

Joint Committee on Vaccination and Immunisation

Statement on COVID-19 vaccination of children and young people aged 12 – 17 years

July 2021

The Joint Committee on Vaccination and Immunisation (JCVI) has previously advised COVID-19 vaccination of all adults aged 18 years and over in the UK, and vaccination of some specific groups under the age of 18 years. The COVID-19 immunisation programme has been highly successful, with rapid delivery and high uptake. The programme has already substantially reduced the risk from serious COVID-19 in the UK population.

In view of the progress in offering COVID-19 vaccination to all adults, the Department of Health Social Care asked JCVI for advice on a possible extension of the programme to children and young people. JCVI has also received representations from professional bodies and members of the public on vaccination of children, both for and against such an extension. **The JCVI has deliberated on the potential risks and benefit of vaccinating children and young people in the context of very high vaccine uptake in those older people at highest risk from serious COVID-19 infection in the UK.**

With regards to a COVID-19 immunisation programme for children and young people, JCVI's main consideration remains the potential benefits of vaccination in terms of reductions in hospitalisations and deaths in the population. As disruption of education is likely to have medium to long term impacts on public health, JCVI has also considered the potential for vaccination to prevent outbreaks in educational facilities. These potential benefits have been considered against the potential risks from vaccination.

Vaccine safety

The Pfizer-BioNTech BNT162b2 COVID-19 vaccine has been authorised for use in persons aged 12 years and over in the UK. This follows evidence from a clinical trial where around 1000 individuals aged 12 to 15 years received two doses of the vaccine. There is good evidence that the vaccine is relatively reactogenic in this age group, with short-lived side effects including fever being common. There are emerging reports from the UK and other countries of rare but serious adverse events, including myocarditis (inflammation of the heart muscle) and pericarditis (inflammation of the membrane around the heart), following the use of Pfizer-BioNTech BNT162b2 and Moderna mRNA-1273 vaccines in younger adults. These reports are being closely evaluated by MHRA and JCVI. Data on the incidence of these events in children and young people are currently limited, and the longer-term health effects from the myocarditis events reported are not yet well understood. MHRA reports on COVID-19 vaccines are available [here](#).

Any decision on deployment of vaccines must be made on the basis that the benefits of vaccination outweigh the risks to those people who are vaccinated.

Advice

A small number of children and young people with underlying chronic conditions are at increased risk of serious COVID-19 disease. **JCVI advises that children and young people aged 12 years and over with specific underlying health conditions that put them at risk of serious COVID-19, should be offered COVID-19 vaccination.** Government advisers are currently reviewing evidence on the risk of COVID-19 in children and young people considered clinically extremely vulnerable. Once this review has reported, the finding will be considered by JCVI and will inform further guidance.

At the current time, **children 12 to 15 years of age with severe neuro-disabilities, Down's Syndrome, underlying conditions resulting in immunosuppression, and those with profound and multiple learning disabilities (PMLD)¹, severe learning disabilities or who are on the learning disability register** are considered at increased risk for serious COVID-19 disease and should be offered COVID-19 vaccination. **Young people aged 16 to 17 years of age who are at higher risk of serious COVID-19, as currently set out in the Green Book, should continue to be offered COVID-19 vaccination.** Further details regarding other specific underlying health conditions for which an offer of COVID-19 vaccination is advised will be provided in the Green Book: Immunisation against infectious disease.

Persons who are immunosuppressed are at higher risk of serious disease from COVID-19 and may not generate a full immune response to vaccination. **JCVI advises that children and young people aged 12 years and over who are household contacts of persons (adults or children) who are immunosuppressed should be offered COVID-19 vaccination** on the understanding that the main benefits from vaccination are related to the potential for indirect protection of their household contact who is immunosuppressed. Clear information on the potential risks and benefits of vaccination should be provided to the child and those with parental responsibility prior to vaccination.

Until more data become available, JCVI does not currently advise routine universal vaccination of children and young people less than 18 years of age. JCVI will keep this advice under review as more safety and effectiveness information become available on the use of COVID-19 vaccines in children and young people. The health benefits in this population are small, and the benefits to the wider population are highly uncertain. *At this time*, JCVI is of the view that the health benefits of universal vaccination in children and young people below the age of 18 years do not outweigh the potential risks. **Operationally, it is considered reasonable to allow a lead-in time to offer vaccination to those children who are within three months of their 18th birthday to ensure good uptake of vaccine in newly-turned 18 year olds.**

Considerations

Direct health benefits

JCVI has carefully examined the risk of COVID-19 to children and young people. The evidence strongly indicates that almost all children and young people are at very low risk from COVID-19. Where symptoms are seen in children and young people, they are typically mild, and little different from other mild respiratory viral infections which circulate each year. The incidence of severe outcomes from COVID-19 in children and young people is extremely low. In England, between Feb

¹ See NHS website for definition: <https://www.nhs.uk/conditions/learning-disabilities/>

2020 and Mar 2021 inclusive, fewer than 30 persons aged less than 18 years died because of COVID-19, corresponding to a mortality rate of 2 deaths per million. During the second wave of the pandemic in the UK, the hospitalisation rate in children and young people was 100 – 400 per million. Most of those hospitalised had severe underlying health conditions.

For children and young people without underlying health conditions that put them at high risk of severe outcomes from COVID-19, the direct individual health benefits of COVID-19 vaccination are limited. Whilst vaccination of younger cohorts could reduce the risk of outbreaks of COVID-19 in school settings, the vast majority of those infected in any outbreak will either be asymptomatic or have mild disease. Currently, less data are available on the safety of COVID-19 vaccines in children and young people compared to adults, and JCVI had carefully considered reports of myocarditis following the use of the Pfizer-BioNTech BNT612b2 and Moderna mRNA-1273 vaccines in younger adults. At this time JCVI does not consider that the benefits of vaccination outweigh the potential risks. Until more safety data have accrued and their significance for children and young people has been more thoroughly evaluated, a precautionary approach is preferred.

Paediatric Inflammatory Multisystem Syndrome Temporally associated with SARS-CoV2 infection (PIMS-TS), also called Multisystem Inflammatory Syndrome in Children (MIS-C), is a rare inflammatory disorder related to previous recent SARS-CoV2 infection. During the second wave, PIMS-TS was estimated to occur in 5 per 10,000 children infected with SARS-CoV2 in the UK, with a case fatality ratio of 1%. The underlying cause for PIMS-TS is not properly understood. Specifically, it is not known how COVID-19 vaccination might influence the occurrence or severity of PIMS-TS.

JCVI's view is that the available data are insufficient to advise on COVID-19 vaccination for the prevention of PIMS-TS. JCVI will continue to review and update this advice as new data emerge.

Concerns have been raised regarding post-acute COVID-19 syndrome (long COVID) in children. Emerging large-scale epidemiological studies indicate that this risk is very low in children, especially in comparison with adults, and similar to the sequelae of other respiratory viral infections in children.

Indirect health benefits

Modelling from the University of Warwick and from Public Health England indicate that vaccinating children and young people could have some impact on hospitalisations and deaths in older adults. However, the extent of such benefits are considered highly uncertain, and by Autumn 2021, all eligible adults should have been offered two doses of COVID-19 vaccine. A successful adult COVID-19 immunisation programme would mean that education staff and adult household members of students should have been vaccinated, reducing the risk of onward transmission from children to adults in school or at home, respectively.

Persons who are immunosuppressed are at higher risk of serious disease from COVID-19 and may not generate a full immune response to vaccination. Given the potential for indirectly protecting persons who are immunosuppressed, JCVI advises an extension of the current offer of vaccination to persons aged 12 to 17 years who are household contacts of those who are immunosuppressed. Information should be readily available explaining the limits of the existing data on safety and that the main benefits from vaccination are related to the potential for indirect protection of their household contact who is immunosuppressed.

Wider health implications and operational considerations

Following disruptions in routine programmes because of the pandemic, there is an urgent need to catch-up on non-COVID-19 school immunisations such as human papillomavirus (HPV) and meningitis (MenACWY) vaccinations, and there may be a need to offer other routine vaccines (such as mumps, measles and rubella (MMR)) in the school setting as part of overall recovery. Any extension to the childhood influenza programme also needs to be taken into account. The health benefits from these various non-COVID-19 school-based immunisation programmes are well established, and some may provide the last effective opportunity to complete an individual's immunisation course and provide timely and / or lifelong protection. Although relative benefits have not been formally compared, in JCVI's view, most non-COVID-19 childhood immunisations are likely to offer more benefits to children and young people than a COVID-19 immunisation programme.

On top of existing routine programmes, a COVID-19 programme for children and young people is likely to be disruptive to education and will require more resource. The scale of additional resources required will be considerable.

Non-health benefits of vaccination.

The pandemic has impacted on the provision of education to children, which in turn has indirectly affected the wider health and well-being of children. In considering the value of vaccination to children, JCVI recognises that there is no agreed methodology to assess indirect educational benefits against potential health risks. Vaccinating secondary school students would provide direct protection against symptomatic infection and reduce the risk of outbreaks in secondary schools. This may allow more students to remain in school and reduce days off-school because of SARS-CoV2 infection. The adverse educational impacts of school closures or days off-school fall disproportionately on students from more deprived areas and may be of long-term importance. Reducing days off-school could mitigate some of the health inequalities related to COVID-19. Children and young people who have SARS-CoV2 infection generally do not become so unwell that they need to take much, or any, time off-sick from education. Moreover, recent changes to national policy on NPIs in schools, in the context of a successful adult vaccination programme, should substantially reduce the impact of COVID-19 on children and young people's education.

Data from the adult COVID-19 vaccination programme indicates that vaccine coverage is lower in more deprived neighbourhoods compared to less deprived neighbourhoods. How similarly differential vaccine uptake amongst school-aged children might affect health inequalities should be considered ahead of any policy decision on this front.

Should the Government wish to consider vaccination of children and young adults aged less than 18 years with the primary aim of reducing the SARS-CoV2 infection rate (asymptomatic and symptomatic cases) irrespective of other direct or indirect benefits as discussed above, the known benefits from vaccination are likely to be limited. In this instance, JCVI favours deferral of a universal offer of vaccination until more data have accrued, including a clearer understanding of the impact of COVID-19 in the UK within the context of a successful adult vaccination programme.

Vaccine choice

At the time of publication, the Pfizer-BioNTech BNT612b2 vaccine is the only vaccine authorised for those less than 18 years of age in the UK (12 years or older). JCVI advises that only authorised COVID-19 vaccines should be offered to those aged less than 18 years.

Future advice

Clinical trials are underway in pre-school and primary-school aged students. Vaccines are only likely to be approved for use in these age groups after summer 2021. JCVI will continue to update its advice as new data emerge.

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