



Public Health
England



NHS public health functions agreement 2019 -20

**Service specification No.10
Measles, mumps and rubella (MMR)
immunisation programme**

NHS England and NHS Improvement



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Promoting equality and addressing health inequalities are at the heart of NHS England and NHS Improvement values. Throughout the development of the policies and processes cited in this document, we have:

- Given due regard to the need to eliminate discrimination, harassment and victimisation, to advance equality of opportunity, and to foster good relations between people who share a relevant protected characteristic and those who do not share it (as required under the Equality Act 2010); and
- Given due regard to the need to reduce inequalities between patients in access to, and outcomes from, healthcare services and to ensure services are provided in an integrated way where this might reduce health inequalities (in accordance with the duties under sections 13G and 13N of the NHS Act 2006, as amended).

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Service specification No.10

This is a service specification to accompany the 'NHS public health functions agreement 2019-20 (the '2019-20 agreement').

This service specification is to be applied by NHS England and NHS Improvement in accordance with the 2019-20 agreement. Where a specification refers to any other published document or standard, it refers to the document or standard as it existed at the date when the 2019-20 agreement was made between the Secretary of State and NHS England and NHS Improvement Board, unless otherwise specified. Any changes in other published documents or standards may have effect for the purposes of the 2019-20 agreement in accordance with the procedures described in Chapter 3 of the 2019-20 agreement

Service specifications should be downloaded in order to ensure that commissioners and providers refer to the latest document that is in effect.

The 2019-20 agreement is available at www.gov.uk (search for 'commissioning public health').

All current service specifications are available at www.england.nhs.uk (search for 'commissioning public health').

This service specification is not intended to replicate, duplicate or supersede any other legislative provisions that may apply. It must always be read in conjunction with the [core service specification](#) and the online version of the [Green Book](#).

1 Purpose of measles, mumps and rubella (MMR) immunisation programme

- 1.1 This document relates to the MMR vaccine, a combined live attenuated vaccine which protects against measles, mumps and rubella, which are all highly infectious viral infections. MMR vaccine was introduced as a single dose schedule in 1988 and a two-dose schedule in 1996 with the aim of eliminating measles and rubella (and congenital rubella) from the UK population. Disease elimination is defined as the absence of endemic measles or rubella cases in a defined geographical area for a period of at least 12 months, in the presence of a well-performing surveillance system. The purpose of the service specification is to enable NHS England and NHS Improvement to commission MMR immunisation services to a standard that will continue to minimise the number of infections and outbreaks caused by these viruses. This means maintaining high coverage rates (95% uptake with two doses of MMR vaccine across England) for the whole population, including maintaining equitable services within the context of populations with protected characteristics as defined by the Equality Act 2010.
- 1.2 This specification provides a brief overview of the MMR vaccine including the diseases it protects against, the context, evidence base, and wider health outcomes, and should be read alongside the core service specification which underpins national and local commissioning practices and service delivery.
- 1.3 The existing programme provides a firm platform on which designated areas can develop and innovate to better meet the needs of their local population and work towards improving outcomes. This specification will also promote a consistent and equitable approach for the commissioning and delivery of the MMR vaccination programme across England. It is important to note that this programme can change and evolve in the light of emerging best practice and scientific evidence and changing epidemiology. NHS England and NHS Improvement and providers will be required to reflect these changes accordingly, in a timely way as directed by the national schedule.
- 1.4 [Immuneisation against infectious disease](#) (known as 'The Green Book'), issued by Public Health England, provides guidance and the main evidence base for all immunisation programmes. This service specification must be read in conjunction with the core immunisation service specification, the online version of the Green Book, all relevant public health letters and must also be read in conjunction with additional evidence, advice and recommendations issued by the [Joint Committee on Vaccination and Immunisation](#) (JCVI).
- 1.5 This service specification is not designed to replicate, duplicate or supersede any relevant legislative provisions that may apply, e.g. the Health and Social Care Act 2012. The specification will be reviewed and amended in line with any new recommendations or guidance, and in line with reviews of the Section 7A agreement.

2 Population needs

Background

- 2.1 The MMR vaccine, given as part of the routine childhood vaccination schedule, protects against measles, mumps and rubella. Two doses of MMR vaccine are required to provide satisfactory protection against measles, mumps and rubella. This is supported by the low number of cases reported during periods of high vaccine coverage. Outbreaks of measles and mumps have continued to occur in recent years in previously incomplete or unvaccinated individuals, most notably in older age groups who missed MMR vaccination in childhood.

Measles

- 2.2 Measles is a highly infectious viral illness characterised by coryza, cough, conjunctivitis and fever. Measles can be serious and lead to complications such as pneumonia, otitis media and encephalitis, particularly in immunocompromised individuals, infants, and pregnant women. Statutory reporting of measles began in England and Wales in 1940. Before the introduction of a measles vaccine in 1968, annual notifications varied between 160,000 and 800,000 with peaks every two years, and around 100 deaths from acute measles occurred each year.
- 2.3 Following the introduction of a single dose of MMR vaccine in October 1988, and the achievement of coverage levels in excess of 90%, measles transmission was substantially reduced and notifications fell progressively to low levels. The introduction of a second dose of MMR as a pre-school booster dose was included in 1996 to provide a second opportunity for protecting those individuals who did not respond to the first dose of vaccine.
- 2.4 The WHO confirmed that the UK eliminated measles in 2016. To achieve and maintain elimination, however, WHO recommends that we aim for 95% uptake with two doses of MMR by 5 years of age. Current UK performance for the second dose is sub-optimal at 88% and needs to be improved to attain and maintain 95% uptake by age five years. In addition, new PHE analyses suggest that population immunity levels are well below those required to interrupt measles transmission in many birth cohorts. Numbers of susceptibles are higher in young people born between 1998/99 and 2003/04. Measles and rubella remain endemic in many other countries and, with current large measles outbreaks across Europe, imported infections pose a very real threat to the UK's recent achievements.

Mumps

- 2.5 Mumps is a viral infection that causes an acute illness with swelling of the parotid glands. Mumps is spread in the same way as colds and flu, by infected drops of saliva that can be inhaled or picked up from surfaces and passed into the mouth or nose. Serious complications are rare but it can lead to viral meningitis, orchitis and pancreatitis.
- 2.6 Before the introduction of the MMR vaccine, mumps occurred commonly in school-age children. More than 85% of adults had evidence of previous mumps infection. Mumps was the cause of about 1200 hospital admissions each year prior to the introduction of the vaccine and was the commonest cause of viral meningitis. Since

the introduction of the MMR vaccine, there has been a significant fall in the number of reported cases.

- 2.7 Most cases of mumps nowadays occur in young adults aged 16 to 30 years and it is not unusual to see outbreaks linked to schools, universities and colleges where prolonged close contact creates the ideal conditions for the infection to spread.

Rubella

- 2.8 Rubella (also known as German measles) is a viral infection that was common in childhood prior to the introduction of routine immunisation. Rubella is generally a mild infection in children characterised by a maculo-papular rash and lymphadenopathy although complications can occur.
- 2.9 Rubella infection during pregnancy (RIP) can have serious consequences for the foetus which may result in congenital rubella syndrome (CRS).
- 2.10 Before the introduction of the rubella immunisation, rubella occurred commonly in children, and more than 80% of adults had evidence of previous rubella infection.
- 2.11 The WHO confirmed that the UK eliminated rubella in 2015. In recent years rubella cases have become sporadic with most imported or linked to importations. In addition the occasional RIP infections identified are almost exclusively in women not born in the UK who acquire the infection whilst abroad or through contact with imported cases in the UK.

MMR vaccine – key details

- 2.12 The key details are that:

- the first dose of MMR vaccine should be given to children between 12 to 13 months of age;
- children are given a second dose before they start school at three years and four months of age (or soon after). The second dose can be given sooner if urgent protection is required, for example in the management of exposures or outbreaks, or in susceptible populations or settings at high risk of outbreaks;
- between 5 and 10% of children are not fully immune after the first dose. The second dose provides a further opportunity to protect children who did not respond to the first dose of MMR, with less than 1% of children remaining susceptible after receiving the two recommended doses;
- eligible children who are not up to date with their MMR vaccine (dose 1 or dose 2) should be caught up at the earliest opportunity
- school nurse health checks should be another opportunity to check children's MMR status and offer or refer them for MMR vaccination. These checks are done at:
 - school entry assessment in reception/ year 1 (age 4 to 5 years)
 - transition from primary to secondary school health assessment in year 6/7 (age 10 to 11 years), and,
- the mid-teen health review;

- checking MMR status should also form part of the contracts for the adolescent immunisation programmes (Td-IPV, MenACWY and HPV) and any missing doses offered to ensure that all children are fully protected with two doses;
- adults who have not received the recommended two doses of MMR vaccine should be brought up to date – the two doses can be given one month apart. MMR is particularly important for women of child-bearing age, and MMR status should be checked during consultations for contraceptive services, fertility problems, post-natal checks or cervical screening;
- in the event of a measles outbreak, MMR vaccine should be offered to susceptible individuals who have been in contact with cases of measles in accordance with national guidance. There are no negative effects from vaccinating people who are already immune;
- rubella susceptibility testing in pregnancy ceased in April 2016. Post-natal women lacking two documented doses of MMR vaccine should be offered missing doses at suitable opportunities, for example the 6 week maternal check to protect future pregnancies from rubella.
- every opportunity to check the MMR status of an individual should be taken and the vaccine administered where appropriate, for example migrants recently arrived in the country and newly registered patients in general practice .

3 Scope

Aims

- 3.1 The aim of the MMR programme is to protect individuals and the population from measles, mumps and rubella, interrupt the spread of the diseases and reduce the associated morbidity and mortality.

Objectives

- 3.2 The aim will be achieved by delivering an evidence-based population-wide immunisation programme that:
- identifies the eligible population and ensures effective timely delivery with optimal coverage based on the target population set out in paragraph 4.2;
 - is safe, effective, of a high quality and is independently monitored;
 - is delivered and supported by suitably trained, competent healthcare professionals who participate in recognised ongoing training and development in line with national standards;
 - delivers, manages and stores vaccine in accordance with national guidance; and
 - is supported by regular and accurate data collection using the appropriate returns.

Direct health outcomes

- 3.3 In the context of health outcomes, the MMR vaccination programme aims to:
- protect the health of individuals and the wider population;
 - reduce the number of preventable infections and their onward transmission; and
 - achieve high coverage across all groups identified.

Baseline vaccine coverage

- 3.4 Local services must ensure they maintain and improve current immunisation coverage (with reference to vaccine coverage public health outcomes framework indicators) with the aim of 100% of eligible individuals being offered immunisation in accordance with the Green Book and other official DH/PHE guidance. This includes performance indicators and key deliverables that are set out in Annex B of the NHS Public Health Functions Agreement (Section 7A) for 2019-20.

4 Service description / care pathway

Local service delivery

4.1 It is essential, in order to promote a nationally aligned high-quality programme focusing on improved outcomes, increasing coverage and local take-up, that the core elements that are set out in the core service specification are included in contracts and specifications.

Target population

4.2 Providers will be required to make the MMR vaccine available to:

- all children both registered and unregistered with a GP, as part of the childhood immunisation programme's primary immunisation course. The first dose should be given to children between 12 to 13 months of age and the second dose at three years and four months of age (or soon after);
- children should have their MMR status checked by the school nurse when starting primary school; transitioning from primary to secondary school; and at the mid-teen health review;
- those in secondary school receiving other scheduled vaccines (e.g. HPV in Year 8 and Year 9, Td/IPV and MenACWY conjugate vaccine in year 9) should have their MMR status checked. Those lacking two documented doses of MMR can either be immunised by the school immunisation team or referred to their GP;
- women of child bearing age who are unvaccinated or partially vaccinated for rubella;
- other adults and children who have no history of MMR vaccination, or incomplete immunisation status, as indicated in the Green Book; and
- address poor uptake for the services set out in the S7A agreement, where local delivery is lower than the key deliverables set out in the S7A agreement and in accordance with the objective to reduce the variation in local levels of performance.

4.3 In addition:

- providers must ensure arrangements must be put in place to ensure that the MMR vaccine can be administered promptly as directed by PHE for unvaccinated contacts of cases or for outbreak control.

Vaccine schedule

4.4 A locally commissioned service should immunise the target population following the national vaccination schedule:

- the first dose should be given to children between 12 to 13 months of age;
- children are given a second dose before they start school at three years and four months of age, except in specific circumstances set out at the next bullet point;
- when measles is circulating in the community or there is contact with a confirmed case, the first dose of MMR can be given early as outlined in the Green Book

MMR Chapter. In addition, details of how to manage suspected measles cases and their close contacts, can be found at this link: <https://www.gov.uk/government/publications/national-measles-guidelines>;

- women of child-bearing age who are unvaccinated or partially vaccinated should be brought up to date at the earliest opportunity. The six week maternal post-natal check offers an opportunity to check MMR status and administer missing doses of vaccine.
- the vaccination status of every child or young person should be checked and missing doses offered as appropriate to ensure that everyone has completed an age appropriate course. This is particularly important for those newly arrived in country who may not have received two doses of MMR vaccine.
- <https://www.gov.uk/government/publications/vaccination-of-individuals-with-uncertain-or-incomplete-immunisation-status>;
- there is an opportunity to offer unimmunised/partially immunised individuals MMR vaccine with the adolescent vaccination programmes at around 13-14 years of age, and this should be considered as routine practice;
- further information on scheduling is available in the relevant chapters of the [Green Book](#);
- in order to provide early protection, providers must aim to complete the schedule at near as possible to the recommended ages. Sufficient immunisation appointments must be available so that individuals can receive vaccinations on time – waiting lists are not acceptable.

Vaccine ordering

- 4.5 All centrally procured vaccines must be ordered via the ImmForm online ordering system details of which are given in the core immunisation specification.