers

- Vaccine misinformation on social media.
- Fear of side effects.
- Missed appointments (DNAs).
- Language and cultural differences.
- Difficulty accessing GP appointments.

Solutions

- Provide evidence-based education.
- Use interpreters and translated resources.
- Send reminder texts and follow-up calls.
- Offer flexible clinic times.
- Build trust through compassionate communication.



Conclusion

- MMRV vaccination is a safe and effective way to prevent serious infectious diseases.
- Health promotion in GP settings increases vaccine awareness and uptake.
- Practice nurses play a key role in educating parents and addressing vaccine hesitancy.
- Improving vaccination rates protects both individuals and the wider community through herd immunity.
- Continued education and evidence-based practice are essential to maintaining public confidence in vaccination.

