Vaccination in the UK - position statement

Health Policy team
Vaccination is proven to be a highly effective intervention to prevent disease, and in the UK vaccines are routinely offered against 18 infections in childhood and adolescence, resulting in a substantial saving in morbidity and mortality. We provide key facts and considerations, our recommendations and key messages for health professionals.

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Key facts

- Vaccination is proven to be a highly effective intervention to prevent disease.
• Globally, vaccination is estimated to prevent 2 – 3 million deaths per year.\(^1\)
• In the UK vaccines are routinely offered against 18 infections in childhood and adolescence \(^2\). As a result, some of these diseases have become very uncommon, with a substantial saving in morbidity and mortality.
• In the UK, vaccination is the norm and uptake of most vaccines is high, with over 90% of 12-month olds and 24 months olds fully vaccinated with the primary vaccines and MMR respectively.\(^3\) However, there is variation in uptake with pockets of under vaccination in some geographical areas as well as in some vulnerable groups.
• Children and young people with long term conditions are an example of an under vaccinated group. For example, only 19.3% of children aged between 6 months and 2 years with neurological problems (eg cerebral palsy) received ‘flu vaccine in 2018-19.\(^4\)

**Key considerations**

• There is a considerable body of high-quality evidence demonstrating the safety and effectiveness of vaccines.\(^5\)
• Immunisation not only protects individuals, but through herd (community) immunity, protects those who cannot be immunised due to their young age or in whom vaccination is contraindicated because of an underlying condition.
• ‘Vaccine hesitancy’, defined as ‘delay or refusal of vaccine in the presence of services’, has been identified by the World Health Organization as one of the top ten threats to global health. However, there is no evidence that this is a major issue in the UK, where vaccine confidence is high and under vaccination is more often due to difficulties accessing services for practical or logistical reasons.\(^6\) \(^7\)
• In the UK, it is estimated only about 1-2% parents refuse all vaccines.\(^8\)
• Mandation of vaccination, whether by attaching it to school entry or welfare benefits has been suggested as a means of increasing vaccine uptake. The evidence of benefit in other countries is tenuous and there is no evidence applicable to UK. Ensuring the interventions known to be effective in achieving high vaccine uptake rates, ie providing accessible/flexible services, and use of reminders and recall should be fully implemented. Analysis of the potential positive and negative impacts of mandatory vaccination should be conducted before introducing such a policy.\(^9\)
Mandation could be
counterproductive with parents withdrawing children from school or paying fines and making families further impoverished. Indeed some parents who were not initially anti-vaccine, may object to the state telling them what to do and therefore refusing to have their children immunised.\textsuperscript{10} \textsuperscript{11}

- The COVID-19 pandemic has further increased missed opportunities for routine vaccination uptake in children and young people due to parental concerns about visiting GP surgeries and prolonged school closures.

**Economic impact**

- Before any vaccine is introduced part of the assessment includes evidence of cost effectiveness. Both HPV\textsuperscript{12} and Meningitis B\textsuperscript{13} vaccines have been shown to be cost-effective, though not cost saving.
- Older more established vaccines may be cost saving. For the routine US schedule in United States of America in 2001, consisting of vaccines against diphtheria, tetanus, pertussis, Hib, polio, measles, mumps, rubella and chickenpox, it was calculated that for every $1 spent there was a saving of $5 in direct costs and a further $11 in societal costs.\textsuperscript{14}
- In drawing up guidance for reducing disparities in immunisation uptake in the under 19s, modelling of the MMR vaccine, showed that even home delivered vaccination would be cost effective.\textsuperscript{15}

**Key messages for health professionals**

- Health professionals should follow national guidance. For example, NICE guidance on reducing differences in immunisation uptake in the under 19s [\textsuperscript{15}], and Reducing Health Inequalities by NHS Health Scotland.\textsuperscript{16} NICE guidance includes recommendations on the targeting of groups at risk of not being fully immunised. It recommended a number of initiatives, including improving access to immunisation services; provision of accurate up to date information to parents and young people; checking immunisation status of new migrants and looked after children and offering outstanding vaccinations.
- Assessing children's immunisation status should form part of any assessment. When vaccines are not up to date, the reason should be established and appropriate intervention taken. Parents may have delayed or refused vaccines for a variety of reasons. These parents should be offered
the opportunity to discuss their concerns. Some children will not have been vaccinated because of false contraindications e.g. egg allergy is still commonly considered to contraindicate MMR vaccine, whereas this is no longer the case.  

- Health Professionals should check guidance on which vaccines are required at different ages. Although there is no upper age limit for most vaccines, vaccine requirements do change with age and so it is important to check. Public Health England publishes an algorithm to assist in determining which vaccines are required.

- It is particularly important when seeing children with allergies, that it is made clear that this should rarely interfere with vaccination. How this relates to an individual child's allergies should be explained to the parents and recorded in the GP letter.

- Many parents have questions and concerns about vaccines. Evidence suggests that an effective interaction can positively influence a parent's view of vaccines and parents who have previously delayed or declined vaccines may reverse this decision. Although there is no good evidence to show that UK parents' vaccine decisions are influenced by misinformation on social media, many parents seek out or are exposed to information on social media and the Internet more generally. Since not all the information available from these sources is reliable, it is important for health care professionals caring for children to be equipped to discuss immunisation with parents. This does not just mean being knowledgeable about vaccines; the style of conversation is vital to gain parents' trust and to support them in their decision making. There are some useful resources with guidance on communicating vaccine issues with parents.

Talking with parents about vaccination is time well spent.

**RCPCH recommendations**

- RCPCH strongly supports immunisation, the promotion of immunisation, including the provision of advice to parents and young people and advocates for national policies, and practices that support the immunisation programme.

- The UK Government should publish its overdue vaccination strategy to prevent a fall in up-take and protect children and young people from deadly infections.
Health professionals should be aware of groups at risk of low vaccine uptake. They include: children in large families, children in lone parent families, looked after children, children in mobile families including the travelling community, children in some ethnic minority groups, children with chronic conditions or disability.

The NHS should take a renewed focus on vaccination and ensure full implementation of national guidance, for example, NICE recommendations for reducing differences in immunisation uptake.\textsuperscript{24}

Public Health England, Health Protection Scotland, Public Health Wales and Northern Ireland’s Public Health Agency Health should continue to ensure the provision of accurate data on infectious diseases and vaccination coverage in the UK.

National funding bodies should commission research into strategies to address vaccine hesitancy and refusal and tailoring interventions appropriately.

Teaching and training health professionals in immunisation issues and discussing vaccination with parents should be included in the national undergraduate and postgraduate medical curricula. This should be based on national training standards and core curricula published in the revised National Minimum Standards and Core Curriculum for Immunisation Training for Registered Healthcare Practitioners published by Public Health England and the Promoting Effective Immunisation Practice Guide published by NHS Education for Scotland.\textsuperscript{25, 26}

The UK Government should focus spending and attention on ensuring equity of access to vaccinations.

Health providers should consider how ‘on the spot’ vaccinations could be provided to children not up to date with their vaccinations. Where this is not possible, health professionals must communicate the need for vaccines with the child’s GP. Professionals seeing children with allergies should make a point of stating clearly whether or not any immunisations are contraindicated.

All other agencies should prioritise routine vaccination uptake to address the large number of children and young people who missed out during the COVID-19 pandemic and need to be caught up to obtain protection. Most children receive vaccines through schools and could continue to miss out if schools are not fully reopened.
RCPCH activity to promote immunisation

- RCPCH is committed to encouraging members to ensure that parents and young people with whom they have contact, are given full and accurate information about vaccination.
- This includes continuing to encourage our members to give greater consideration of provision of opportunistic vaccination, for example in hospitals and community clinics.
- RCPCH publishes ‘Vaccines in Practice’ online e-learning, which is mapped to the paediatric and GP curricula, to support paediatric and GP trainees to develop skills in communicating the benefits of vaccination.
- RCPCH will continue to collaborate with other professional organisations such as RCGP, RCN, RCM, iHV, FFPH, Society of Immunology, Unite CPHVA to promote vaccination.

Case studies

Examples of the impact of vaccination include the introduction of vaccines to prevent measles and meningococcal group C disease in the UK.

Case study: Meningococcal C

The MenC vaccine was introduced into UK in 1999. Before its introduction, meningococcal serotype C was one of the most common causes of meningitis and septicaemia with 823 confirmed cases in 1998. The incidence of MenC disease fell by 86% in vaccinated groups in first 18 months of the programme. Over the years, the number of doses offered to infants has been reduced and in 2016 the remaining infant dose was removed as disease rates are so low and infants are protected by herd immunity. Since 2016, children are offered only one dose of Men C at 12 months of age and MenACWY replaced Men C vaccine for 14-year olds in 2015.

Case study: Measles

Before the single measles vaccine was introduced into the UK in 1968, measles notifications ranged between 160,000 – 800,000 annually, peaking every two years
with over 600 deaths between 1960-1967. As vaccine uptake increased notifications decreased but measles remained endemic. In 1988, MMR vaccine was introduced with the aim of eliminating measles, mumps, rubella and congenital rubella syndrome. By 1996 uptake of the vaccine was 91.8% and endemic transmission of measles was interrupted.

However, the publication of the now discredited paper in 1998 shook public confidence in the vaccine and uptake fell to 79.9% in 2003-04. Outbreaks of measles and mumps began to occur from 2002. As public confidence in the vaccine was restored, vaccine uptake gradually recovered and in 2013-14, 94.1% of five-year-olds received at least one dose of MMR with 88.3% receiving the complete course of two doses.29

However, the uptake of MMR, along with that of other vaccines has fallen since more recently and there has been an increase in disease such that the UK has had its elimination status withdrawn. In recent outbreaks, the epidemiology of measles has changed, and a relatively high proportion of cases occur in older adolescents/young adults.30 These are the people who were not vaccinated due to public concerns over the vaccine in the early 2000s.

**Resources available to support immunisation conversations and to direct parents to include:**

NHS website: vaccinations - This is information for the general public

Public Health England: immunisation Information for health professionals and immunisation practitioners - This is the main website for immunisation information in England and enables access to Immunisation against Infectious Disease (the ‘Green Book’), factsheets, leaflets, Q&As for health professionals, Vaccine Update, etc.

Vaccine Knowledge Project: Oxford Vaccine Group - This provides more detailed responses to parental concerns. This also includes a [film](#) of a mother describing the impact of SSPE on her adult daughter who contracted measles in infancy

Vaccine Education Center – Children’s Hospital of Philadelphia - This is based in USA and so some vaccines or timings are not applicable, but it is a useful source of information on many vaccine questions.
Immunisation eLearning from eLfH

Vaccines in practice – online learning, RCPCH - This is designed to facilitate the development of skills in communicating the benefits of vaccination

- 9 Joint Committee on vaccination and Immunisation. Minute of the meeting held on 02 October 2019 app.box.com/s/iddfb4ppwkmtjusir2tc/file/557390763676


15 a b https://www.nice.org.uk/guidance/NG218


External links
RCPCH State of Child Health - evidence on immunisations