COVID Vaccines for Children in Early Care and Education

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May 4, 2022
Welcome

Better Kid Care will provide an *email verification* of attendance for those who registered for and attended this webinar live. It will be **up to you to** contact the appropriate organization to see if professional development credit will be awarded.
Objectives

01
Increase the understanding of the science related to COVID vaccines.

02
Examine appropriate messaging to address parental concerns related to vaccination of young children.

03
Identify ways in which ECE professionals can support vaccine confidence.
Presenter Introduction

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Disclosures

• Funding from NIH for work on Janssen and Moderna vaccine trials
• Funding from Merck Foundation for work on COVID-19 surveillance in children in child care centers
Where Are We in the Pandemic: US Cases?

Prevalent Hospitalizations of Patients with Confirmed COVID-19, United States
August 01, 2020 - April 27, 2022

10,991
Current 7-Day Average
Apr 21, 2022 - Apr 27, 2022

9,997
Prior 7-Day Average
Apr 14, 2022 - Apr 20, 2022

146,543
Peak 7-Day Average
Jan 14, 2022 - Jan 20, 2022

9.9%
% Change from Prior 7-Day Avg

-92.5%
% Change from Peak Avg

Based on reporting from all hospitals (98.5%). Due to potential reporting delays, data reported in the most recent 7 days (as represented by the shaded bar) should be interpreted with caution.

Small shifts in historic data may occur due to changes in the CMS Provider of Services file, which is used to identify the cohort of included hospitals. Data since Dec 1, 2020 have had error correction methodology applied. Data prior to this date may have anomalies that are still being resolved.

Last Updated: Apr 29, 2022
Where Are We in the Pandemic? Big Picture

- >2 years
- Nearly 1,000,000 deaths in the US
- Number 3 cause of death in 2020 and 2021
- Nearly 60% of US population has been infected by February 2022*
- Large increase in children of all ages during Omicron (up to about 75%)*
- Dr. Fauci: “We are certainly right now in this country out of the pandemic phase” (4/26/22, PBS NewsHour)
- But we haven’t and won’t eradicate COVID-19

*Clarke, MMWR, April 26, 2022; 71(17);606-608
## Where Are We in the Pandemic? Vaccines

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Janssen (J and J)</th>
<th>Pfizer</th>
<th>Moderna</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adults 18 and older</td>
<td>✅ + mRNA &gt;2m</td>
<td>✅ + ✅ (&gt;3-8wks) + B (&gt;5m)</td>
<td>✅ + ✅ (&gt;4-8wk) + B (&gt;5m)</td>
</tr>
<tr>
<td>12-17 year olds</td>
<td></td>
<td>✅ + ✅ (&gt;3-8wks) + B (&gt;5m)</td>
<td>Could be in June 2022</td>
</tr>
<tr>
<td>5-11 year olds</td>
<td></td>
<td>✅ + ✅ (&gt;3wks)</td>
<td>Could be in June 2022</td>
</tr>
<tr>
<td>6m-4 year olds</td>
<td></td>
<td>Could be in June 2022</td>
<td>Could be in June 2022</td>
</tr>
</tbody>
</table>

✅ = primary series

B = booster

[Stay Up to Date with Your COVID-19 Vaccines](https://www.cdc.gov/vaccines/) | [CDC](https://www.cdc.gov/vaccines/), accessed 4/26/2022
Regulatory Process for Vaccines – It’s Involved

Investigational New Drug application

Pre-licensure vaccine clinical trials (Phase I-III)

Biologics License Application

Inspection of manufacturing facility

Findings reviewed by Federal Drug Administration (VRBPAC) Committee
• Emergency Use Authorization (EUA) if certain criteria are met – faster than full approval

Usability testing of product labeling

FDA approval and continued monitoring of production and safety
• Pfizer (Comirnaty) for adults >18 years old (8/23/21)
• Moderna (Spikevax) for adults >18 years old (1/31/22)

Tracking of side effects through Vaccine Adverse Event Reporting System

What Needs to Happen for EUA-Approval of mRNA COVID Vaccines for Children <5 yrs Old?

- First have to schedule a VRBPAC meeting (maybe June)
- For an EUA, there has to be an E
- Natural immunity vs vaccine-derived immunity – is one better?
- Moderna vs Pfizer – will data for both be reviewed?
- Bottom Line: Trust the process
Where We Are in the Pandemic for Children?

How Bad is COVID for Young Children?

- Most commonly causes mild upper respiratory illness
- Often no symptoms
- Rarely, causes severe disease called MIS-C
- Children can be hospitalized or die from COVID-19
  - Children with underlying health conditions are higher risk
  - More children died of COVID-19 over the past two years than typical flu years
- COVID-19 is worse than influenza for young children
## Influenza and COVID Disease Burdens (Estimates, Adjusted for Underreporting)

<table>
<thead>
<tr>
<th></th>
<th>Influenza/yr#</th>
<th>COVID-19</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disease severity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children</td>
<td>Mild to Severe &lt;2yr</td>
<td>Moderate Severe &gt;65y</td>
</tr>
<tr>
<td>Adults</td>
<td></td>
<td>Usually, mild, sometimes severe</td>
</tr>
<tr>
<td><strong>Mortality (deaths/yr)</strong></td>
<td>~200-1,100</td>
<td>~35,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>680*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>747,483*</td>
</tr>
<tr>
<td><strong>Hospitalizations</strong></td>
<td>~35,000</td>
<td>~400,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>209,264**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6,200,000**</td>
</tr>
<tr>
<td><strong>Symptomatic illnesses</strong></td>
<td>~10,000,000</td>
<td>~30,000,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>22,895,857**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>101,800,000**</td>
</tr>
</tbody>
</table>

#Averaged over past 10 flu seasons from CDC estimates
*Jan20-Oct21
** Feb20-May21

[https://www.cdc.gov/flu/about/burden/index.html](https://www.cdc.gov/flu/about/burden/index.html), accessed 11/03/21
What’s Taking So Long? COVID Vaccine Development for Children Compared to Adults

- Adults had more severe disease and were the priority at the beginning
- Because children have less severe disease
  - Harder to show differences in vaccine efficacy (takes a longer time, more people)
  - Less tolerance for side effects
- Harder to do research that requires blood in children
- Dosage issues
  - Adult doses cause more side effects (fever, headache) in children
  - Lower doses produce the same antibody levels in children compared to adults
  - Took some time to find ideal dose
Arguments for Vaccinating Young Children Against COVID-19

• Reduce infection and disruption (exclusion, isolation requirements)
• Reduce transmission to family members
• Return children to normal activities (child care, playgroups, sports and social activities)
• Prevent serious disease (hospitalizations, MIS-C, death)
• Prevent long term COVID sequelae like “long-COVID”
What is an mRNA Vaccine and How Does It Work?

- Injection of mRNA into the muscle
- mRNA instructs dendritic cells in the muscle or nearby lymph nodes to make harmless spike proteins
- Our body recognizes the spike proteins as “foreign” and makes antibodies to them
- mRNA **dissolves** in 3 days and never gets in our DNA
- The spike proteins **dissolve** in a few weeks

Understanding mRNA COVID-19 Vaccines | CDC, accessed 4/27/22
How is the SARS-CoV-2 (COVID) mRNA Vaccine Different than other Vaccines Children Receive?

• Vaccine end goal: to cause the immune system to make antibodies against a piece of the “germ” (bacteria, virus or other pathogen)
• mRNA vaccines tell our cells to make a harmless piece of the virus (spike protein), THEN our immune cells make antibodies to it (one extra step)
• Most other vaccines introduce a portion of the pathogen into our body where it is recognized by the immune system, and antibodies develop to it
  • Live and inactivated viral vaccines (MMR, varicella, influenza) put a harmless version of the virus in the body
  • Many bacterial vaccines (pneumococcal, H flu, diphtheria) introduce a portion of the outside surface of the bacteria
Is the COVID Vaccine Dosage Different for Children?

- Doses are lower by age
What Do We Know About Safety of the mRNA COVID Vaccine(s) for Children?

Status of COVID vaccines for children 5-18 yrs old

- Published data for Pfizer: 5-18 yrs of age, Moderna: 12-18 yrs of age
  - Safety and tolerability in children the same or better than adults
- Pediatric COVID vaccine trials have as primary goals
  - Address safety and side effect profiles in the dose-finding studies (Phase I, II)
  - Address antibody levels (immunogenicity)

Status of COVID Vaccines for children <5yrs of age

- Moderna
  - Submitted data to FDA on 4/28/22 for children <5yrs old
- Pfizer
  - Submission delayed due to need for 3rd shot
What are the Side Effects of mRNA COVID Vaccines in Children?

Common: pain at injection site, fatigue, headache, muscle pain, chills, fever

Rare

- Myocarditis/Pericarditis (Block, MMWR; April 8, 2022; 71(14);517-523)
- Risk higher for: boys, older, after second dose
- Risk is reduced if 2nd shot spaced out to 8 wks
- Risk rises from very low (5-10/100,000) in girls 5-11 yrs old, to 50-65/100,000 in boys 12-17 yrs old
- Risk is much higher after COVID-19 infection than vaccination
- Anaphylaxis
  - 11.1 cases per million (MMWR, Jan 15, 2021. 70(2);46-51)
How Well Do mRNA COVID Vaccines Work in Children? Protection from Infection vs Severe Disease

General Observations About Protection from Infection

- Reduced efficacy with more recent variants (Omicron)
- Reduced efficacy the more time since vaccine or booster (>5m)
- Reduced efficacy the younger the age (more likely to have been infected with Omicron)

Pfizer: Strong Protection Against Severe Disease

Children 5y-17y of age

- Reduced risk of Omicron infection (31% in 5-11yr olds, 59% in 12-15yr olds) (Fowlkes; MMWR; March 18, 2022; 71(11);422-428)
- Reduced emergency department and urgent care encounters (46-83%), hospitalizations (74-94%) (Klein, MMWR, March 4, 2022; 71(9):352-358)

Adolescents

- Highly effective against hospitalization (94%) (Olson, NEJM, 2022)
- Reduced risk of MIS-C (91%) (Zambrano; MMWR; January 14, 2022; 71(2);52-58)

Moderna: not much efficacy data because not EUA approved yet (Ali, NEJM, 2021)
Is There a Concern About Interactions Between COVID vaccine and Other Childhood Vaccinations?

• No!
• Children CAN get COVID vaccines at the same time on the same day that they get other vaccinations

Child Care Providers as a Trusted Information Source

- High immunization rates themselves (78.2%) (Patel, Pediatrics, 2021)
- Long term relationships
- Often represent the community demographic they serve
- Potential source for reliable information and education
Strategy to Address Vaccine Hesitancy

- Categories of parents regarding COVID vaccine acceptance
  - Vaccinated and eager to vaccinate children
  - Vaccinated and somewhat hesitant to get their children vaccinated for various reasons
  - Unvaccinated and unwilling to consider vaccination for children
- How do we communicate effectively with middle group?
- We must first understand where their thoughts are
## Myths Regarding COVID mRNA Vaccines?

Have you heard anyone say or have you read anywhere that...? IF YES: To the best of your knowledge is that true or false, or do you not know whether it is true or false?

<table>
<thead>
<tr>
<th>Myth</th>
<th>Have heard, believe to be true</th>
<th>Have heard, don't know if true</th>
<th>NET</th>
</tr>
</thead>
<tbody>
<tr>
<td>The government is exaggerating the number of COVID-19 deaths</td>
<td>38%</td>
<td>22%</td>
<td></td>
</tr>
<tr>
<td>Pregnant women should not get the COVID-19 vaccine</td>
<td>17%</td>
<td>22%</td>
<td></td>
</tr>
<tr>
<td>Deaths due to the COVID-19 vaccine are being intentionally hidden by the government</td>
<td>18%</td>
<td>17%</td>
<td></td>
</tr>
<tr>
<td>The COVID-19 vaccines have been shown to cause infertility</td>
<td>23%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ivermectin is a safe and effective treatment for COVID-19</td>
<td>14%</td>
<td>14%</td>
<td></td>
</tr>
<tr>
<td>You can get COVID-19 from the vaccine</td>
<td>14%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The COVID-19 vaccines contain a microchip</td>
<td>17%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The COVID-19 vaccines can change your DNA</td>
<td>13%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NET who have heard at least one of these myths, and either say it is true or are not sure if it is true: 78%

**NOTE:** See topline for full question wording.
**SOURCE:** KFF COVID-19 Vaccine Monitor (October 14-24, 2021)
Adults Set in Their Ways at This Point

Have you personally received at least one dose of the COVID-19 vaccine, or not? As you may know, an FDA-authorized vaccine for COVID-19 is now available for free to all adults in the U.S. Do you think you will…?

- Already gotten
- As soon as possible
- Wait and see
- Only if required
- Definitely not

NOTE: Links for each individual month report are accessible by clicking on the dates above.
SOURCE: KFF COVID-19 Vaccine Monitor
For Young Children, Wait and See Group is Large

One In Five Parents Of Children Under Five Say They'll Vaccinate Their Child Right Away Once Available, But Most Remain More Cautious

Thinking about your child under the age of 5, once there is a COVID-19 vaccine authorized and available for your child’s age group, do you think you will...?

- Get them vaccinated right away
- Wait and see
- Only if required
- Definitely not

<table>
<thead>
<tr>
<th></th>
<th>Get them vaccinated right away</th>
<th>Wait and see</th>
<th>Only if required</th>
<th>Definitely not</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb '22</td>
<td>21%</td>
<td>26%</td>
<td>15%</td>
<td>35%</td>
</tr>
<tr>
<td>Jan '22</td>
<td>31%</td>
<td>29%</td>
<td>12%</td>
<td>26%</td>
</tr>
<tr>
<td>Sept '21</td>
<td>23%</td>
<td>33%</td>
<td>7%</td>
<td>35%</td>
</tr>
<tr>
<td>July '21</td>
<td>20%</td>
<td>40%</td>
<td>10%</td>
<td>30%</td>
</tr>
</tbody>
</table>

NOTE: Among parents or guardians of children under the age of 5. See topline for full question wording.

SOURCE: KFF COVID-19 Vaccine Monitor • Download PNG

Amid Pfizer’s decision to postpone their FDA request to authorize a COVID-19 vaccine for children ages 6 months to 4 years, one in five parents of children under 5 (21%) now say they’ll get their child vaccinated right away once a COVID-19 vaccine is authorized for their age group. A quarter of parents (26%) report they’ll wait and see before getting their young child vaccinated. 15% will only get them vaccinated if required, and 35% definitely won’t get them vaccinated.
Parents of Children Need More Information

Do you feel you have enough information about the safety and effectiveness of the COVID-19 vaccine for...

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Enough Information</th>
<th>Not enough Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children ages 12-17</td>
<td>66%</td>
<td>32%</td>
</tr>
<tr>
<td>Children ages 5-11</td>
<td>61%</td>
<td>37%</td>
</tr>
<tr>
<td>Children under the age of 5</td>
<td>43%</td>
<td>57%</td>
</tr>
</tbody>
</table>

NOTE: Asked of parents or guardians of children in each age group. See topline for full question wording.
SOURCE: KFF COVID-19 Vaccine Monitor (February 9-21, 2022)
Parents of Young Children Concerned About Safety

How confident, if at all, are you that the COVID-19 vaccines are safe for...?

- Very confident
- Somewhat confident
- Not too confident
- Not at all confident

Children ages 12-17
- 36% Very confident
- 21% Somewhat confident
- 14% Not too confident
- 29% Not at all confident

Children ages 5-11
- 24% Very confident
- 22% Somewhat confident
- 18% Not too confident
- 36% Not at all confident

Children ages 6 months-5 years
- 10% Very confident
- 22% Somewhat confident
- 21% Not too confident
- 43% Not at all confident

Equity Issues in Vaccine Access

Percent who say they are concerned about each of the following:

- Might need to take time off work to bring child to get vaccinated or to care for them if they experience side effects:
  - Total: 31%
  - Black: 43%
  - Hispanic: 47%
  - White: 23%

- Won’t be able to get the vaccine for their child from a place they trust:
  - Total: 22%
  - Black: 29%
  - Hispanic: 39%
  - White: 13%

- Will have difficulty traveling to a place to get their child vaccinated:
  - Total: 17%
  - Black: 24%
  - Hispanic: 34%
  - White: 7%

NOTE: Among parents or guardians of children between the ages of 5 and 17 who have not gotten the COVID-19 vaccine. See topline for full question wording.

Approaching Parents About COVID Vaccine - General Questions

- How do you feel about getting the vaccine?
- What is your understanding of the vaccine?
- Would it be alright if I shared some information?
- What are your thoughts about what I shared?
- What might be the next step for you?
Use Reflective Listening and Summarizing

Seek to understand the other person’s perspective

- Restating and clarifying
- Make sure you really understand their perspective

Summarize

- Tie together the different points in a statement
- Is that what you mean?

Make sure they feel heard and respected (goal is not to change their mind)

- Increases communication and confidence in their ability to decide what to do
- Leaves open the chance for discussing more challenging topics

Ask for permission to share information from reliable sources

Reliable Information Sources

- Myths and Facts about COVID-19 Vaccines | CDC
- Stay Up to Date with Your COVID-19 Vaccines | CDC
- Frequently Asked Questions about COVID-19 Vaccination | CDC
- How Do I Find a COVID-19 Vaccine? | CDC
- COVID-19 Risk Reduction Strategies: Posters | ECLKC (hhs.gov)
- Greater Than COVID, Kaiser Family Foundation (THE CONVERSATION: Between Us, About Us. - Greater Than COVID)
Information from Experts from all Communities

What are some of the risks of not being vaccinated for COVID-19?

Why do we need boosters for the COVID-19 vaccine?

What does a COVID vaccine booster do?

Is "natural immunity" better than a COVID-19 vaccine?

If I had COVID do I need to be vaccinated?

What do we know about the COVID-19 vaccine and fertility?
Lots of Frequently Asked Questions

- What are some of the risks of not being vaccinated for COVID-19?
- Is "natural immunity" better than a COVID-19 vaccine?
- If I had COVID do I need to be vaccinated?
- What do we know about the COVID-19 vaccine and fertility?
The Conversation: Video Examples

Black Faith Communities:

THE CONVERSATION / LA CONVERSACIÓN Videos (greaterthancovid.org)

Pregnancy:

THE CONVERSATION: Between Us, About Us. - Greater Than COVID
Other Techniques

- On site vaccine delivery?
- Give information about vaccination sites
- Community health workers

Incentives
- Rebate or voucher on tuition

Develop clear COVID-related exclusion criteria (leads to lost work)

Program mandates
COVID Vaccine Schedule – When Can’t Get It: Almost Never!!

- >5 years old – YES, get it
- Recent COVID infection – YES, get it after isolation period (Frequently Asked Questions about COVID-19 Vaccination | CDC)
- Pregnancy – YES, get it at any point (COVID-19 Vaccines While Pregnant or Breastfeeding (cdc.gov))
  - It protects you
  - It protects your baby for the first six months
- Immunocompromised – YES, get it (COVID-19 Vaccines for Moderately or Severely Immunocompromised People | CDC)
- Anaphylaxis – YES, get another type of COVID vaccine, but not the same one (Allergic Reactions after COVID-19 Vaccination | CDC)
Thoughts About COVID Vaccine Mandates

- Early education and child care
  - Legislation, regulation, citation
  - Local rules

- Schools
  - Legislation, school nurse enforcement
  - School Boards - politics

- Religious, philosophical exemptions
Looking Into the Future

• What will the pandemic/COVID-19 look like in the future?
• How will future COVID variants affect vaccination?
• Will a COVID vaccine be required each year, like influenza?
• Will boosters be recommended for children?
• Is there a childhood vaccination goal?
• Will children always need to wear masks? How will vaccination affect masking requirements?
Questions?
• Please take a few minutes to fill out the post-webinar survey. You will receive a link at the close of the webinar.

• Better Kid Care will provide an email verifying the attendance for those who registered and attending the live webinar.

• For additional resources including an upcoming course on Prioritizing Mental and Emotional Health Beyond COVID-19

https://extension.psu.edu/programs/betterkidcare/knowledg e-areas/k7/covid-19info