Emergency Use Instructions for Healthcare Providers: 2024–2025 Formula COVID-19 Vaccine by Pfizer-BioNTech

The Centers for Disease Control and Prevention (CDC) is issuing Emergency Use Instructions (EUI) to provide information about the use of the 2024-2025 Formula[1] COVID-19 vaccine, by Pfizer-BioNTech (Comirnaty[2]), which is approved (licensed) by the Food and Drug Administration (FDA) for the prevention of COVID-19 in individuals ages 12 years and older. The CDC-issued EUI provide information for the uses of this vaccine that are beyond the FDA-approved labeling. The CDC-issued EUI provide information on the following uses of the 2024-2025 Formula COVID-19 vaccine by Pfizer-BioNTech for:

- Additional doses for people ages 12 years and older who are moderately or severely immunocompromised, which include the following:
    - A 3-dose initial series for people ages 12 years and older who are moderately or severely immunocompromised and previously unvaccinated or who need revaccination followed by 1 additional dose of any age-appropriate 2024-2025 COVID-19 vaccine[3] 6 months after completion of the initial series (minimum interval 2 months).
        - People who are recommended to be revaccinated are those who are moderately or severely immunocompromised who received COVID-19 vaccine dose(s) during treatment with B-cell-depleting therapies over a limited period or who received COVID-19 vaccine dose(s) prior to or during treatment involving hematopoietic cell transplant (HCT) or chimeric antigen receptor (CAR)-T-cell therapy.
    - People ages 12 years and older who are moderately or severely immunocompromised and have previously received 1 original monovalent, bivalent, or 2023-2024 Formula mRNA COVID-19 vaccine dose are recommended to receive 2 homologous (i.e., from the same manufacturer) 2024-2025 Formula mRNA vaccine doses to complete the 3-dose initial series followed by 1 additional dose of any age-appropriate 2024-2025 COVID-19 vaccine 6 months after completion of the initial series (minimum interval 2 months).
    - People ages 12 years and older who are moderately or severely immunocompromised and have previously received 2 original monovalent, bivalent, or 2023-2024 Formula mRNA COVID-19 vaccine dose are recommended to receive 1 homologous 2024-2025 Formula mRNA vaccine dose, at least 4 weeks after their last COVID-19 vaccine dose to complete the 3-dose initial series followed by 1 additional dose of any age-appropriate 2024-2025 COVID-19 vaccine 6 months after completion of the initial series (minimum interval 2 months).
    - For people initiating or completing the 3-dose initial series with the Pfizer-BioNTech COVID-19 vaccine, Dose 1 and Dose 2 are recommended with a 3-week interval; Dose 2 and Dose 3 are recommended with at least a 4-week interval. One additional dose of any age-appropriate 2024-2025 COVID-19 vaccine is recommended 6 months after completion of the initial series (minimum interval 2 months).
    - People ages 12 years and older who are moderately or severely immunocompromised and have completed their 2024-2025 COVID-19 vaccine recommended doses may receive additional doses of any age-appropriate 2024-2025 COVID-19 vaccine under shared clinical decision-making at least 2 months after the last dose of 2024-2025 COVID-19 vaccine.
- People ages 65 years and older are recommended to receive a second dose of any age-appropriate 2024–2025 COVID-19 vaccine 6 months after their last 2024-2025 COVID-19 vaccine dose (minimum interval 2 months), except people ages 65 years and older who received a 2-dose 2024-2025 Novavax initial vaccination series. Those individuals are recommended to receive a third dose of any age-appropriate 2024-2025 COVID-19 vaccine 6 months (minimum interval 2 months) after their second Novavax dose.

[1] The 2024-2025 Formula COVID-19 vaccine by Pfizer-BioNTech encodes the spike protein of SARS-CoV-2 Omicron variant lineage KP.2 (Omicron KP.2).
[2] Comirnaty is the proprietary name for the product licensed under the Biologics License Application (BLA). Because Comirnaty is commonly referred to as the "Pfizer COVID-19 vaccine" or the "Pfizer-BioNTech COVID-19 Vaccine," these EUI refer to this vaccine as the COVID-19 vaccine by Pfizer-BioNTech.
[3] Note that references to use of other licensed (Moderna) and authorized (Novavax) 2024-2025 COVID-19 vaccines are as provided under other EUI and/or the Interim Clinical Considerations.

The EUI for the 2024-2025 Formula COVID-19 vaccine by Moderna also allow the same uses as an alternative 2024-2025 Formula mRNA COVID-19 vaccine to Pfizer-BioNTech, (see the Moderna EUI Fact Sheet for Healthcare Providers). The 2024-2025 Formula COVID-19 vaccine by Novavax, which is authorized under Emergency Use Authorization (EUA; see the Novavax EUA Fact Sheet) is also available. See the Interim Clinical Considerations for use of the 2024-2025 Formula Novavax COVID-19 vaccine.

Refer to CDC's Interim Clinical Considerations for specific recommendations on use of the 2024-2025 Formula COVID-19 vaccine by Pfizer-BioNTech allowed under the EUI. For additional information about the COVID-19 vaccine by Pfizer-BioNTech COVID-19, refer to the Comirnaty package insert.

What are EUI and why is CDC issuing EUI for the 2024-2025 Formula COVID-19 vaccine by Pfizer-BioNTech?
In 2013, the Pandemic and All-Hazards Preparedness Reauthorization Act included a new provision that allowed for the issuance of EUI to permit CDC to inform healthcare providers and recipients about certain uses of FDA-approved, licensed, or cleared medical products. Specifically, EUI inform healthcare providers and recipients about such products' approved, licensed, or cleared conditions of use by noting additional uses under the EUI.

The 2024-2025 Formula COVID-19 vaccine by Pfizer-BioNTech is approved by the FDA as a single dose for active immunization to prevent COVID-19 in persons ages 12 years and older to be administered at least 2 months after the last dose of COVID-19 vaccine. CDC is issuing these EUI to provide information about use of the 2024-2025 Formula COVID-19 vaccine by Pfizer-BioNTech for additional doses for people ages 12 years and older who are moderately or severely immunocompromised and people ages 65 years and older that extend beyond its FDA-approved labeling.

What is COVID-19?
Coronavirus disease 2019 (COVID-19) is an infectious disease caused by SARS-CoV-2 that emerged in late 2019. It is predominantly a respiratory illness but can also affect other organs. People with SARS-CoV-2 infection have reported a wide range of symptoms, ranging from no symptoms to severe illness. Symptoms may appear 2 to 14 days after exposure to the virus. Symptoms may include fever or chills, cough, shortness of breath, fatigue, muscle or body aches, headache, new loss of taste or smell, sore throat, congestion or runny nose, nausea or vomiting, and diarrhea.

Who can receive additional doses of the 2024-2025 Formula COVID-19 vaccine by Pfizer-BioNTech?
The below describes who can receive the 2024-2025 Formula COVID-19 vaccine by Pfizer-BioNTech under these EUI. The COVID-19 vaccine by Moderna can also be used under EUI for the same uses as an alternative 2024-2025 Formula mRNA COVID-19 vaccine (see the Moderna EUI Fact Sheet for Healthcare Providers). In addition, the 2024-2025 Formula COVID-19 vaccine by Novavax is available for persons ages 12 years and older (see the Interim Clinical Considerations and Novavax EUA Fact Sheet).

- People ages 12 years and older who are moderately or severely immunocompromised
- People ages 65 years and older

What are the doses and intervals of the 2024-2025 Formula COVID-19 vaccine by Pfizer-BioNTech for people ages 12 years and older who are moderately or severely immunocompromised?

- Additional doses for people ages 12 years and older who are moderately or severely immunocompromised, which include the following:
    - A 3-dose initial series for people ages 12 years and older who are moderately or severely immunocompromised and previously unvaccinated or who need revaccination followed by 1 additional dose of any age-appropriate 2024-2025 COVID-19 vaccine 6 months after completion of the initial series (minimum interval 2 months).
        - People who received COVID-19 vaccine dose(s) during treatment with B-cell-depleting therapies over a limited period: the suggested interval to restart revaccination is about 6 months after completion of the B-cell depleting therapy.

        - Recipients of HCT or CAR-T-cell therapy who received COVID-19 vaccine dose(s) prior to or during treatment: revaccination should start at least 3 months (12 weeks) after transplant or CAR-T-cell therapy.
    - People ages 12 years and older who are moderately or severely immunocompromised and have previously received 1 original monovalent, bivalent, or 2023-2024 Formula mRNA COVID-19 vaccine doses are recommended to receive 2 homologous (i.e., from the same manufacturer) 2024-2025 Formula mRNA vaccine doses to complete the 3-dose initial series followed by 1 additional dose of any age-appropriate 2024-2025 COVID-19 vaccine 6 months after completion of the initial series (minimum interval 2 months).
    - People ages 12 years and older who are moderately or severely immunocompromised and have previously received 2 original monovalent, bivalent, or 2023-2024 Formula mRNA COVID-19 vaccine doses are recommended to receive 1 homologous 2024-2025 Formula mRNA vaccine dose, at least 4 weeks after their last COVID-19 vaccine dose followed by 1 additional dose of any age-appropriate 2024-2025 COVID-19 vaccine 6 months after completion of the initial series (minimum interval 2 months).
    - For people initiating or completing the 3-dose initial series with the Pfizer-BioNTech COVID-19 vaccine, Dose 1 and Dose 2 are recommended with a 3-week interval; Dose 2 and Dose 3 are recommended with at least a 4-week interval followed by 1 additional dose of any age-appropriate 2024-2025 COVID-19 vaccine 6 months after completion of the initial series (minimum interval 2 months).
    - People ages 12 years and older who are moderately or severely immunocompromised and have completed their recommended 2024-2025 COVID-19 vaccine doses may receive additional doses of any age-appropriate 2024-2025 COVID-19 vaccine under shared clinical decision-making at least 2 months after the last dose of 2024-2025 COVID-19 vaccine.

What are the recommended doses and intervals of the updated COVID-19 vaccine by Pfizer-BioNTech for people ages 65 years and older under these EUI?

- People ages 65 years and older who have received a dose of the 2024-2025 COVID-19 vaccine are recommended to receive a second dose of any age-appropriate 2024-2025 COVID-19 vaccine 6 months after their last 2024-2025 COVID-19 vaccine dose (minimum interval 2 months), except people ages 65 years and older who received a 2-dose 2024-2025 Novavax initial vaccination series. Those individuals are recommended to receive a third dose of any age-appropriate 2024-2025 COVID-19 vaccine 6 months (minimum interval 2 months) after their second Novavax dose.

Additional Information

Refer to CDC's Interim Clinical Considerations for specific information and the latest dosing recommendations (e.g., number of doses, dosing intervals, revaccination) that may vary for individuals with certain medical conditions and/or in certain circumstances, which differ from or extend beyond the FDA-authorized and/or FDA-approved labeling.
See Table 1 (COVID-19 vaccination schedule for people ages 65 years and older) and Table 2 (COVID-19 vaccination schedule for people ages 12 years and older who are moderately or severely immunocompromised) in CDC's Interim Clinical Considerations for the latest dosing recommendations.

What are the formulations of the COVID-19 vaccine by Pfizer-BioNTech that these EUI apply to?
These EUI apply to the FDA-approved 2024-2025 Formula COVID-19 vaccine by Pfizer-BioNTech (Comirnaty).

What are the common side effects with the COVID-19 vaccine by Pfizer-BioNTech?
Adverse reactions that have been reported following administration of Pfizer-BioNTech COVID-19 vaccines include pain at the injection site, fatigue, headache, chills, muscle pain, joint pain, fever, injection site swelling, and injection site redness.

What are possible serious side effects with the COVID-19 vaccine by Pfizer-BioNTech?

Severe allergic reactions, including anaphylaxis, and other hypersensitivity reactions (e.g., rash, pruritus, urticaria, angioedema), and myocarditis and pericarditis have been reported following administration of Pfizer-BioNTech COVID-19 vaccines. There is a rare risk of myocarditis and pericarditis following receipt of mRNA COVID-19 vaccine. Cases have occurred most frequently in adolescent and young adult males within 7 days after receiving the second dose of an mRNA COVID-19 vaccine (Moderna and Pfizer-BioNTech). Anaphylaxis has been rarely observed following COVID-19 vaccines. Allergic reactions can rarely occur with any kind of vaccine or medical product.

What are other clinically important side effects with the COVID-19 vaccine by Pfizer-BioNTech?
Syncope (fainting), which may be associated with injury, may occur in association with administration of injectable vaccines, including Pfizer-BioNTech COVID-19 vaccine.

Who should not receive the 2024-2025 Formula COVID-19 vaccine by Pfizer-BioNTech?
Do not administer the COVID-19 vaccine by Pfizer-BioNTech to persons with known history of a severe allergic reaction (e.g., anaphylaxis) to a previous dose of mRNA COVID-19 vaccine (Moderna or Pfizer) or any component of the vaccine (see *Contraindications, and Warnings and Precautions* sections in the Comirnaty package insert as well as CDC's Interim Clinical Considerations for Use of COVID-19 Vaccines Currently Approved or Authorized in the United States for additional considerations).

What information should be provided to persons receiving additional doses of the 2024-2025 Formula COVID-19 vaccine by Pfizer-BioNTech as described in the EUI?
Provide the EUI Fact Sheet for Recipients and Caregivers.

Risk-Benefit of the COVID-19 vaccine by Pfizer-BioNTech as Additional Vaccine Doses for Individuals Described in the EUI
People who are moderately or severely immunocompromised and previously unvaccinated or in need of revaccination would be less likely to have protection from infection-induced immunity and thus the data supporting a single dose for those with evidence of pre-existing infection-induced immunity would be less applicable to this population. Therefore, the following evidence supports continuing a 3-dose initial series to ensure the optimal immune response to protect this population at high risk of severe outcomes with COVID-19 and the need for additional 2024-2025 Formula COVID-19 vaccine doses in people who are moderately to severely immunocompromised and previously vaccinated with an initial vaccine series. The original Pfizer-BioNTech and Moderna COVID-19 vaccine randomized controlled trials from 2020 measured efficacy of a 2-dose initial series (previously called the primary series) among people without evidence of prior SARS-CoV-2 infection. Effectiveness of an additional initial series dose of the COVID-19 vaccine is inferred from immunogenicity data in immunocompromised adults who received a single additional primary series dose. These data were used to support EUA amendments on August 12, 2021, for the Pfizer-BioNTech original monovalent vaccine and support the CDC recommendations to expand the primary series for persons who are moderately or severely immunocompromised to 3 doses for mRNA vaccines in August 2021. Persons who are moderately or severely immunocompromised may have reduced protection after COVID-19 vaccination, compared with persons without immunocompromise. Historically, COVID-19 vaccine effectiveness has been lower and waned more quickly for adults with immunocompromise compared to adults without immunocompromise.

Adults ages 65 years and older are at increased risk of severe illness due to COVID-19, having the highest rates of COVID-19-associated hospitalization, intensive care, mechanical ventilation, and death among all age groups.

While COVID-19-associated hospitalization rates peak during the respiratory virus season, COVID-19 hospitalizations and deaths continue throughout the year due to ongoing SARS-CoV-2 transmission. Receiving recommended 2024-2025 COVID-19 vaccines can restore and enhance protection against the virus variants

currently responsible for most infections and hospitalizations in the United States. For adults ages 65 years and older and people with moderate or severe immunocompromise who are at highest risk of severe COVID-19, receiving the recommended number of doses of 2024-2025 COVID-19 vaccine may optimize their protection year-round.

For data regarding safety, please see sections in the Comirnaty package insert. Based on available information, it appears reasonable to anticipate that known and potential risks of additional doses of the COVID-19 vaccine by Pfizer-BioNTech may be outweighed by its likely benefit to enhance or restore protection, which might have waned over time, especially in people who are moderately or severely immunocompromised and for people ages 65 years and older.

Refer to the CDC's Interim Clinical Considerations for Use of COVID-19 Vaccines for additional information.

Available Alternatives

Currently, the Moderna COVID-19 vaccine and Pfizer-BioNTech COVID-19 vaccine are the only FDA-approved vaccines for which EUI provide for dose administration to people who are moderately or severely immunocompromised. The 2024-2025 Formula Novavax COVID-19 vaccine is available under EUA for individuals 12 years of age and older (Novavax EUA Fact Sheet). See the Interim Clinical Considerations for recommendations regarding the use of Novavax COVID-19 vaccine for persons who are moderately or severely immunocompromised and for people ages 65 years and older.

Reporting Adverse Event or Medication Errors

For Pfizer-BioNTech (Comirnaty[3]), approved for use in persons ages 12 years and older, healthcare providers are strongly encouraged to report of the following to the Vaccine Adverse Event Reporting System (VAERS):

- Any adverse event that occurs after the administration of a vaccine licensed in the United States, whether or not it is clear that a vaccine caused the adverse event
- Vaccine administration errors, whether or not associated with an adverse event

Complete and submit reports to VAERS online at https://vaers.hhs.gov/reportevent.html.

For information about reporting requirements for COVID-19 vaccines under an Emergency Use Authorization (EUA), see https://vaers.hhs.gov/reportevent.html. For further assistance with reporting to VAERS call 1-800-822-7967.

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[3] Comirnaty is the proprietary name for the product licensed under the Biologics License Application (BLA). Because Comirnaty is commonly referred to as the "Pfizer COVID-19 vaccine" or the "Pfizer-BioNTech COVID-19 Vaccine," these EUI refer to this vaccine as the COVID-19 vaccine by Pfizer-BioNTech.

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