


Addressing COVID-19 Vaccine Hesitancy

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1

1

Faculty



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2

2

Faculty Disclosure

- Stacy B. Buchanan, DNP, RN, CPNP-PC
 - Consultant: Sequiris
 - Honorarium: American Nurses Association (ANA) Covid Facts for Nurses campaign (2021)
- Mary Cahill-Roberts, DNP, RN, CPNP-PC none to disclose
- Drs. Buchanan and Cahill-Roberts serve as clinical consultants for the National Association of Pediatric Nurse Practitioners (NAPNAP) on their Mobilizing Pediatric Nurse Provider Networks to Strengthen Pediatric COVID-19 Vaccine Confidence and Uptake in the United States, made possible by a grant from the Centers for Disease Control and Prevention.

3

3

Learning Objectives

After completing this continuing education course, the participant will be able to:

- Confidently lead vaccination conversations with parents and caregivers using evidence and facts to overcome COVID-19 vaccine hesitancy.
- Recognize health care disparities and medically vulnerable children to offer protection to individuals at-risk for COVID-19.
- Respond to vaccine hesitancy that arises from misinformation and disinformation.
- Share reputable vaccine resources and teach strategies for recognizing which resources can be trusted.
- Provide open discussion about COVID-19 with staff.

4

4

Role of the Pediatric-focused APRN

Leading Vaccination Conversations

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5

5

Primary Provider

- APRN provides primary preventative care
 - Maintains knowledge of latest up-to-date vaccine guidelines
 - Continues yearly education in changing health care realm including new diseases, vaccines
 - Established provider-family relationship
 - Parents look to nurse practitioners as a trusted source for health care, options and advice

6

6

Leading Vaccine Conversations

- Speaking with parents regarding immunization can be challenging
- PNs and FNs are considered trusted sources of information surrounding vaccines, even for those who are vaccine-hesitant
- Anticipate acceptance of your vaccine recommendation
- When encountering a hesitant parent, invite them to discuss their concerns with you

7

7

Leading Vaccine Conversations

- Determining parental experience with COVID-19 infection and/or immunization may guide decision making
- COVID-19 infection rates may seemingly be low, however long-COVID and MIS-C complications remain a threat
- PNs and FNs help families navigate the complex landscape of vaccine information to ensure they have accurate and evidence-based facts

<https://covid.cdc.gov/covid-data-tracker/#vaccination-demographics-trends>

8

8

Leading Vaccine Conversations

COVID-19 Vaccines are safe for children 5 and under

- Vaccine reactions are monitored closely, > 2 million children 5 and under have received the COVID-19 vaccine
- No reports of myocarditis in this age group
- Common side effects post-immunization:
 - Arm soreness, fever and fatigue

<https://www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html#safety-mRNA>

9

9

Leading Vaccine Conversations

COVID-19 Vaccines are effective for children 5 and under:

- Pfizer BioNTech efficacy: Three dose regimen was 75% effective at preventing symptomatic infection from the Omicron variant in children 6 months–2 years and 82% effective in children ages 2–4 years
- Moderna efficacy: Two dose regimen was 50.6% effective at preventing symptomatic infection for children 6–23 months and 36.5% effective for children ages 2 to 5 years, with an overall efficacy of 41.5% for children ages 6 months to 5 years

10

10

Stay Up to Date with COVID-19 Vaccines

- Everyone 6 years and older should get **1 updated Pfizer-BioNTech or Moderna COVID-19 vaccine**, regardless of whether they've received any original COVID-19 vaccines.
- Children aged 6 months–5 years may need multiple doses of COVID-19 vaccine to be up to date, including at least 1 dose of updated Pfizer-BioNTech or Moderna COVID-19 vaccine, depending on the number of doses they've previously received and their age.
- COVID-19 vaccine recommendations will be updated as needed.

<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/stay-up-to-date.html#children>

11

11

Stay Up to Date with COVID-19 Vaccines – Pfizer-BioNTech

Pfizer-BioNTech

AGE GROUP
6 MONTHS–4 YEARS

<p>1st Dose Pfizer-BioNTech UPDATED VACCINE</p>	<p>2nd Dose Pfizer-BioNTech UPDATED VACCINE 3–8 weeks after 1st dose</p>	<p>3rd Dose Pfizer-BioNTech UPDATED VACCINE At least 8 weeks after 2nd dose</p>
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Up to Date: Immediately after getting the last updated dose. Learn more about [children who got the original vaccine](#).

AGE
5 YEARS OLD

<p>1st Dose Pfizer-BioNTech UPDATED VACCINE</p>
--

Up to Date: Immediately after getting 1 updated dose. Learn more about [children who got the original vaccine](#).

<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/stay-up-to-date.html#children>

12

Stay Up to Date with COVID-19 Vaccines – Moderna

Moderna

AGE GROUP
6 MONTHS–5 YEARS

<p>1st Dose Moderna UPDATED VACCINE</p>	<p>2nd Dose Moderna UPDATED VACCINE 4–8 weeks after 1st dose</p>
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Up to Date: Immediately after getting the last updated dose. Learn more about [children aged 6 months–4 years](#) and [children aged 5 years](#) who got the original vaccine.

<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/stay-up-to-date.html#children>

13

13

Vulnerable and underserved populations

APRNs care for:

- children with chronic health concerns or on immunosuppressive treatment that may not be able to receive routine vaccinations.
- children who live with older adults.
- children in low-income populations.
- children in minority groups and limited access to health care.
- children with families that have transportation limitations.

14

14

APRN Practice

- 355,000 APRNs practicing in the U.S.
- 88% of providers in primary care
- 94% of APRNs have been vaccinated for COVID (2021, survey AANP), **APRNs leading by example**

(256,000 primary care MD in the U.S. - <https://bhw.hrsa.gov/data-research/>)

15

15

Health Impact of COVID-19

16

16

History of COVID-19 vaccine development

- 12/2019 - COVID-19 identified
- 2020 - Vaccine developed for adults
- 2021 - Vaccine developed for children
- 2022 - Vaccine guidelines modified
- 2023 - Guidelines modified based on changing variants to bivalent type vaccine (monovalent vaccine phased out)

- Identified variants - 16 (regional and national) 5/2023, CDC

17

17

Health Impact of COVID-19 - As of 6/2023

- 331 million - American population
- 6.1 million - COVID-19 hospitalizations
- 1.1 million - COVID-19 deaths
 - Unknown deaths from lack of care
 - Unknown number of deaths due to lack of access to care
- 17% of all Americans vaccinated with booster

<https://covid.cdc.gov/covid-data-tracker/#datatracker-home>

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Continued Infection

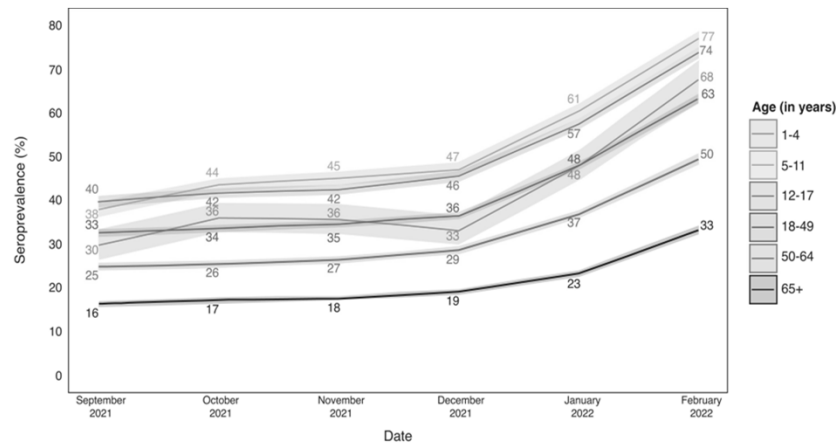


Figure 1. Infection-induced seroprevalence of antibodies to the SARS-CoV-2 nucleocapsid protein by age group—United States. *J Infect Dis*, Volume 227, Issue 3, 1 February 2023, Pages 364–370, <https://doi.org/10.1093/infdis/jiac423>

Published by Oxford University Press on behalf of Infectious Diseases Society of America 2022. This work is written by (a) US Government employee(s) and is in the public domain in the US.

<https://academic.oup.com/jid/article/227/3/364/6771010>

19

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Health Impact of COVID-19 in Children

- Vaccination reduces risk of severe COVID-19 by 91%
- Long COVID affects children at a higher rate
 - 20-25% of children have been affected with long COVID (gavi.org)
- 10,000 cases of MIS-C with 76 deaths
 - 1900 deaths 0-18 years of age 5/23, U.S.
 - 17,000 deaths under age 20, worldwide

20

20

Symptoms of Long COVID-19 in Children

- Cognitive effects, such as slowed thinking or “brain fog”
 - Unable to distinguish in younger children
- Physical symptoms, including fatigue, breathlessness and pain
 - Unable to distinguish pain in younger children
- Mental health symptoms, such as altered mood and anxiety
 - Unable to distinguish in younger children

21

21

Financial Impact of COVID-19 on Families

- 35% of children grow up in single parent households
- On average 25% of children under 6 attend some form of childcare
- Unvaccinated children are at increased risk of illness
- The continued recommendation is 5 days of isolation with positive infection (<https://www.chop.edu/>)

<https://www.cdc.gov/media/releases/2021/s1227-isolation-quarantine-guidance.html>

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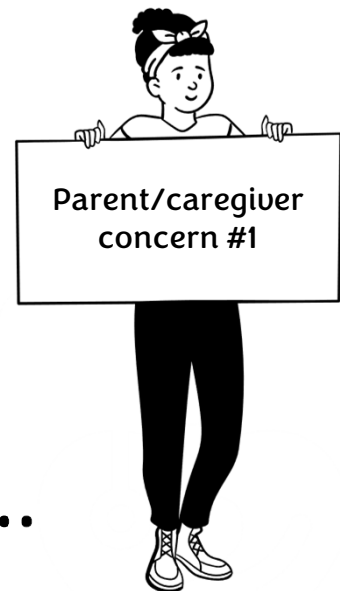
Addressing Misinformation and Disinformation

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Were the COVID-19 vaccines rushed? I'm worried that might mean they are unsafe...



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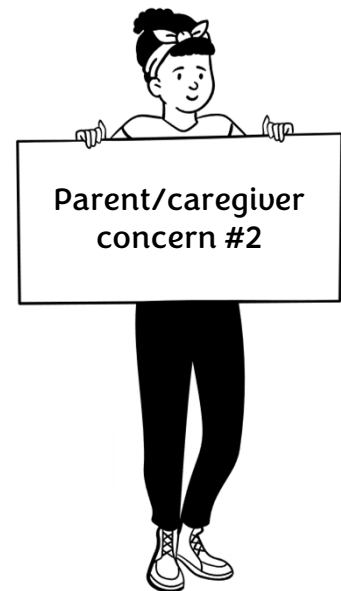
Addressing Family and Caregiver Vaccine Hesitancy

- MYTH: COVID-19 vaccines were rushed and have not been fully tested.
- FACT: COVID-19 vaccines for children 5 and under have undergone the same rigorous scientific process as all other vaccines and medical products.
 - Developing new vaccines for the public involves numerous regulated steps, all of which must be followed before they are made available for use.
 - Vaccines are only authorized by the FDA if they are proven to be safe and effective, and scientific data shows that the benefits of the vaccine outweigh any potential risks (<https://www.cdc.gov/vaccines/parents/infographics/journey-of-child-vaccine.html>).
 - For decades, scientists have been developing vaccines against other coronaviruses, such as severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS). These scientific advancements laid a strong foundation for the development of the current COVID-19 vaccines (<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/how-they-work.html>).

25

25

Is it ok if we decide to wait a little longer?
It's too early to know what side effects the vaccine will cause...



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26

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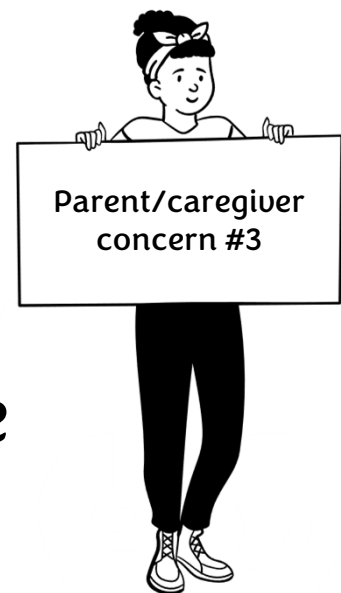
Addressing Family and Caregiver Vaccine Hesitancy

- MYTH: The vaccine is too new, and we don't understand the side effects caused by the vaccine.
- FACT: COVID-19 vaccines do not cause long-term side effects. Rather, they boost the body's immune response to help prevent potential long-term complications from being infected with COVID-19.
 - Adverse reactions, including myocarditis, after COVID-19 vaccination in children are rare.
 - In fact, one study suggests that patients infected with COVID-19 had a greater risk for myocarditis compared with patients who had not been infected with COVID-19 (<https://www.cdc.gov/mmwr/volumes/70/wr/mm7035e5.htm>).
 - Among children ages 6 months to 5 years, there has been no evidence of myocarditis following COVID-19 vaccinations (<https://www.cdc.gov/vaccines/acip/meetings/downloads/slides-2022-09-01/05-COVID-Shimabukuro-508.pdf>).
 - While uncommon, children can still suffer from long-term health issues after being infected with COVID-19, also known as long COVID or post-COVID conditions. Anyone is more likely to develop long COVID if they get the disease and have not been vaccinated (<https://www.cdc.gov/coronavirus/2019-ncov/long-term-effects/index.html>).

27

27

I know a bunch of people who got COVID right after they got the vaccine...



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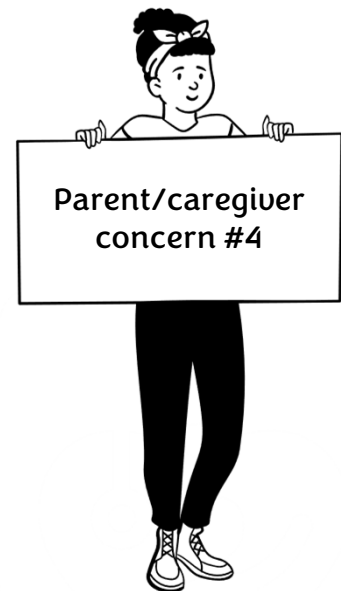
Addressing Family and Caregiver Vaccine Hesitancy

- MYTH: My neighbor's child got the COVID vaccine, and a week later she tested positive for COVID. I am sure she got it from the vaccine.
- FACT: COVID-19 vaccines do not give children COVID-19.
 - COVID-19 vaccines approved and authorized in the U.S. do not contain a live virus. As such, these COVID-19 vaccines cannot give/make your children sick from COVID-19. Instead, COVID-19 vaccines teach the body's immune system how to protect the body against the virus (<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/facts.html>).

29

29

**I don't think we know
enough about mRNA.
It might be dangerous
for my child...**



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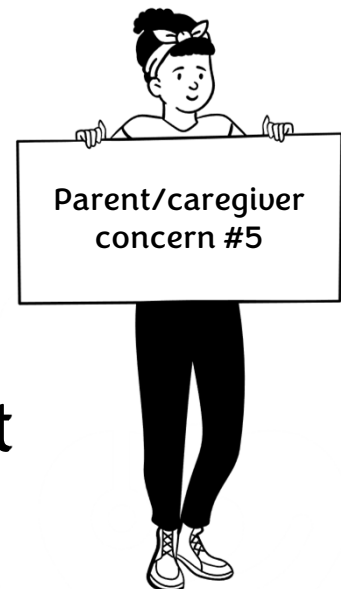
Addressing Family and Caregiver Vaccine Hesitancy

- MYTH: mRNA technology is brand new. You can't be sure that it won't be dangerous for my child.
- FACT: The science behind mRNA is not unique to COVID-19 vaccines, scientists have been studying and working with mRNA for decades.
 - Messenger RNA, known more commonly as mRNA, is genetic material that tells the human body how to make proteins (<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/how-they-work.html>).
 - The protein breaks down after delivering the message.
 - Since the discovery of mRNA in the early 1960s, scientists have made enormous strides in their understanding around mRNA and the role it plays in the human body (<https://www.nature.com/articles/d41586-021-02483-w>).
 - Beyond vaccines, cancer research has also used mRNA to trigger the immune system to target specific cancer cells (<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/how-they-work.html>).

31

31

I read that this vaccine will change my child's DNA. I'm very concerned about how this will affect them long term...



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32

32

Addressing Family and Caregiver Vaccine Hesitancy

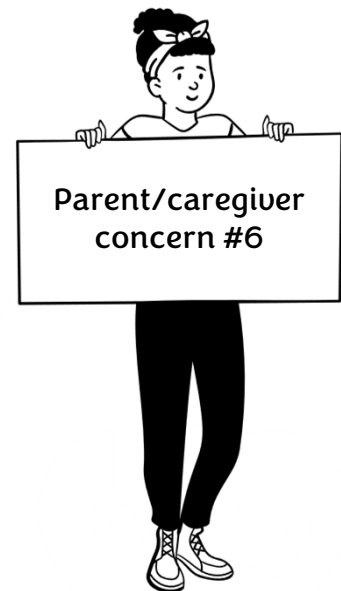
- MYTH: I don't want to give my child any vaccine that was created with technology that will change their DNA.
- FACT: mRNA COVID-19 vaccines do not interact with or alter DNA.
 - There is no evidence that the mRNA enters the nucleus of the cell where DNA is stored
 - Both messenger RNA (mRNA) and viral vector COVID-19 vaccines work by delivering instructions (genetic material) to our cells to start building protection against the virus that causes COVID-19.
 - After the body produces an immune response, it discards all the vaccine ingredients just as it would discard any information that cells no longer need. This process is a part of normal body functioning.
 - The genetic material delivered by mRNA vaccines never enters the nucleus of your cells, which is where your DNA is kept.

<https://www.voicesforvaccines.org/just-the-facts/correcting-this-weeks-misinformation-week-of-june-1-2023/sequencing-is-incorporated-into-the-human-genome>

33

33

My child hasn't gone through puberty. I don't want to make a decision now that could harm their future reproductive health...



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34

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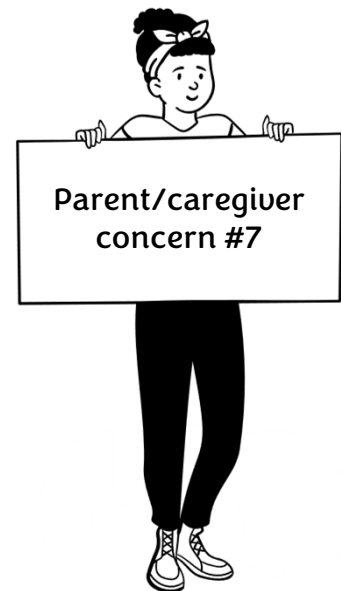
Addressing Family and Caregiver Vaccine Hesitancy

- MYTH: My child's future fertility will be at risk if I give them the COVID-19 vaccine.
- FACT: COVID-19 vaccines do not cause infertility in children or adults and there is no evidence they affect puberty in children.
 - Children are at risk of long term COVID at increased rates
 - There is not enough information to know about long term COVID illness morbidity
 - There is not enough evidence at this time to determine this statement as factual
 - Because of these facts, COVID-19 vaccination is recommended for people who are pregnant, trying to get pregnant now, or might become pregnant in the future, as well as their partners.

35

35

Children don't seem to get very sick from COVID. All the other vaccines prevent illnesses that make children really sick...



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36

36

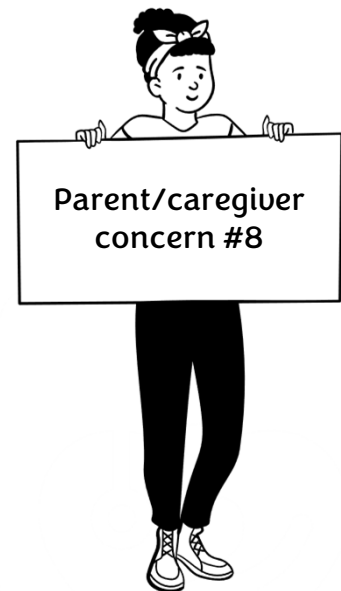
Addressing Family and Caregiver Vaccine Hesitancy

- MYTH: Every child I know that has had COVID barely had symptoms. Why would we need a vaccine for something that didn't even make them very sick?
- FACT: Children 5 and under are susceptible to becoming infected with COVID-19, and, in some cases, they can get a severe case. COVID-19 vaccination can protect your child against potentially serious COVID-19 complications.
 - During Omicron variant predominance beginning in late December 2021, U.S. infants and children aged 0–4 years were hospitalized at approximately five times the rate of the previous peak during Delta variant predominance. Infants aged <6 months had the highest rates of hospitalization, but indicators of severity (e.g., respiratory support) did not differ by age group.
 - Important strategies to prevent COVID-19 among infants and young children include vaccination of currently eligible populations such as pregnant women, family members, and caregivers of infants and young children.

37

37

**We already had
COVID, so why do we
need the vaccine...**



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38

38

Addressing Family and Caregiver Vaccine Hesitancy

- MYTH: My child already had COVID, so they have the protection they need to fight off any future infections.
- FACT: Children 5 and under who have been infected with COVID-19 should still get vaccinated to reduce the risk of reinfection.
 - COVID-19 continues to mutate causing new strains. All are at risk for reinfection which is why the recommendation is to receive the vaccine.
 - Getting a COVID-19 vaccine gives most people a high level of protection against COVID-19 and can provide added protection for people who already had COVID-19.
 - Getting sick with COVID-19 can offer some protection from future illness, sometimes called “natural immunity,” but the level of protection people get from having COVID-19 may vary depending on how mild or severe their illness was, the time since their infection, and their age.

39

39

Recommending Reputable Resources for Families

40

40

Resources

- Centers for Disease Control and Prevention (CDC) - <https://www.cdc.gov/coronavirus/2019-nCoV>
- Vaccinate Your Family - <https://vaccinateyourfamily.org/>
- <https://www.voicesforvaccines.org/>
- Partnering for Vaccine Equity - <https://vaccineresourcehub.org/>
- Immunize.org (formerly Immunization Action Coalition) - <https://www.immunize.org/>
- We Can Do This (HHS) - <https://wecandothis.hhs.gov/>
- National Foundation for Infectious Diseases - <https://www.nfid.org/infectious-diseases/coronaviruses/>
- CHOP Vaccine Education Center - <https://www.chop.edu/centers-programs/vaccine-education-center>
- GAVI.org

41

41

For additional practical information,
view our Provider Micro-learning Videos
and other important resources at:

<https://www.napnap.org/covid-provider-resources/>

THANK YOU!

42

42