

Vaccines and Related Biological Products Advisory Committee Meeting

Pfizer-BioNTech COVID-19 Vaccine: Request for Emergency Use Authorization (EUA) Amendment, Use of a 2-Dose Primary Series in Children 5-11 Years of Age

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Purpose of Today's VRBPAC Meeting

- Pfizer-BioNTech COVID-19 Vaccine is authorized for use under EUA in individuals 12 years of age and older (and approved as COMIRNATY for use in individuals 16 years of age and older) for active immunization for prevention of COVID-19 caused by SARS-CoV-2.
- Pfizer/BioNTech has submitted a request seeking an amendment to the EUA for use of a 2-dose primary series in children 5-11 years of age.
 - Request includes use of a lower mRNA content (10 µg) than authorized for use in older age groups (30 µg).
- The VRBPAC is convened to discuss whether available data support that benefits of the Pfizer-BioNTech COVID-19 Vaccine outweigh its risks when administered as a 2-dose primary series to children 5-11 years of age.

COVID-19 in the U.S.

- More than 45 million COVID-19 cases, including more than 700,000 COVID-19 associated deaths, have been reported to date in the U.S.*
- The Delta variant surge that began during summer 2021 has been associated with increased SARS-CoV-2 transmission and COVID-19 disease, with the most severe outcomes predominantly among unvaccinated individuals.
 - Effectiveness of currently available COVID-19 vaccines has been demonstrated in clinical trials and confirmed in real-world observational studies.
- While the Delta variant surge is now on a downward trajectory, the current number of COVID-19 cases reported daily in the U.S. is approximately 70,000.*

COVID-19 in Children 5-11 Years of Age

- Children 5-11 years of age have accounted for approximately 9% of reported COVID-19 cases in the U.S. overall and currently account for approximately 40% of all pediatric COVID-19 cases.*
 - Current case rate in children 5-11 years of age is near the highest of any age group.
- Clinically significant sequelae of COVID-19 such as long COVID-19, hospitalizations, and deaths are less frequent in children than in adults but nonetheless account for substantial morbidity and mortality in pediatric age groups.
 - Sequelae of particular concern in children include COVID-19 associated myocarditis and multisystem inflammatory syndrome (MIS-C).

Statutory Criteria for EUA

- FDA may issue an EUA of an unapproved medical product following an EUA declaration, if the following statutory requirements* are met:
 - The agent referred to in the EUA declaration can cause a serious or life-threatening disease or condition
 - The medical product may be effective to prevent, diagnose, or treat the serious or life-threatening condition caused by the agent
 - The known and potential benefits of the product outweigh the known and potential risks of the product
 - No adequate, approved, and available alternative to the product for diagnosing, preventing, or treating the disease or condition

Benefit/Risk Considerations

- Considerations on data to support EUA of COVID-19 vaccines for use in pediatric age groups were discussed at the June 10, 2021 VRBPAC meeting.
- Benefits of vaccination in pediatric age groups can be assessed via:
 - Clinical endpoint efficacy data to directly demonstrate prevention of SARS-CoV-2 infection or COVID-19 diseaseAND/OR
 - Immunobridging data to infer effectiveness based on immune response biomarker(s) elicited by the vaccine in a pediatric age group vs. a comparator group in which clinical endpoint efficacy of the same vaccine was previously demonstrated (e.g., younger adults).

Benefit/Risk Considerations

- Risks of vaccination in pediatric age groups are assessed by safety evaluation in pre-authorization clinical trials and in the context of the safety profile and risks described in older age groups.
 - Safety database size for pediatric age groups in the same range as pre-licensure safety databases for approved preventive vaccines, provided no safety concerns are identified that could reasonably be evaluated in larger pre-authorization clinical trials.
- Uncertainties regarding benefits and risks (e.g., risk of vaccine-associated myocarditis/pericarditis) are also considered.
 - Post-authorization safety surveillance and observational studies would be needed to further evaluate benefits and risks.

Today's VRBPAC Meeting

- Potential EUA of COVID-19 vaccines for use in younger children has been a topic of intense anticipation and public debate.
- Data to inform the benefits and risks of the Pfizer-BioNTech COVID-19 vaccine, manufactured to provide for an age-appropriate mRNA content, are now available for children 5-11 years of age.
- FDA has conducted a comprehensive and independent review of the data, and input provided by the VRBPAC today will be considered in FDA's assessment of the data and decision regarding regulatory action.



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