



COVID-19 Vaccine Acceptance and Hesitancy Among Parents of Young Children

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Today's Topics

- COVID-19 infection and vaccination rates among U.S. children
- Parents' attitudes toward vaccinating their 5 – 11 year old children following FDA approval October 2021
- Parent's attitudes toward vaccinating their 1 – 4 year old children following FDA approval May 2022
- Protecting the health of children and communities

COVID Infection Rates Among Children in the U.S.

- Infection in children rose sharply during Omicron
- 87,374 cases reported last week in May 2022
- >13.5M have tested +
- >40,000 hospitalized (1.3% - 4.6%)
- 1000 deaths (9x flu deaths)

Although children are on average less symptomatic and have milder symptoms, they can spread the virus to adults.

COVID Vaccinations Among U.S. Children as of June 2022

- Vaccine 70% - 80% effective
- 2 doses recommended
- Side effects < but similar to adults for 2nd shot
- Risk of severe or immediate allergic reactions

% Receiving First Dose Since FDA Approval

- 36% 5 – 11 yrs
- 60% 12 – 17 yrs
- 78% - 95% 18 – >65 yrs

NYC:

**60% 5 – 17 yrs fully vaccinated
(Manhattan 90%, SI 53% 1st dose)
88% adults fully vaccinated**

Pre-pandemic normality is only achievable with high vaccination rates across all age groups—

Understanding parental pediatric COVID-19 vaccine hesitancy is essential for the development of effective public health programs.

The Children's Health Study

Phase 1

In 2021, 2 weeks prior to FDA approval for emergency use of the COVID vaccine for children 5 and older, we surveyed a national, sample of 400 mothers of children 5 – 11 years

Sample was diverse with respect to race/ethnicity (100 Asian, Black, Hispanic, non-Hispanic White), educational and economic status, geographic regions

Parents' Plans to Vaccinate Their 5 – 11 Year Old Children

VACCINE RESISTANT

34%

Giving my child
the vaccine will be
like performing an
experiment on
my child.

VACCINE UNSURE

25%

My child will
receive the
vaccine if other
parents in my
neighborhood
vaccinate
their children

VACCINE ACCEPTING

41%

The vaccine
will significantly
reduce my child's
risk of getting sick

Beliefs Influencing Parents' Decision to Vaccinate Their 5 – 11 Year Old

Am I knowledgeable about how COVID is spread?

Is my child's at risk of getting COVID?

Might symptoms be severe if my child gets COVID?

Do I have trust in vaccines in general?

Do I think the COVID vaccine is safe and effective?

Do I have confidence in FDA and physician recommendations?

Does my family and community support vaccination?

Infection and Disease Severity

Child's Susceptibility:

I worry my child will be exposed to COVID-19...

- at School
- playing with friends (indoors; outdoors)
- at a close friend or family member's house

Disease Severity:

If my child became infected symptoms would be...

- mild (cough, fever)
- serious (trouble breathing)
- require hospitalization
- cause long term health problems

COVID Misconceptions

- Children and adults who are infected with COVID-19 cannot transmit the virus to others if they do not have symptoms
- Children are naturally immune to the virus

Parents' Vaccination Beliefs

General Vaccine Mistrust:

- Doctors give out too many vaccines
- The government is trying to cover up the link between vaccines and autism

Safety and Efficacy of Vaccine:

- The vaccine will significantly reduce my child's risk of getting sick
- The vaccine will be safe for my child

Community Support and Trust

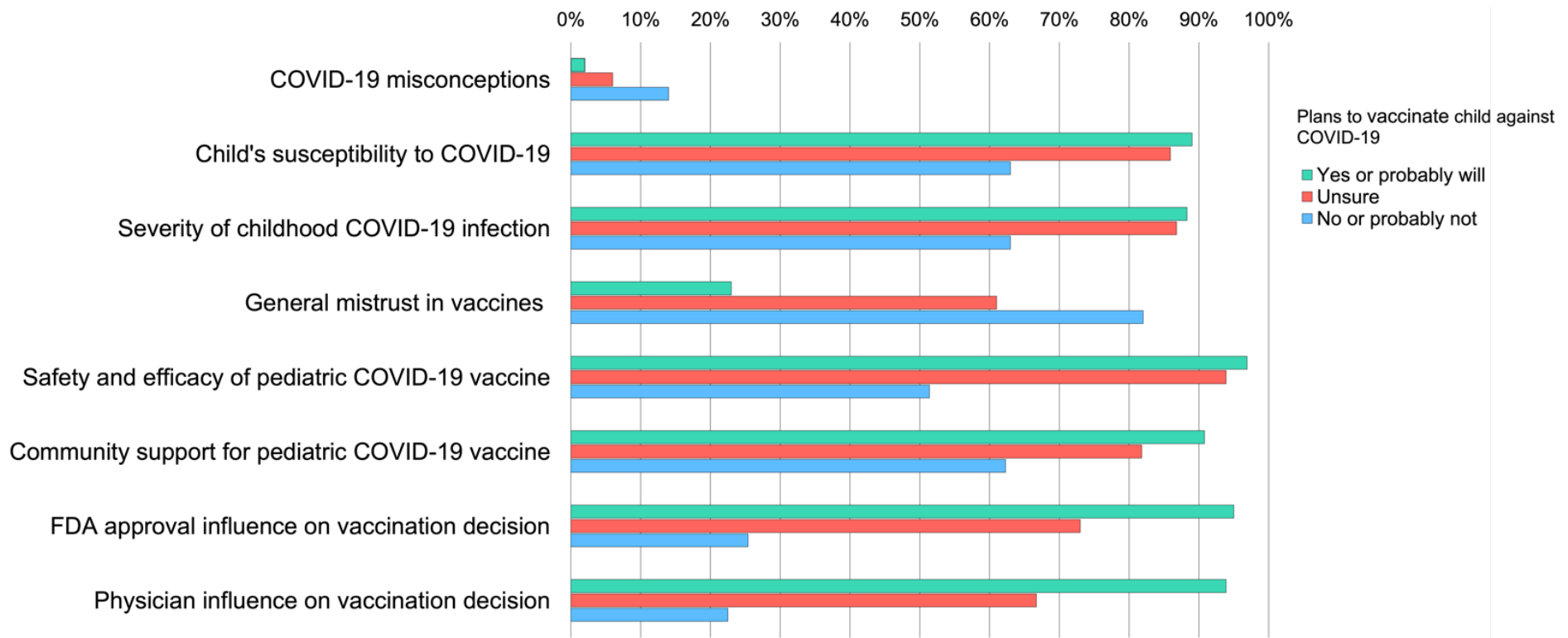
The Likelihood I will Vaccinate my Child will increase if:

- The FDA approves it as safe for children under 12
- My doctor recommends it for my child

Family and Community Support for Vaccinating 5 – 11 year olds:

- Religious leaders
- Other parents
- My family

Parental Attitudes and Plans to Vaccinate Children 5 – 11



Mother's who were vaccinated were more willing to vaccinate their children

Financial Insecurity Decreased Plans to Vaccinate 5 – 11 Year Olds

Although vaccines are “free” many places ask for insurance info which can be confusing

→ Access:

“Difficulty to find a pharmacy where I would not have to wait a long time to get an appointment”

→ Burden:

”It would be difficult to find the time to have my child receive the 2 recommended shots”

Race/Ethnicity

- In 2021 CDC did not collect race/ethnicity data on children's COVID vaccination rates
- Assumptions regarding Hispanic and Black parents vaccine hesitancy did not take into account access and availability
- When other demographics held constant, non-Hispanic White parents were most likely:
 - to be vaccine resistant,
 - hold misconceptions,
 - thought children less susceptible and disease less severe,
 - and had lowest levels of community support.

The Children's Health Study

Phase 2

In 2022 1 month prior to FDA approval for emergency use of the COVID vaccine for children 6 months and older we surveyed a national sample of 411 mothers of children 1 – 4 years

Sample was diverse with respect to race/ethnicity, educational and economic status, geographic regions

Parents' Plans to Vaccinate Their 1 – 4 Year Old Children

**VACCINE
RESISTANT**

46%

Because I strongly
believe it will kill my
son. Absolutely not.

**VACCINE
UNSURE**

23%

I'm unsure because
we hear new stuff all
the time about all of the
COVID vaccines and
you don't know what
to believe

**VACCINE
ACCEPTING**

31%

Because keeping
my kids safe is my
number one priority

Beliefs Influencing Parents' Decision to Vaccinate Their 1 – 4 Year Old

Am I knowledgeable about how COVID is spread?

Is my child's at risk of getting COVID?

Might symptoms be severe if my child gets COVID?

Do I have trust in vaccines in general?

Do I think the COVID vaccine is safe and effective?

Do I have confidence in FDA and physician recommendations?

Does my family and community support vaccination?



In Their Own Voice

*COVID Vaccine Acceptance and Hesitancy Among
Mothers of Children 1 – 4 years of Age
May 2022*

Parents' Primary Reasons for Their Vaccination Plans

- Will the vaccine protect my child?
- Is this age group too young?
- Is the vaccine safe for children?
- Is the vaccine necessary for children?
- Should we trust science, Big Pharma, and the government?

Child/Family/Community Protection

“I want my child to be protected but I am also scared because instead of helping her become immune it may cause severe problems to her health.”

–Vaccine Unsure



“Can help protect everyone, myself and anyone my child comes into to contact with.”

– Vaccine Accepting

“I want to protect my child and my community against COVID spread.”

– Vaccine Accepting

They're Too Young



“I would like him to be older before I pump more things into his body.”

– Vaccine Resistant

“They are so young and some can’t tell you if something [is] wrong.”

– Vaccine Unsure

“I am so worried that [for infants and young children] it might damage their major organs.”

– Vaccine unsure

“Because I don’t think he’s anywhere he can get it...I keep him isolated around our family only.”

– Vaccine unsure

Side Effects and Long Term Reactions

“I’m just unsure about the possible side effects for my children. The booster shot made me really sick.”
– Vaccine Unsure



“I don’t feel the benefits are worth the risks. ...I don’t want to risk the long term effects it could have on her.”
– Vaccine Resistant

“There might be some side effects for children under 5 that might be more serious than the virus itself.”
– Vaccine Unsure

It's Not Necessary

“Children do not get sick like adults, it will be like the flu or a cold.”
– Vaccine resistant

“I got COVID when I was breast feeding. I was still breastfeeding when I received both doses, I think my toddler is protected.”
– Vaccine unsure

“It's just that they already said that younger kids are immune already.”
– Vaccine Unsure



The Vaccine Doesn't Work



“My husband and I are both fully vaccinated, but we still end up with having COVID. I don’t believe the vaccination is effective.”

– Vaccine Resistant

“The vaccine is not keeping you from getting COVID. I think it’s pointless and they really don’t know the effects.”

– Vaccine resistant

Vaccine Distrust

Guinea Pig:

“It would be like testing the product and I will not allow my son to be used as an experiment.” – Vaccine Resistant

Distrust Social Media:

“The only reason COVID-19 became something more is because the social media and everything was getting into people’s heads.” – Vaccine Resistant

Distrust Government:

“I don’t feel like there’s been thorough research...I definitely don’t go off word of mouth from the CDC or FDA especially when it comes to the health of my kids.” – Vaccine Unsure

Distrust Pharma:

“It’s a rushed vaccine with no long term study and the pharmaceuticals are refusing to release the study records to see how safe and effective it actually is?” – Vaccine Resistant

“We should not put so much trust in a vaccine created so quickly”

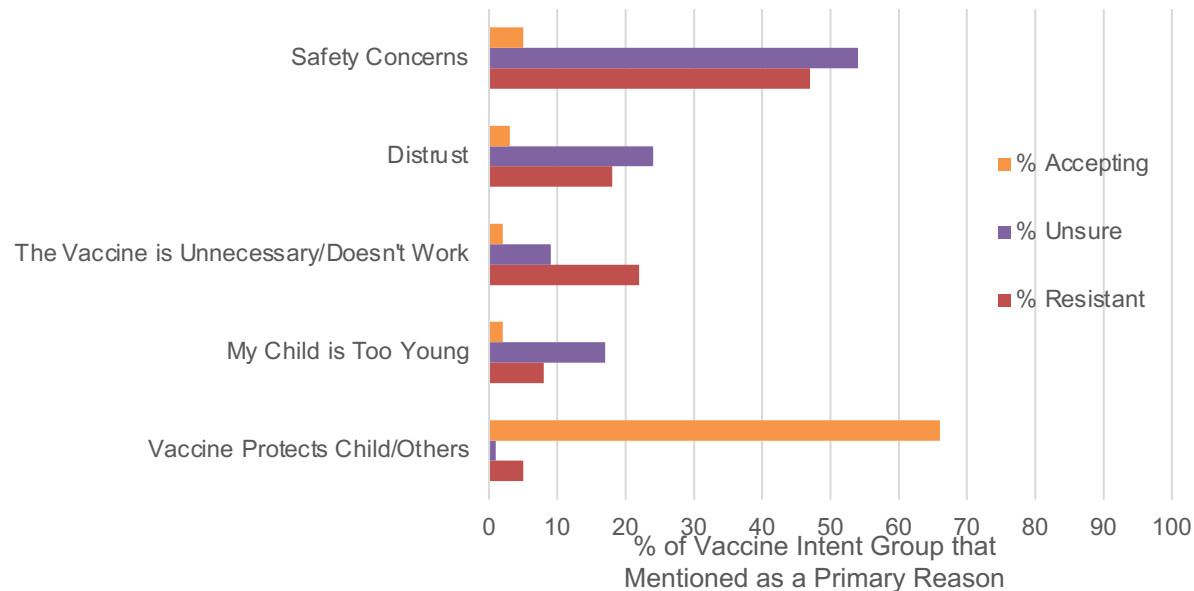
“My children are up-to-date with all their vaccines. I’m slightly hesitant about this vaccine because it is so new and rushed”
– Vaccine Unsure



“The words ‘emergency approval’ scare me, especially when it comes to my children. Emergency seemed like it wasn’t tested as long as it needs to show proper results.”
– Vaccine Accepting

“I don’t think there is enough research and data for long term effects of a vaccine for COVID-19”
– Vaccine Resistant

In their Own Words: Reasons For and Against Vaccinating Their 1 – 4 Year Olds



Additional Facilitators and Barriers to Vaccinating 1 – 4 Year Olds

Facilitators:

Vaccinated mothers are more likely to plan to vaccinate their child...
However, less likely if they had side effects from the vaccine.

Barriers:

Lower educational level, financial Insecurity and less access.

“I have 4 young children so making and keeping the appointment to get the shot is difficult... I think giving the shots at school, or having open clinics would be best.” – Vaccine accepting

There were no racial/ethnic differences or geographic differences.

The Importance of Community Support for Childhood COVID Vaccine

	Resistant	Unsure	Accepting
My Family	40%	68%	95%
Other Parents	42%	65%	75%
Doctors/Healthcare Providers	78%	93%	98%

Implications for Public Health Messaging

- The pandemic has also changed the extent to which parents' vaccine decisions are influenced by traditional sources of expertise
- Less likely to rely on FDA and pediatricians and more on family and community
- Most testing and vaccines were provided by local pharmacies
- This suggests that the “speak with your doctor” public health campaigns may be ineffective in communities where distrust is high and where vaccine access is only through pharmacies or other “pop-up” stations.

Unsure Parents

- Although in 2021 “Unsure” parents had attitudes more similar to vaccine acceptors for children 5 – 11;
- In 2022 Unsure parents shared similar concerns with Resistant Parents for children 1 – 4
- What has changed:
 - Age of child
 - Omicron more infectious but less severe
 - Infection in vaccinated adults
 - Severity of side effects
 - Messaging

Is the COVID Vaccine Like Other Childhood Vaccinations?

- If COVID became seasonal, would you vaccinate annually?
 - 35% definitely or probably not
 - 25% Unsure
 - 39% definitely or probably yes
- Although majority of children 74% – 90% had received routine infant and childhood vaccines (MMR, DTaP, Polio)
- Only 47% (resistant), 67% (unsure) and 80% (accepting) of children had received the flu vaccine.

Will School Mandates Work?

- *Only 50% of parents would be more likely to have their child vaccinated if it was a school attendance requirement.*
- *And 57% thought school requirements would be a violation of their family's individual rights.*
- *This was largely due to “resistors” in both age groups*

Confusing Messages and Science Literacy

Parents have experienced a barrage of conflicting government and media information on vaccine safety and efficacy

General lack of understanding of the process of vaccine development

- Misconception that the COVID vaccine contains the virus
- This is the first time in decades that the public has witnessed the process of vaccination science

Protecting Children and Communities

- Parents want their children to be safe and healthy
- Policies must respect differences in how parents assess risks and benefits of vaccination
- Physicians should meet parents where they are in their decision-making
- A one size fits all approach to public health messaging will not work
- Work with communities and families to increase support
- Work with pharmacies in areas where they are the primary provider
- Improve government messaging and transparency
- Increase health science literacy
- Physicians should ask for more personal narratives to counter vaccine misinformation

Thank You

Research Assistants

- Aaliyah Gray
- Rimah Jaber
- Elise Bragard

The mothers who shared their beliefs and concerns

Gray, A. & **Fisher, C. B.** (2022) Determinants of COVID-19 vaccine uptake in adolescents 12 – 17 years old: Examining pediatric vaccine hesitancy among racially diverse parents in the United States. *Frontiers in Public Health: Children and Health*. doi: [10.3389/fpubh.2022.844310](https://doi.org/10.3389/fpubh.2022.844310).

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