Evidence to Recommendation Framework:
Pfizer-BioNTech COVID-19 vaccine,
Comirnaty

Kathleen Dooling, MD, MPH
ACIP Meeting
August 30, 2021
Evidence to Recommendations Framework
Evidence to Recommendations (EtR) Framework

- Structure to describe information considered in moving from evidence to ACIP vaccine recommendations

- Provide transparency around the impact of additional factors on deliberations when considering a recommendation
Evidence to Recommendations (EtR) Framework
Policy Question

- Should vaccination with the Pfizer-BioNTech COVID-19 vaccine be recommended for people 16 years of age and older?

**FDA:** EUA
**ACIP:** Interim Recommendation

**FDA:** BLA
**ACIP:** Standard Recommendation

EUA= Emergency Use Authorization, BLA= Biologics License Application
## Evidence to Recommendations (EtR) Framework: PICO Question

<table>
<thead>
<tr>
<th>Population</th>
<th>People aged ≥16 years</th>
</tr>
</thead>
</table>
| **Intervention** | Pfizer-BioNTech COVID-19 vaccine (BNT162b2)  
30µg, 2 doses IM, 21 days apart |
| **Comparison**   | No vaccine             |
| **Outcomes**     | Symptomatic COVID-19 (PCR confirmed)  
Hospitalization due to COVID-19  
Death due to COVID-19  
Asymptomatic SAR-CoV-2 infection (assessed using PCR)  
Serious adverse events (including death, myocarditis/pericarditis and anaphylaxis)  
Reactogenicity (≥grade 3 or worse reactions) |
## Evidence to Recommendations (EtR) Framework

<table>
<thead>
<tr>
<th>EtR Domain</th>
<th>Question</th>
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<tbody>
<tr>
<td>Public Health Problem</td>
<td>• Is the problem of public health importance?</td>
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<tr>
<td>Benefits and Harms</td>
<td>• How substantial are the desirable anticipated effects?</td>
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<td>• Do the desirable effects outweigh the undesirable effects?</td>
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“The problem” = COVID-19
“The vaccine” or “The intervention” = Pfizer-BioNTech COVID-19 vaccine
EtR Domain: Public Health Problem
Public Health Problem

Is COVID-19 of public health importance?

- Are the consequences of COVID-19 serious?
- Is COVID-19 urgent?
- Are a large number of people affected by COVID-19?
- Are there populations disproportionately affected by COVID-19?

○ No  ○ Probably no  ○ Probably yes  ○ Yes  ○ Varies  ○ Don't know
Daily Trends in Number of COVID-19 Cases in the U.S.

January 23, 2020 – Aug 27, 2021

Cases Total 38,709,295

https://covid.cdc.gov/covid-data-tracker/#trends_dailytrendscases
Daily Trends in Number of COVID-19 Deaths in the U.S.

January 23, 2020 – Aug 27, 2021

Deaths Total: 634,157

https://covid.cdc.gov/covid-data-tracker/#trends_dailytrendscases
Weekly Trends in COVID-19 Associated Hospitalization Rates in the U.S.

March 7, 2020 – Aug 21, 2021

Rates per 100,000 population

Age-adjusted weekly COVID-19-associated hospitalization rates among adults by week of admission and age group*—COVID-NET, January 24–July 17, 2021

*Data are preliminary and case counts and rates for recent hospital admissions are subject to lag. As data are received each week, prior case counts and rates are updated accordingly.

†Cumulative rate ratio from January 24 – July 17, 2021. Shaded area indicates preliminary July data that does not include one site.

Havers et al. https://medrxiv.org/cgi/content/short/2021.08.27.21262356v1. COVID-19-associated hospitalizations among vaccinated and unvaccinated adults ≥18 years - COVID-NET, 13 states, January 1-July 24, 2021
ICU Utilization by State

Data updated daily and provides the latest values reported by each facility within the last four days. No statistical analysis is applied to account for non-response and/or to account for missing data.

https://protect-public.hhs.gov/pages/hospital-utilization
Delta is more than 2x as contagious as alpha variant

[Links]
Daily Trends in Doses of COVID-19 Vaccine Administered

December 23, 2020 – Aug 28, 2021

https://covid.cdc.gov/covid-data-tracker/#vaccination-trends
~38% of people 16+ years are not fully vaccinated
COVID-19 Vaccination Coverage by Age

Percent Receiving ≥1 dose

- 65-74 years: 94%
- ≥75 years: 89%
- 50-64 years: 80%
- 40-49 years: 72%
- 25-39 years: 63%
- 18-24 years: 59%
- 16-17 years: 57%
- 12-15 years: 49%

https://covid.cdc.gov/covid-data-tracker/#vaccination-demographic

Aug 28, 2021
People Fully Vaccinated with Pfizer-BioNTech COVID-19 Vaccine, by Week and Age Group

Since April, most people achieving full vaccination are younger than 50 years old.

As of August 15, 2021

A person is considered fully vaccinated against COVID-19 ≥2 weeks after receipt of the second dose in a two-dose series (Pfizer-BioNTech) CDC. [https://covid.cdc.gov/covid-data-tracker](https://covid.cdc.gov/covid-data-tracker); *Does not include vaccine data from Idaho for persons under 18; Excludes vaccines administered by DoS (Department of State). Excludes vaccines administrations reported by Texas. Includes U.S. territories.
Percent of Population >= 12 Years of Age that is Fully Vaccinated

COVID-19 cases, hospitalizations and deaths have been increasing

The Delta variant is the dominant circulating variant of SARS-CoV-2 in the U.S., and is estimated to be more than 2x as transmissible as previous variants.

Over 173 million people are fully vaccinated in the U.S., however vaccination coverage varies by age and geography.

Increasing cases are taxing healthcare resources, with many States facing ICU bed shortages.
Public Health Problem: Work Group Interpretation

Is COVID-19 of public health importance?

○ No  ○ Probably no  ○ Probably yes  ○ Yes  ○ Varies  ○ Don't know
EtR Domain: Benefits and Harms
Benefits and Harms

How substantial are the desirable anticipated effects?

- How substantial is the anticipated effect for each main outcome for which there is a desirable effect?

○ Minimal  ○ Small  ○ Moderate  ○ Large  ○ Varies  ○ Don't know
Benefits and Harms

How substantial are the undesirable anticipated effects?

- How substantial is the anticipated effect for each main outcome for which there is an undesirable effect?

○ Minimal  ○ Small  ○ Moderate  ○ Large  ○ Varies  ○ Don't know
Benefits and Harms

Do the desirable effects outweigh the undesirable effects?

- What is the balance between the desirable effects relative to the undesirable effects?

- Favors intervention (Pfizer-BioNTech COVID-19 vaccine)
- Favors comparison (no vaccine)
- Favors both
- Favors neither
- Unclear
# Summary of GRADE

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Importance</th>
<th>Design (# of studies)</th>
<th>Findings</th>
<th>Evidence type</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Benefits</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symptomatic lab-confirmed COVID-19</td>
<td>Critical</td>
<td>RCT (1) OBS (9)</td>
<td>Pfizer-BioNTech COVID-19 vaccine is effective in preventing symptomatic</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>COVID-19</td>
<td></td>
</tr>
<tr>
<td>Hospitalization due to COVID-19</td>
<td>Critical</td>
<td>RCT (1) OBS (8)</td>
<td>Pfizer-BioNTech COVID-19 vaccine prevents COVID-19-resulting in</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>hospitalization</td>
<td></td>
</tr>
<tr>
<td>Death due to COVID-19</td>
<td>Important</td>
<td>RCT (1) OBS (4)</td>
<td>Pfizer-BioNTech COVID-19 vaccine prevents death due to COVID-19</td>
<td>2</td>
</tr>
<tr>
<td>Asymptomatic SARS-CoV-2 infection</td>
<td>Important</td>
<td>OBS (2)</td>
<td>Two cohort studies show benefit of vaccination for preventing asymptomatic</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>infections, but magnitude inconsistent</td>
<td></td>
</tr>
<tr>
<td><strong>Harms</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serious adverse events</td>
<td>Critical</td>
<td>RCT (2)</td>
<td>In the RCT, SAEs were balanced between vaccine and placebo arms. In</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>post-authorization safety monitoring, myocarditis and anaphylaxis were</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>rare but more common following vaccination.</td>
<td></td>
</tr>
<tr>
<td>Reactogenicity</td>
<td>Important</td>
<td>RCT (2)</td>
<td>Severe reactions within 7 days were more common in vaccinated; any grade</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>≥3 reaction was reported by 10.7% of vaccinated vs. 2.3% of placebo group</td>
<td></td>
</tr>
</tbody>
</table>

Evidence type: 1=high; 2=moderate; 3=low; 4=very low; ND, no data
Benefits and Harms

How substantial are the desirable anticipated effects?

- How substantial is the anticipated effect for each main outcome for which there is a desirable effect?

○ Minimal  ○ Small  ○ Moderate  ○ Large  ○ Varies  ○ Don't know
Benefits and Harms

How substantial are the undesirable anticipated effects?

- How substantial is the anticipated effect for each main outcome for which there is an undesirable effect?

- Minimal  ○ Small  ○ Moderate  ○ Large  ○ Varies  ○ Don't know
Benefits and Harms

Do the desirable effects outweigh the undesirable effects?

- What is the balance between the desirable effects relative to the undesirable effects?

○ Favors intervention (Pfizer-BioNTech COVID-19 vaccine)
○ Favors comparison (no vaccine)
○ Favors both
○ Favors neither
○ Unclear
EtR Domain: Values
Values

Criteria 1:
Does the target population feel that the desirable effects are large relative to undesirable effects?

- How does the target population view the balance of desirable versus undesirable effects?
- Would patients feel that the benefits outweigh the harms and burden?
- Does the population appreciate and value Pfizer-BioNTech COVID-19 vaccine?

○ No    ○ Probably no    ○ Probably yes    ○ Yes    ○ Varies    ○ Don't know
Values

Criteria 2:
Is there important uncertainty about, or variability in, how much people value the main outcomes?

- How much do individuals value each outcomes in relation to the other outcomes?
- Is there evidence to support those value judgments?
- Is there evidence that the variability is large enough to lead to different decisions?

- Important uncertainty or variability
- Probably important uncertainty or variability
- Probably not important uncertainty or variability
- No important uncertainty or variability
- No known undesirable outcomes
Values:
Review of the Available Evidence

- Review of scientific literature, news media, and reports
- Surveys were limited to those conducted since authorization of COVID-19 vaccines (December 2020)

Search strategy: Pubmed: (COVID-19 OR coronavirus OR SARS-CoV-2) AND (vaccin* OR immunization) AND (survey OR questionnaire OR poll) AND (adolescent OR child* OR parent*)
Societal Experts Action Network COVID-19 Survey Archive
Positive COVID-19 Vaccination Intent†

† Positive vaccination intent includes persons already vaccinated or reporting definitely, probably, or somewhat likely to get vaccinated
*Surveys with multiple time points are shown with the same color bubble for each time point. Surveys with only one time point are shown in gray.
The most common reasons for not getting vaccinated included\(^1\)-\(^2\):

- Concern about side effects
- Belief that the vaccines are too new
- Belief that vaccination is not necessary

Of those not vaccinated\(^3\):

- 20\% said they would only get vaccinated if required
- 36\% said they would definitely not get vaccinated

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Unvaccinated people were asked:

- “Would you be more likely to get vaccinated if one of the vaccines currently authorized for emergency use received full approval from the FDA”

31% of unvaccinated respondents said they would be more likely to get vaccinated after full FDA vaccine approval.

**Values**

<table>
<thead>
<tr>
<th>Positive Intent</th>
<th>68%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wait and see</td>
<td>10%</td>
</tr>
<tr>
<td>Definitely not</td>
<td>14%</td>
</tr>
<tr>
<td>Only if required</td>
<td>6%</td>
</tr>
</tbody>
</table>
Values: Work Group Interpretation

Criteria 1:
Does the target population feel that the desirable effects are large relative to undesirable effects?

- No
- Probably no
- Probably yes
- Yes
- Varies
- Don't know
Values: Work Group Interpretation

Criteria 2:
Is there important uncertainty about, or variability in, how much people value the main outcomes?

- Important uncertainty or variability
- Probably important uncertainty or variability
- Probably not important uncertainty or variability
- No important uncertainty or variability
- No known undesirable outcomes
EtR Domain: Acceptability
Acceptability

Is Pfizer-BioNTech COVID-19 vaccine acceptable to key stakeholders?

- Are there key stakeholders that would not accept the distribution of benefits and harms?
- Are there key stakeholders that would not accept the undesirable effects in the short term for the desirable effects (benefits) in the future?

○ No   ○ Probably no   ○ Probably yes   ○ Yes   ○ Varies   ○ Don't know
Acceptability

- COVID-19 vaccination has been implemented in a variety of settings
  - State and local health departments
  - Healthcare sites/hospitals
  - Mass vaccination clinics
  - Long Term Care Facilities (LTCF)
  - Retail pharmacies
  - Healthcare Provider offices

- As of August 29th, 2021, >207 million doses of Pfizer-BioNTech COVID-19 vaccine have been administered¹

¹. COVID Data Tracker. [https://covid.cdc.gov/covid-data-tracker/#vaccinations](https://covid.cdc.gov/covid-data-tracker/#vaccinations)
Acceptability

- Vaccination with Pfizer-BioNTech COVID-19 vaccine was already highly acceptable to stakeholders under FDA emergency use authorization and ACIP interim recommendation
- Vaccination may be more acceptable to stakeholders under full FDA approval and standard ACIP recommendation
Acceptability:

Work Group Interpretation

Is the Pfizer/BioNTech COVID-19 vaccine acceptable to key stakeholders?

- No
- Probably no
- Probably yes
- Yes
- Varies
- Don't know
EtR Domain: Feasibility
Feasibility

Is the Pfizer/BioNTech COVID-19 vaccine feasible to implement?
- Is the Pfizer-BioNTech COVID-19 vaccine program sustainable?
- Are there barriers that are likely to limit the feasibility of implementing the Pfizer-BioNTech COVID-19 vaccine or require consideration when implementing it?
- Is access to Pfizer-BioNTech COVID-19 vaccine an important concern?

○ No ○ Probably no ○ Probably yes ○ Yes ○ Varies ○ Don't know
Feasibility

- Barriers to implementation may include:
  1. Complexity of recommendations
  2. Vaccine storage and handling requirements
  3. Financial barriers
  4. Supply barriers
Feasibility

1) Complexity of recommendations

- The Pfizer-BioNTech COVID-19 vaccine is currently the only COVID-19 vaccine that has an FDA approved BLA
- BLA has only been issued for some indications, which may add complexity to current recommendations
  - BLA: Ages 16 years and older
  - EUA: Ages 12-15 years
  - Additional dose in immunocompromised people
Feasibility

2) Vaccine storage and handling requirements

- Ultra-cold storage requirements (-90°C to -60°C) impacts where vaccine can be stored
  - Ultra cold storage maximum extended from 6 to 9 months
  - Freezer storage (-25°C to -15°C) for up to 2 weeks
  - Refrigerator (2°C to 8°C) temperatures for up to 1 month (31 days)

- Minimum size of orders (currently 450 doses)
Feasibility

3) Financial barriers

- All COVID-19 vaccines will be provided to U.S. population free of charge

- Health systems or health departments incur costs for vaccine implementation, clinics, outreach and education

- Financial hardship may arise if vaccine recipients need to take time off to receive the vaccine or experience post-vaccination reactogenicity that prevents them from working
Feasibility

4) Supply barriers

- Vaccine supply in the US is sufficient for implementation of the intervention

- As of August 29, 2021, >209 million doses of Pfizer-BioNTech Covid-19 vaccine have been administered in the U.S., demonstrating that the vaccine is feasible to implement

1. CDC COVID Data Tracker
Feasibility:

Work Group Interpretation

Is Pfizer-BioNTech COVID-19 vaccine feasible to implement?

<table>
<thead>
<tr>
<th></th>
<th>No</th>
<th>Probably no</th>
<th>Probably yes</th>
<th>Yes</th>
<th>Varies</th>
<th>Don't know</th>
</tr>
</thead>
</table>
EtR Domain: Resource Use
Resource Use

Is Pfizer-BioNTech COVID-19 vaccine a reasonable and efficient allocation of resources?

- What is the cost-effectiveness of the Pfizer-BioNTech COVID-19 vaccine?
- How does the cost-effectiveness of the Pfizer-BioNTech COVID-19 vaccine change in response to changes in context, assumptions, etc?

○ No  ○ Probably no  ○ Probably yes  ○ Yes  ○ Varies  ○ Don't know
Resource Use:
Costs Associated with Hospitalization due to COVID-19

Estimated cost of unvaccinated COVID-19 hospitalizations to the U.S. health system in billions of dollars

- June 2021: $0.7B
- July 2021: $1.5B
Resource Use:
Costs & Benefits Associated with COVID-19 Vaccines

- Vaccine doses purchased with U.S. taxpayer funds will be given to people living U.S. at no cost\(^1\)
- Several published modeling studies have found that COVID-19 vaccinations are likely to be of a reasonable economic value and may also be cost-saving under many circumstances\(^2-5\)

\(^1\) COVID-19 Vaccines Are Free to the Public | CDC
Resource Use:
Work Group Interpretation

- The Work Group concluded that cost-effectiveness may not be a primary driver for decision-making during a pandemic
  - Will need to be reassessed for future recommendations
Resource Use:
Work Group Interpretation

Is Pfizer-BioNTech COVID-19 vaccine a reasonable and efficient allocation of resources?

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<th>Probably yes</th>
<th>Yes</th>
<th>Varies</th>
<th>Don't know</th>
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(CDC logo)
EtR Domain: Equity
Equity

What would be the impact of the Pfizer-BioNTech COVID-19 vaccine on health equity?

- Are there groups or settings that might be disadvantaged in relation to COVID-19 disease burden or receipt of the Pfizer-BioNTech COVID-19 vaccine?
- Are there considerations that should be made when implementing the Pfizer-BioNTech COVID-19 vaccine program to ensure that inequities are reduced whenever possible, and that they are not increased?

○ Reduced ○ Probably reduced ○ Probably no impact ○ Probably increased ○ Increased ○ Varies ○ Don't know
Equity:

Review of the Available Evidence

- Identification of groups that might be disadvantaged in relation to COVID-19 disease burden or receipt of the Pfizer-BioNTech COVID-19 vaccine
  - PROGRESS-Plus Framework: Place of residence, race or ethnicity, gender or sex, socioeconomic status, disability, other

- Review of the scientific and gray literature

- Review of CDC COVID-19 response data and resources

Equity: Which Groups in the United States Could be Disadvantaged in Relation to Standard Recommendation for the Pfizer-BioNTech COVID-19 Vaccine?

- **Place of residence**
  - Living in rural/frontier areas
  - Justice-involved (incarcerated persons)
  - Living in congregate settings (long-term care facilities)
  - Experiencing homelessness

- **Socioeconomic status**
  - Poverty
  - High social vulnerability

- **Racial and ethnic minority populations**
  - Black, Hispanic or Latino, and Alaskan Native/American Indian
  - No- U.S. -born persons

- **Personal characteristics associated with discrimination**
  - With disabilities
  - Substance use
Equity: Cumulative COVID-19 Associated Hospitalizations in the United States by Race/Ethnicity, March 7, 2020 – August 14, 2021

**Equity:** Annual Excess Death Incidence Rates for Persons aged 25-64 years by Race/Ethnicity – United States, 2020

- **AI/AN:** 221.1 excess death incidence rate per 100,000 person-years
- **Black:** 133.4
- **NH/PI:** 124.9
- **Hispanic:** 98.5
- **White:** 51.2
- **Asian:** 30.2

Excess death incidence rate per 100,000 person-years

**Equity:** Percent of People Receiving COVID-19 Vaccine by Race/Ethnicity

<table>
<thead>
<tr>
<th></th>
<th>Al/AN, NH</th>
<th>Asian, NH</th>
<th>Black, NH</th>
<th>Hispanic/Latino</th>
<th>NHPI, NH</th>
<th>White, NH</th>
</tr>
</thead>
<tbody>
<tr>
<td>At Least One Dose</td>
<td>51.5%</td>
<td>39.8%</td>
<td>30.8%</td>
<td>38.3%</td>
<td>41.2%</td>
<td>36.7%</td>
</tr>
<tr>
<td>Fully Vaccinated</td>
<td>43.6%</td>
<td>38.2%</td>
<td>26.6%</td>
<td>33.3%</td>
<td>35.3%</td>
<td>34.5%</td>
</tr>
</tbody>
</table>

December 14, 2020 – August 23, 2021

Equity: Reasons Why Some Adults Remain Unvaccinated

- Unvaccinated Hispanic and Black adults are more likely than White adults to cite worries about missing work and having to pay for the vaccine as major reasons for not being vaccinated.
- In addition, unvaccinated Hispanic adults are more likely than unvaccinated White adults to say they are too busy, would have difficulty traveling to a vaccination site, or are not sure how or where to get the vaccine.
COVID-19 Vaccination Coverage Varies by Geography

Percent of population ≥ 12 years of age fully vaccinated

<table>
<thead>
<tr>
<th>% of population ≥12 years of age fully vaccinated</th>
<th>% of U.S. counties at this level</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-29.9%</td>
<td>14%</td>
</tr>
<tr>
<td>20-39.9%</td>
<td>21%</td>
</tr>
<tr>
<td>40-49.9%</td>
<td>28%</td>
</tr>
<tr>
<td>50-69.9%</td>
<td>32%</td>
</tr>
<tr>
<td>70%+</td>
<td>5%</td>
</tr>
<tr>
<td>No Data</td>
<td>--</td>
</tr>
</tbody>
</table>
Equity: Work Group interpretation

- COVID-19 has resulted in disproportionate hospitalization and mortality in minority populations
- Equitable uptake of COVID-19 vaccine has improved over time— we need to strive to continue to improve vaccine confidence and vaccine access for all
- The Work Group had varying opinions on the impact a standard ACIP recommendation for Pfizer-BioNTech COVID-19 vaccine would have on equity— it is likely that the impact will vary by community
Equity:

Work Group Interpretation

What would be the impact of Pfizer-BioNTech COVID-19 vaccine on health equity?

- Reduced
- Probably reduced
- Probably no impact
- Probably increased
- Increased
- Varies
- Don't know
Summary
<table>
<thead>
<tr>
<th>EtR Domain</th>
<th>Question</th>
<th>Work Group Judgments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Public Health</strong></td>
<td>Is COVID-19 of public health importance?</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Problem</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Benefits and</strong></td>
<td>How substantial are the desirable anticipated effects?</td>
<td>Large</td>
</tr>
<tr>
<td><strong>Harms</strong></td>
<td>How substantial are the undesirable anticipated effects?</td>
<td>Small</td>
</tr>
<tr>
<td></td>
<td>Do the desirable effects outweigh the undesirable effects?</td>
<td>Favors the intervention</td>
</tr>
<tr>
<td></td>
<td>What is the overall certainty of the evidence for the critical outcomes?</td>
<td>High to Moderate</td>
</tr>
<tr>
<td><strong>Values</strong></td>
<td>Does the target population feel the desirable effects are large relative to the undesirable effects?</td>
<td>Probably yes</td>
</tr>
<tr>
<td></td>
<td>Is there important variability in how patients value the outcomes?</td>
<td>Probably important uncertainty or variability</td>
</tr>
<tr>
<td><strong>Acceptability</strong></td>
<td>Is the Pfizer-BioNTech COVID-19 vaccine acceptable to key stakeholders?</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Feasibility</strong></td>
<td>Is the Pfizer-BioNTech COVID-19 vaccine feasible to implement?</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Resource Use</strong></td>
<td>Is Pfizer-BioNTech COVID-19 vaccine a reasonable and efficient allocation of resources?</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Equity</strong></td>
<td>What would be the impact of the intervention on health equity?</td>
<td>Varies/Don’t know</td>
</tr>
</tbody>
</table>
### Evidence to Recommendations Framework
#### Summary: Work Group Interpretations

<table>
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<tr>
<th>Balance of consequences</th>
<th>Undesirable consequences clearly outweigh desirable consequences in most settings</th>
<th>Undesirable consequences probably outweigh desirable consequences in most settings</th>
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Evidence to Recommendations Framework
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### Evidence to Recommendations Framework

#### Summary: Work Group Interpretations

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# Evidence to Recommendations Framework

## Summary: Work Group Interpretations

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For more information, contact CDC
1-800-CDC-INFO (232-4636)

Thank you

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  - DVD Enhanced Surveillance
  - Community Surveillance

- Data, Analytics and Visualization Task Force

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- Immunization Safety Office