

# Measles Mumps and Rubella (MMR) Information and Support Guide

Emily White

Screening and Immunisation Coordinator  
NHS England – Southwest

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# Introduction

- This Information and Support Guide provides clear, evidence based information about the Measles, Mumps and Rubella (MMR) vaccine and the infectious diseases that it prevents.
- This guide explains that the MMR vaccine is safe and effective and that two doses should be taken up with confidence, by all eligible people.
- The guide explains who is eligible and where the MMR vaccine can be accessed.
- It answers specific questions about the MMR vaccine that have been raised by local communities.

# UK Immunisation Schedule

Most countries recommend the same vaccinations for babies, children and adults. However, the timing of vaccination – the Immunisation Schedule is not exactly the same in every country. There may be differences in:

- the number of different types of vaccines offered
- the ages at which vaccines and boosters are recommended
- the number of vaccine doses that are recommended for each vaccine
- the types of vaccines recommended for the whole population
- the types of vaccines recommended for special groups (such as pregnant people)



This is because there are:

- Differences in the rates and chances of catching the disease in each country
- Differences in the way that countries make decisions about which vaccines to offer to everyone
- Differences in the amount of money that countries have to spend on vaccines
- Differences in the history and traditions of the country

# UK Immunisation Schedule

- In the UK, our immunisation schedule is designed based on clear evidence to protect people against the infections that are most dangerous when they are very young and people as they age.
- Vaccinations are offered to people throughout their life to provide protection and are given at the ages when they will work best to protect the person being vaccinated and the whole community.
- The age recommendations for each vaccine based on
  - the **risk of disease** at a specific age,
  - the risk of complications** from the disease,
  - how well people’s bodies will **respond to the vaccine**
  - the best way to **stop disease from spreading** to the whole population.
- The immunisation schedule should be followed as closely as possible to give people the best possible protection from serious infections.

The routine immunisation schedule from February 2022				
Age due	Diseases protected against	Vaccine given and trade name	Usual site <sup>1</sup>	
Eight weeks old	Diphtheria, tetanus, pertussis (whooping cough), polio, <i>Haemophilus influenzae</i> type b (Hib) and hepatitis B	DTaP/IPV/Hib/HepB	Infanrix hexa or Vaxelis	Thigh
	Meningococcal group B (MenB)	MenB	Bexsero	Left thigh
	Rotavirus gastroenteritis	Rotavirus <sup>2</sup>	Rotarix <sup>2</sup>	By mouth
Twelve weeks old	Diphtheria, tetanus, pertussis, polio, Hib and hepatitis B	DTaP/IPV/Hib/HepB	Infanrix hexa or Vaxelis	Thigh
	Pneumococcal (13 serotypes)	Pneumococcal conjugate vaccine (PCV)	Prevenar 13	Thigh
Sixteen weeks old	Rotavirus	Rotavirus <sup>2</sup>	Rotarix <sup>2</sup>	By mouth
	Diphtheria, tetanus, pertussis, polio, Hib and hepatitis B	DTaP/IPV/Hib/HepB	Infanrix hexa or Vaxelis	Thigh
One year old (on or after the child's first birthday)	MenB	MenB	Bexsero	Left thigh
	Hib and MenC	Hib/MenC	Menitorix	Upper arm/thigh
One year old (on or after the child's first birthday)	Pneumococcal	PCV booster	Prevenar 13	Upper arm/thigh
	Measles, mumps and rubella (German measles)	MMR	MMRVaxPro <sup>3</sup> or Priorix	Upper arm/thigh
Eligible paediatric age groups <sup>4</sup>	MenB	MenB booster	Bexsero	Left thigh
	Influenza (each year from September)	Live attenuated influenza vaccine LAIV <sup>5</sup>	Fluenz Tetra <sup>1,5</sup>	Both nostrils
Three years four months old or soon after	Diphtheria, tetanus, pertussis and polio	dTap/IPV	Boostrix-IPV	Upper arm
	Measles, mumps and rubella	MMR (check first dose given)	MMRVaxPro <sup>3</sup> or Priorix	Upper arm
Boys and girls aged twelve to thirteen years	Cancers and genital warts caused by specific human papillomavirus (HPV) types	HPV (two doses 6-24 months apart)	Gardasil	Upper arm
Fourteen years old (school Year 9)	Tetanus, diphtheria and polio	Td/IPV (check MMR status)	Revaxis	Upper arm
	Meningococcal groups A, C, W and Y	MenACWY	Nimenrix	Upper arm
65 years old	Pneumococcal (23 serotypes)	Pneumococcal Polysaccharide Vaccine (PPV)	Pneumovax 23	Upper arm
65 years of age and older	Influenza (each year from September)	Inactivated influenza vaccine	Multiple	Upper arm
70 to 79 years of age	Shingles	Shingles	Zostavax <sup>1</sup> (or Shingrix if Zostavax contraindicated)	Upper arm

1. Intramuscular injection into deltoid muscle in upper arm or anterolateral aspect of the thigh.  
 2. Rotavirus vaccine should only be given after checking for SCID screening result.  
 3. Contains porcine gelatine.  
 4. See annual flu letter at: [www.gov.uk/government/collections/annual-flu-programme](http://www.gov.uk/government/collections/annual-flu-programme)  
 5. If LAIV (live attenuated influenza vaccine) is contraindicated or otherwise unsuitable use inactivated flu vaccine (check Green Book, Chapter 19 for details).

For vaccine supply information for the routine immunisation schedule please visit [portal.immform.phe.gov.uk](http://portal.immform.phe.gov.uk) and check Vaccine Update for all other vaccine supply information: [www.gov.uk/government/collections/vaccine-update](http://www.gov.uk/government/collections/vaccine-update)



# About Measles

- Measles can cause **blindness** and **death** especially in young children.
- It **kills more than 100,000 people a year**, mostly **children under five**.
- There were over **82,500** cases in Europe in 2018.
- It spreads from person to person **very easily** through coughs, sneezes and close contact.
- Measles can lead to **serious problems** if it spreads to other parts of the body, such as the lungs or brain.
- If you get measles when you're pregnant, **it could harm your baby**.
- It's important to get medical advice if you're pregnant and have been in close contact with someone who has measles.
- If you have measles, you must miss school and work so you can get well, recover and do not infect other people.

# Symptoms of Measles

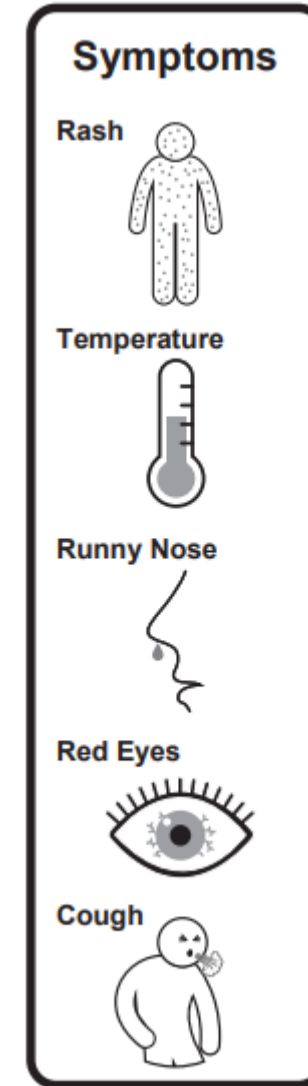
## Cold-like symptoms

The first symptoms of measles include:

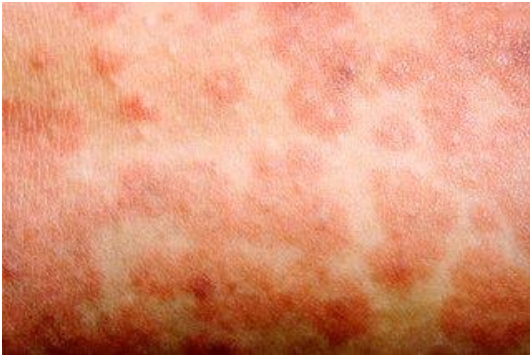
- high temperature (fever)
- runny or blocked nose
- sneezing
- cough
- red, sore, watery eyes

## Spots in the mouth

Small white spots may appear inside the cheeks and on the back of the lips a few days later. These spots usually last a few days.



# Measles Rash



A **rash** usually appears a few days after the cold-like symptoms.

The rash starts on the face and behind the ears before spreading to the rest of the body.

The spots of the measles rash are sometimes raised and join together to form red, blotchy patches. They're not usually itchy.

The rash looks brown or red on white skin. It may be harder to see on brown and black skin.



# Complications of Measles

- Death
- Blindness
- Increased chance of developing other infections as the immune system may be affected
- Ear infections that can lead to hearing loss
- Pneumonia
- Diarrhoea
- Encephalitis – inflammation (swelling) of the brain
- Severe problems for unborn babies

<b>M</b>	<b>M</b>	<b>R</b>
MEASLES	MUMPS	RUBELLA

Measles is circulating, it is serious, very infectious and can cause complications.

Especially for those with a weakened immune system, babies under one year and pregnant women.



You need two doses of MMR vaccine to protect you, see your GP practice to make an appointment.

It is never too late to have your MMR.

**i**mmunisation

the safest way to protect your child

# About Mumps



- Mumps is an infectious condition that causes **painful swelling** of the glands of the face, jaw and neck.
- Mumps spreads from person to person **very easily** through coughs, sneezes and close contact.
- There can be some **serious complications** such as meningitis, swelling of the ovaries or testicles, swelling of the pancreas and brain and temporary hearing loss.
- It can cause **infertility** and make it difficult for men to have children.
- In 2020 in England and Wales, there were 3,738 confirmed cases of mumps.
- It was much more common before the introduction of the MMR vaccine.
- Over 90% of cases were in people **aged 15 years or over**.
- If you have mumps, you must miss school and work so you can get well, recover and do not infect other people.

# Symptoms of Mumps

More general symptoms often start a few days before painful swellings in the side of the face under the ears start to show.

These can include:

- Headache
- Joint pain
- Feeling sick
- Dry mouth
- Mild abdominal pain
- Feeling tired
- Loss of appetite
- High temperature



Other symptoms:

- Painful swellings in the side of the face under the ears
- Headaches
- Joint pain
- A high temperature
- Painful and Inflamed (swollen) testicles – one or both
- Lower abdominal (stomach) pain caused by inflamed (swollen) ovaries

# Complications of Mumps

Mumps can cause the following serious and life-threatening problems:

- Meningitis
- Short term hearing loss
- Encephalitis – inflammation (swelling) of the brain
- Pancreatitis – inflammation (swelling) of the pancreas
- Infertility – short term or permanent

# About Rubella



- Rubella used to be a common disease in the UK
- Since the measles mumps rubella (MMR) vaccine was introduced, **rubella infections are rare.**
- In England and Wales the total number of rubella cases was 5 in 2015, 2 in 2016 and 3 in 2017.
- Rubella can be **very serious for pregnant people and their babies** and can cause miscarriage (loss of a pregnancy)
- It can cause **serious birth defects if caught during pregnancy** – these are changes to a baby that show at birth and can affect almost any part of the body (e.g., heart, brain, foot). They may affect how the body looks and works, or both.
- If you have rubella, you must miss school and work so you can get well, recover and do not infect other people.

# Symptoms of Rubella

- A spotty rash that starts on the face or behind the ears and spreads to the neck and body.
- You might also have lumps (swollen glands) in your neck or behind your ears.



Rubella can also cause:

- aching fingers, wrists or knees
- high temperature
- coughs
- sneezing and a runny nose
- headaches
- a sore throat
- sore, red eyes

# Complications of Rubella

If you catch rubella when you are pregnant, it could harm your baby.

It can cause:

- Loss of the baby (miscarriage)
- Death of a baby at birth (stillbirth)
- Serious problems after the baby is born – such as problems with their sight, hearing, heart, or brain

The risk is highest if you get rubella early in pregnancy.

In rare cases, rubella can also cause:

- Swollen and painful joints
- Bleeding disorders
- Encephalitis - inflammation (swelling) of the brain



# The MMR vaccine – Key Facts

- It was introduced in England in 1988 and since then, measles, mumps and rubella have become rare diseases .
- The MMR vaccine provides strong **protection against measles, mumps and rubella**
- **Two doses of the MMR vaccine** are recommended: the first when children are 1 year and the second when they are 3 years 4 months. However, the vaccine can be given **safely at any age** over 12 months.
- **Millions** of MMR vaccinations have been **given safely** to children in the UK and **all around the world**.
- **Over 20 million vaccinations have been given safely in the UK since the start of the vaccination programme.**
- Measles vaccination has **saved over 17.1 million lives** worldwide since 2000<sup>1</sup>
- **The MMR vaccine is the best way to protect children and adults from Measles, Mumps and Rubella**

# MMR and Gelatine

- A gelatine free vaccine is easily available

- Just ask your GP or Healthcare Professional

<https://www.gov.uk/government/publications/vaccines-and-porcine-gelatine> [Arabic](#), [Bengali](#), [Gujarati](#), [Panjabi](#), and [Urdu](#)



## This leaflet describes how and why porcine gelatine is used in vaccines

The issue of pork ingredients in some vaccines has raised concerns among some groups.

This leaflet has been developed to provide information about vaccines that contain this product and the alternatives that may be available.

### What is gelatine?

Gelatine is a substance derived from the collagen of animals such as chickens, cattle, pigs and fish. Collagen is found in tendons, ligaments, bones and cartilage. Porcine gelatine comes from collagen in pigs. All forms of gelatine for use in medicines are manufactured under strict hygiene and safety regulations.

### Why is porcine gelatine used in vaccines?

Gelatine is used in a very wide range of medicines, including many capsules and some vaccines. Porcine gelatine is used in vaccines as a stabiliser – to ensure that the vaccine remains safe and effective during storage. Vaccine manufacturers normally test a wide range of stabilisers and choose one that is stable, good quality and available in sufficient volume. Unlike the gelatine used in foods, the product used in vaccines is highly purified and broken down into very small molecules called peptides.

### Why can't vaccines be made with other stabilisers or other types of gelatine?

Developing a vaccine takes many years of laboratory testing and clinical studies to ensure that it is both safe and effective. Once the manufacturer has chosen the stabiliser for the vaccine, any change in this could require extensive laboratory and clinical studies to show that the safety and effectiveness of the vaccine has not been affected. Because of this, developing a new safe and effective vaccine with a different stabiliser may take several years or may never happen.

### Which vaccines contain porcine gelatine?

In the UK routine immunisation programme, there are three vaccines that contain porcine gelatine:

- Fluenz® Tetra, the nasal spray vaccine that protects children against flu
- MMR VaxPro®, a vaccine that protects against measles, mumps and rubella
- Zostavax®, the vaccine that protects older adults against shingles.

## Immunisation

helping to protect everyone, at every age.

# Exceptions – Who should not have the vaccine?

## 1. People who are pregnant

- As a precaution, the MMR vaccine is **not recommended for pregnant people**.
- You should also **avoid becoming pregnant for 1 month** after having the MMR vaccine.
- If you had the MMR vaccine while you were pregnant, it's best to let your GP or midwife know
- Evidence suggests there will be **no harm to your baby, but it's better to let them know.**



# Exceptions – Who should not have the vaccine?

## 2. People with a weakened immune system

- The MMR vaccine is not recommended for people with a severely weakened immune system. For example, if you are having **chemotherapy**.
- If you have a medical condition, or are taking medicine that may **affect your immune system, check if it's safe for you to have the MMR vaccine with your healthcare provider.**

3. **People who have had a rare, confirmed very serious allergic (anaphylactic) reaction** to a previous dose of a measles-, mumps- or rubella-containing vaccine

4. **People who have had a rare, confirmed very serious allergic (anaphylactic) reaction** to neomycin or gelatine

## Is the vaccine safe?



- The combined MMR vaccine has been **safely protecting millions** of children and adults for many years in **more than 100 countries worldwide.**

# Side effects of the vaccine

The MMR vaccine is **very safe**. Most side effects are **mild and do not last long**, for example:

- the skin where the needle goes in may be red, swollen and feel sore for 2 to 3 days
- around 7 to 11 days after the vaccination, babies or young children may feel a bit unwell or develop a temperature (fever) for 2 or 3 days
- Some children might also cry and be upset immediately after the injection. This is normal and they should feel better after a cuddle.
- It's important to remember that the possible problems caused by measles, mumps and rubella are much more serious.
- Serious reactions following vaccination are very rare.



# Is there a link between MMR vaccine and Autism?

**No.** The evidence is clear that **there is no link between MMR vaccine and autism.**

These short films provide more information:

[Evidence-based short films about autism for the Somali community - ARC West \(nih.ac.uk\)](#)

[Autism in the Somali community – myth-busting short films offer advice and top tips for parents - ARC West \(nih.ac.uk\)](#)

# Is there a link between the MMR vaccine and Autism?

- There are now a **large number of studies that show no evidence at all of any link between the MMR vaccine and autism.**
- Two of these with almost **1.2 million children found no link between MMR vaccines and autism.**
- The National Autistic Society in the UK has issued a statement saying that ‘there is no link between autism and the MMR vaccine’.



# Is there a link between MMR vaccine and speech delay?

A review of 87 studies (13 million children) showed that the MMR vaccination is safe and there is no link between the vaccination and autism, speech delay or other delays to brain development.





# Does the MMR Vaccine Work?

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## Yes

Over **99%** of those who have **2** doses of the vaccine will be **protected** against Measles.

Over 99% of those who have 2 doses will be protected against Rubella.

Over 88% of those who have 2 doses will be protected against Mumps.

# Should my child have the Measles, Mumps and Rubella vaccines separately?

- This is **not advised in England**.
- With single vaccines, children would need **6 separate injections** instead of 2.
- Each injection can be uncomfortable.
- **There is no good evidence for giving the vaccines separately.**
- It's unclear how long a gap to leave between each vaccine, as **there's no evidence on giving the vaccines separately.**
- **Single vaccines are less safe than the combined MMR** because they leave children and adults unprotected from dangerous diseases for longer.
- [Measles, mumps, rubella \(MMR\): use of combined vaccine instead of single vaccines - GOV.UK \(www.gov.uk\)](http://www.gov.uk)

# Why should you or your children have the vaccine?

- The vaccine will protect you and your children against 3 serious infections.
- You will also help to protect people in your community who can't have the vaccine.
- It is particularly important to have the MMR vaccine if you work with young children or care for people as part of your work.
- Passing on measles to children who are too young to have the MMR vaccine or to people who are already ill, can have very serious consequences for their health.



# Where can I get an MMR vaccination?

- At your GP Practice, Child Health Clinic or University Health Centre.
- If you think your child needs a vaccination, you can speak to your GP surgery to book the appointment. You do not need to wait to hear from them.
- **Remember - two doses of the MMR vaccine** are recommended: the first when children are 1 year and the second when they are 3 years 4 months. However, the vaccine can be given **safely at any age** over 12 months.
- Contact your GP practice at any time if you want to check whether you or your child are able to have an MMR vaccination.
- Your child's immunisation history should also be available in their red book



- **Protect yourself.**
- **Protect your family.**
- **Protect everyone, especially young children and elders in your community.**





**Protect yourself and your family  
from measles, mumps and rubella.**

**Get two doses of MMR from  
your GP surgery.**

**i**mmunisation

Helping to protect everyone, at every age

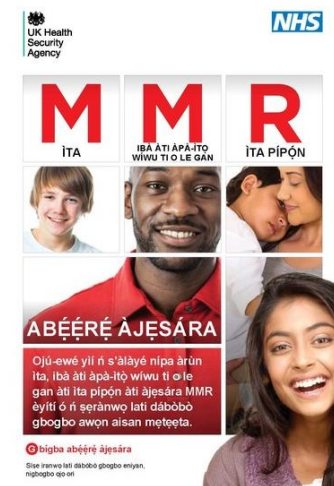
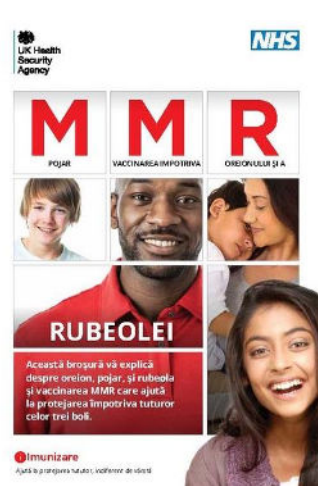
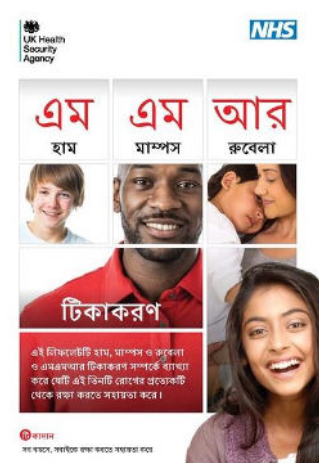
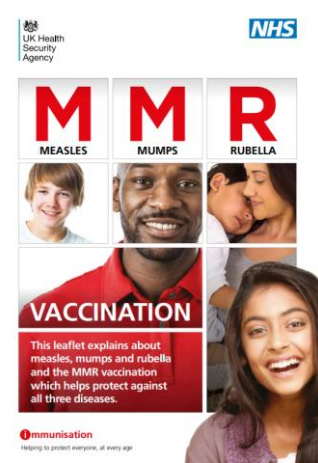
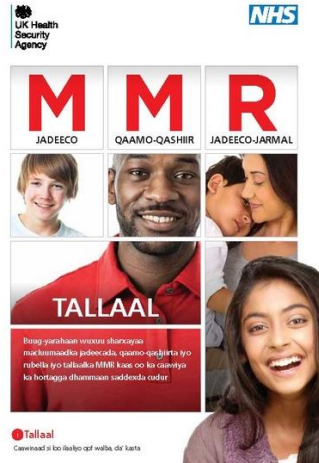
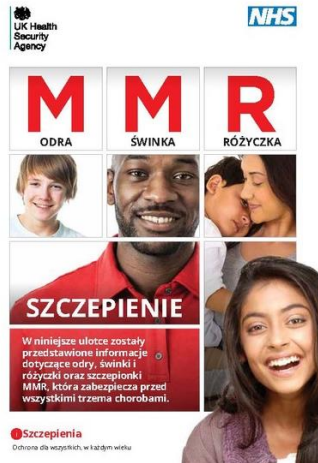


# Summary

- Measles can be **very serious and cause death and blindness.**
- It's **never too late to catch up with MMR vaccination** – children and adults can be vaccinated safely.
- **Children under 5 are most at risk** from Measles.
- There are some serious side effects for young people and adults too.
- The **vaccine does not cause autism or speech delay.** It is very **safe.**
- **Two doses of the vaccine will protect over 99% of people from Measles and Rubella and over 88% of people from Mumps.**



# Leaflets Available In Several Languages



MMR for all leaflet – now available to order in [English](#), [Bengali](#), [Polish](#), [Romanian](#), [Somali](#), [Ukrainian](#) and [Yoruba](#)

# Resources

- <https://arc-w.nihr.ac.uk/research/projects/evidence-based-short-films-about-autism-for-the-somali-community/>
- <https://arc-w.nihr.ac.uk/news/autism-in-the-somali-community-myth-busting-short-films-offer-advice-and-top-tips-for-parents/>
- [MMR Vaccine \(Measles, Mumps and Rubella Vaccine\) | Vaccine Knowledge Project \(ox.ac.uk\)](#)
- [How do we know that the MMR vaccine doesn't cause autism? – YouTube](#)
- [MMR for all: general guide - GOV.UK \(www.gov.uk\)](#)
- The University of Oxford Vaccine Group provides clear and detailed information about the MMR vaccine and is accessible to all. (<https://vk.ovg.ox.ac.uk/mmr-vaccine#Key-vaccine-facts>)
- A leaflet with further information for parents about porcine gelatine content can be downloaded here: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/460069/8584-Vaccines-porcine-gelatine-2015-2P-A4-04-web.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/460069/8584-Vaccines-porcine-gelatine-2015-2P-A4-04-web.pdf)

# Resources

- MMR for all leaflet – now available to order in [English](#), [Bengali](#), [Polish](#), [Romanian](#), [Somali](#), [Ukrainian](#) and [Yoruba](#)
- <https://www.gov.uk/government/publications/think-measles-patient-leaflet-for-young-people>
- <https://www.gov.uk/government/publications/think-measles-poster-about-measles-in-young-people>
- <https://www.gov.uk/government/publications/measles-protect-yourself-protect-others>
- Measles outbreak poster for GPs and outbreak poster and leaflet as simple text version in <https://www.gov.uk/government/publications/measles-outbreak> Czech, Arabic, Spanish, Romani and Romanian
- <https://www.healthpublications.gov.uk/ArticleSearch.html?sp=Sreset&keyword=IMMS>