

Unpacking Vaccine Hesitancy in the Era of COVID-19

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Community-University
Health Care Center

Objectives

1. Become aware of historical trauma contributing to vaccine hesitancy
2. Understand common reasons for COVID-19 vaccine hesitancy
3. Develop strategies to address vaccine hesitancy and advocate for vaccination

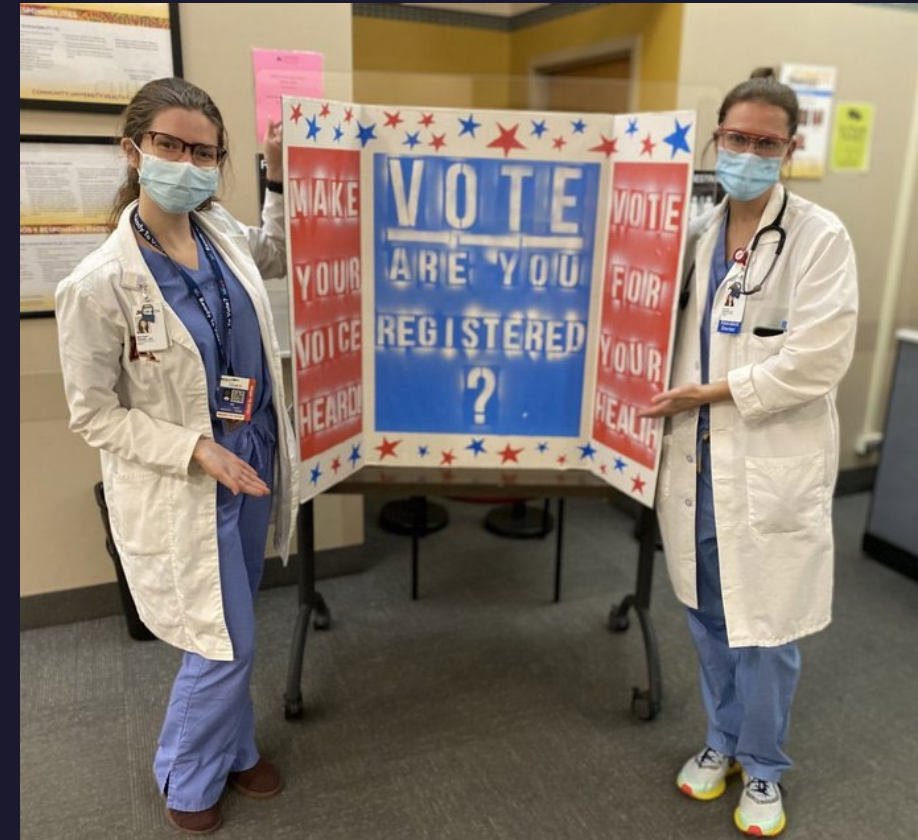
Who are we?

Brittany Kimball, MD

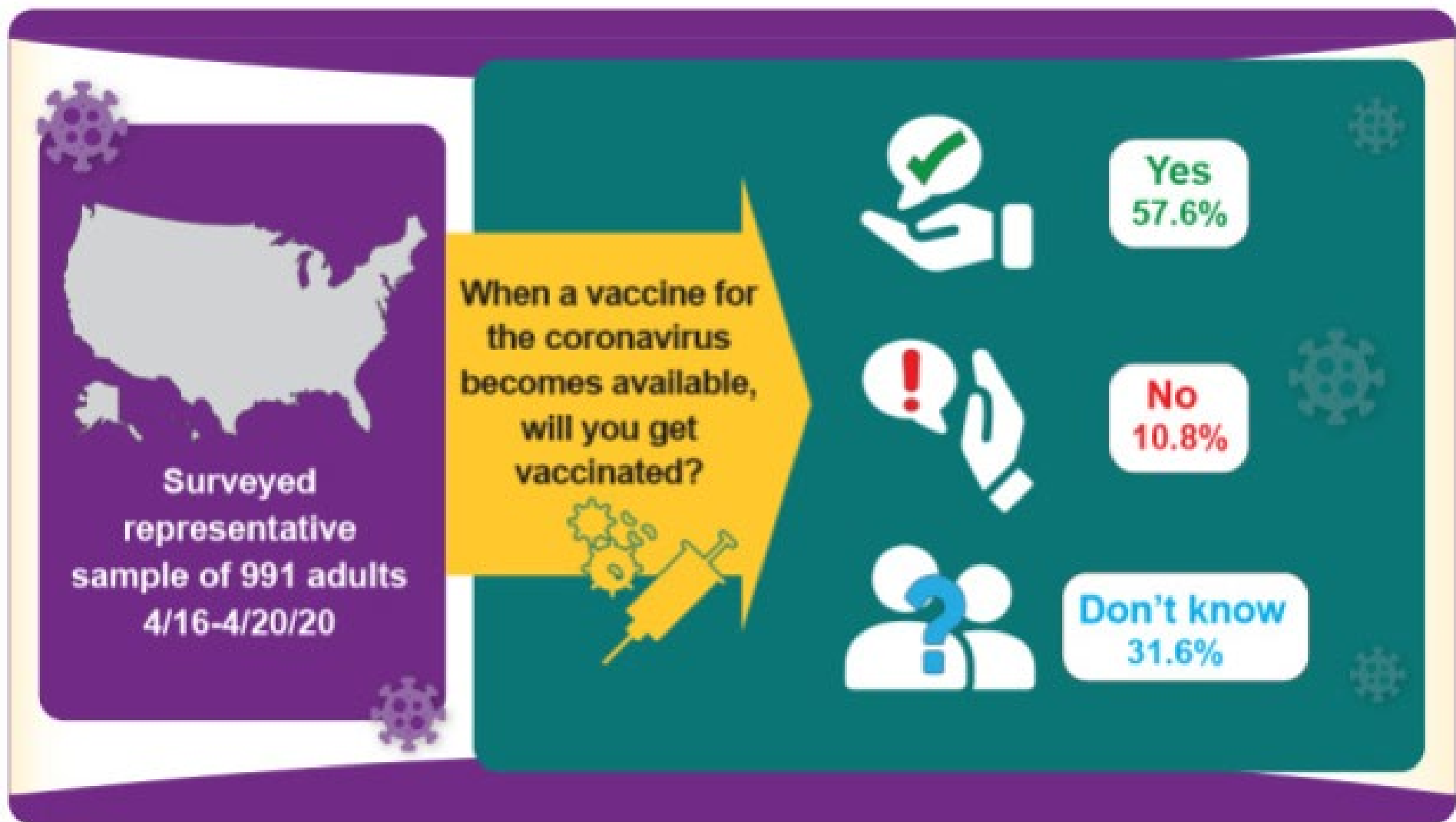
- 3rd year Internal Medicine-Pediatrics resident
- Former AmeriCorps VISTA member working in community health in Cedar-Riverside and Downtown Minneapolis
- Thanks to my partner Will Matchett, PhD--a virologist and COVID-19 vaccine researcher for input!

Talitha Wilson, MD

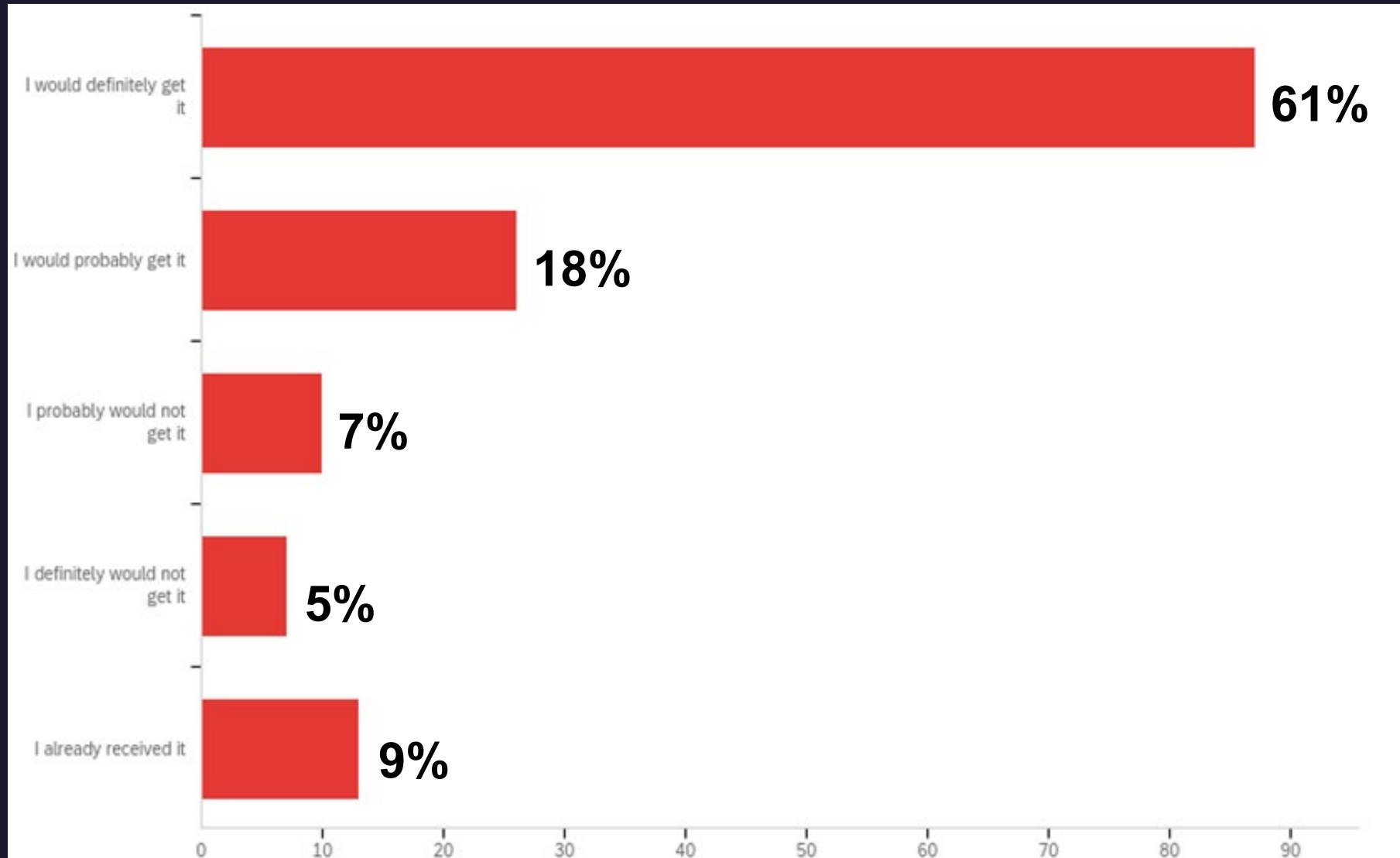
- 2nd year Internal Medicine-Pediatrics resident
- Former CDC worker focused on infectious disease management in Miami, FL
- Grew up in a small town in Alaska



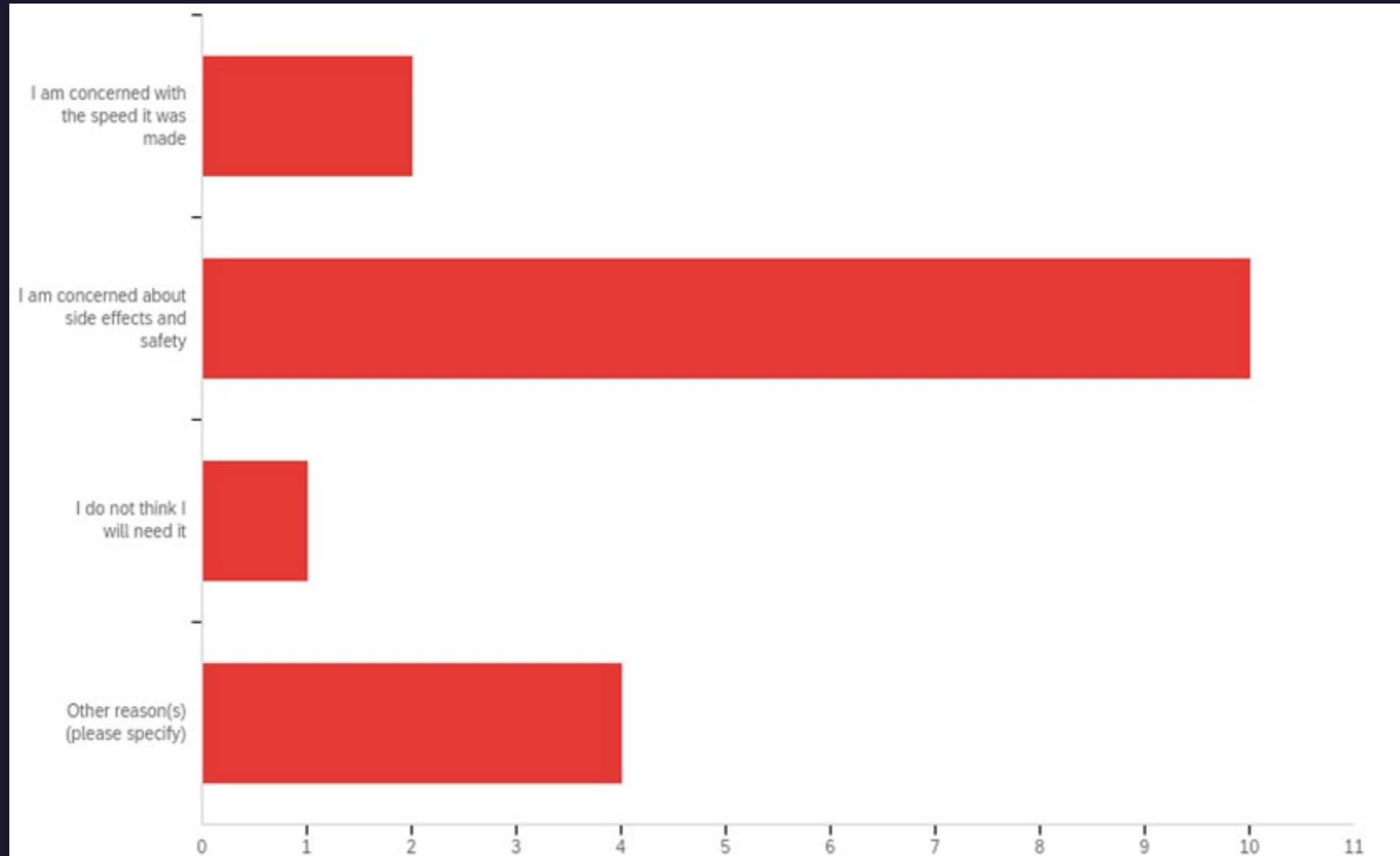
Do adults residing in the US intend to receive COVID-19 vaccination when it becomes available?



CUHCC poll: If you were offered a free COVID 19 vaccine by your employer, would you get it?



CUHCC POLL: If not, what best describes the reason why?



Why might people be hesitant when it comes to a new medicine or vaccine in the US?

Havasupai blood samples misused

How the CIA's Fake Vaccination Campaign Endangers Us All

The U.S. was wrong to use health workers to target Osama bin Laden

May 1, 2013



Indian Country Today

Mar 9, 2004

Historical trauma: an important factor contributing to broken trust

- In **1932** the US Public Health Service enrolled African American men with and without syphilis into the Tuskegee syphilis study without informed consent. They did not inform the men of their diagnosis. They trialed ineffective, sometimes toxic treatments on the participants. The study continued for 40 years, even beyond the advent of penicillin for treatment, without informing participants that they had a curable illness. The study didn't end until **1972**.
- In **2003** it was brought to light that DNA samples from members of the Havasupai tribe were being used by Arizona State University for research without consent
- In **2011**, the CIA led a hepatitis B vaccination campaign in Afghanistan to collect DNA samples in order to identify family members of Osama Bin Laden

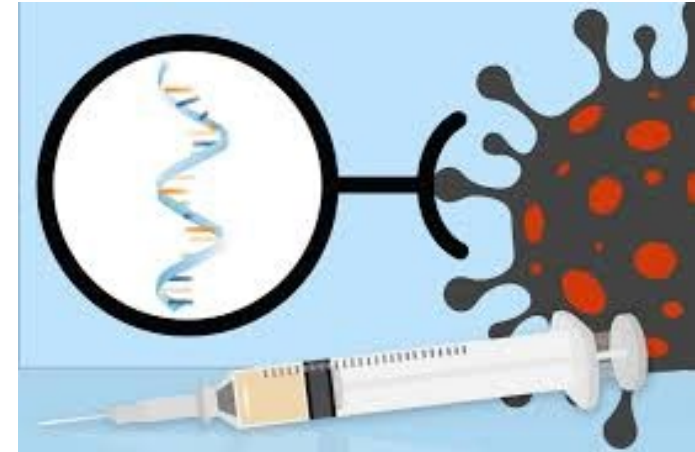
History of vaccine misinformation





Concern: Was the vaccine development process rushed?

- New technology was what allowed the vaccine to be developed so quickly
 - There was a body of work from prior SARS virus research to build on
 - In the past, developing a new vaccine took a lot of time to learn about the virus enough to either attenuate a live version or create an inactive version
 - In the past, they also spent a lot of time determining appropriate adjuvants to stimulate an immune response
 - mRNA technology allowed scientists to create an effective vaccine much more quickly
- The vaccine still had to go through all of the steps typically required for approval



PRE-CLINICAL

Drug Sponsor's Discovery and Screening Phase



Drug Developed

Drug sponsor develops a new drug compound and seeks to have it approved by FDA for sale in the United States.



Animals Tested

Sponsor must test new drug on animals for toxicity. Multiple species are used to gather basic information on the safety and efficacy of the compound being investigated/researched.



IND Application

The sponsor submits an Investigational New Drug (IND) application to FDA based on the results from initial testing that include, the drug's composition and manufacturing, and develops a plan for testing the drug on humans.

IND REVIEW

FDA reviews the IND to assure that the proposed studies, generally referred to as clinical trials, do not place human subjects at unreasonable risk of harm. FDA also verifies that there are adequate informed consent and human subject protection.

CLINICAL

Drug Sponsor's Clinical Studies/Trials



3

PHASE 1

20-80

The typical number of healthy volunteers used in Phase 1; this phase emphasizes safety. The goal here in this phase is to determine what the drug's most frequent side effects are and, often, how the drug is metabolized and excreted.



4

PHASE 2

100's

The typical number of patients used in Phase 2; this phase emphasizes effectiveness. This goal is to obtain preliminary data on whether the drug works in people who have a certain disease or condition. For controlled trials, patients receiving the drug are compared with similar patients receiving a different treatment—usually a placebo, or a different drug. Safety continues to be evaluated, and short-term side effects are studied.



At the end of Phase 2, FDA and sponsors discuss how large-scale studies in Phase 3 will be done.



5

PHASE 3

1000's

The typical number of patients used in Phase 3. These studies gather more information about safety and effectiveness, study different populations and different dosages, and uses the drug in combination with other drugs.



FDA's Center for Drug Evaluation and Research (CDER) evaluates new drugs before they can be sold.

The center's evaluation not only prevents quackery, but also provides doctors and patients the information they need to use medicines wisely. CDER ensures that drugs, both brand-name and generic, are effective and their health benefits outweigh their known risks.

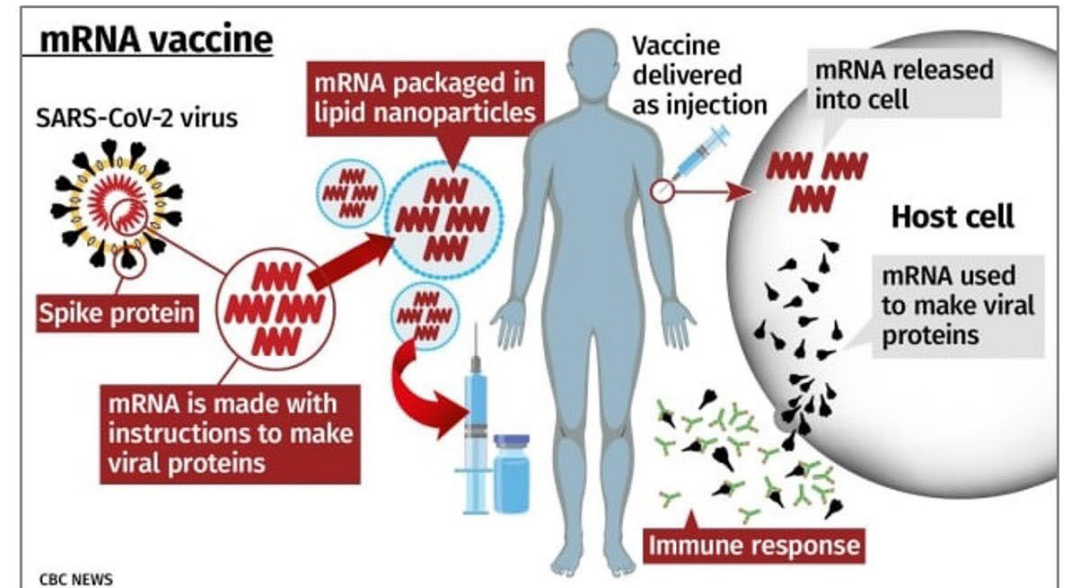
Concern: Is this new vaccine technology (mRNA) safe?

- **YES:** The US Food and Drug Administration has determined that the two COVID-19 vaccines are **safe and effective**
 - This technology has been studied for decades for other viral infections
 - It is different than live vaccines -- no weakened form of the virus
 - The vaccine is free from materials from animal origin, cell-free process, without preservatives
 - Trials included more than 70,000 people who were followed for median of 2 months

Concern: Can the vaccine cause genetic changes?

- **No:** The vaccine does not enter the nucleus of the cell, where our DNA are kept
 - No effect on person's genetic makeup
 - No COVID infection

MRNA VACCINES ARE NON-INFECTIOUS AND NON-INTEGRATING (NO RISK OF MUTATION).



Concern: Will the vaccine affect fertility?

- **No:** There is no evidence that the vaccine affects fertility
- Based on the mechanism of action of the vaccine and safety profile in non-pregnant individuals, the mRNA vaccines are not thought to cause increased risk of infertility

ACOG's recommendations for pregnant patients

- Symptomatic pregnant patients with COVID-19 are at increased risk of more severe illness compared with nonpregnant peers - increased risk of ICU admission, need for mechanical ventilation and ventilatory support (ECMO), and death reported in pregnant women with symptomatic COVID-19 infection, when compared with symptomatic non-pregnant women
- Vaccines currently available under EUA have not been tested in pregnant women. Therefore, there are no safety data specific to use in pregnancy.

ACOG's recommendations for pregnant patients cont.

- ACOG recommends that COVID-19 vaccines should not be withheld from pregnant individuals who meet criteria for vaccination based on ACIP-recommended priority groups.
- COVID-19 vaccines should be offered to lactating individuals similar to non-lactating individuals when they meet criteria for receipt of the vaccine based on prioritization groups outlined by the ACIP.



Concern: I'm undocumented--will my covid vaccine record be put in a national database that can be used by ICE?

- States are controlling vaccine distribution, so this may vary state-to-state
- Information on what MN will do to protect this information is limited at this time, but according to one interview:
 - The Minnesota Department of Health said they will only be sharing date of birth, county and vaccine information to the Data Clearinghouse.
 - State privacy laws protect this data



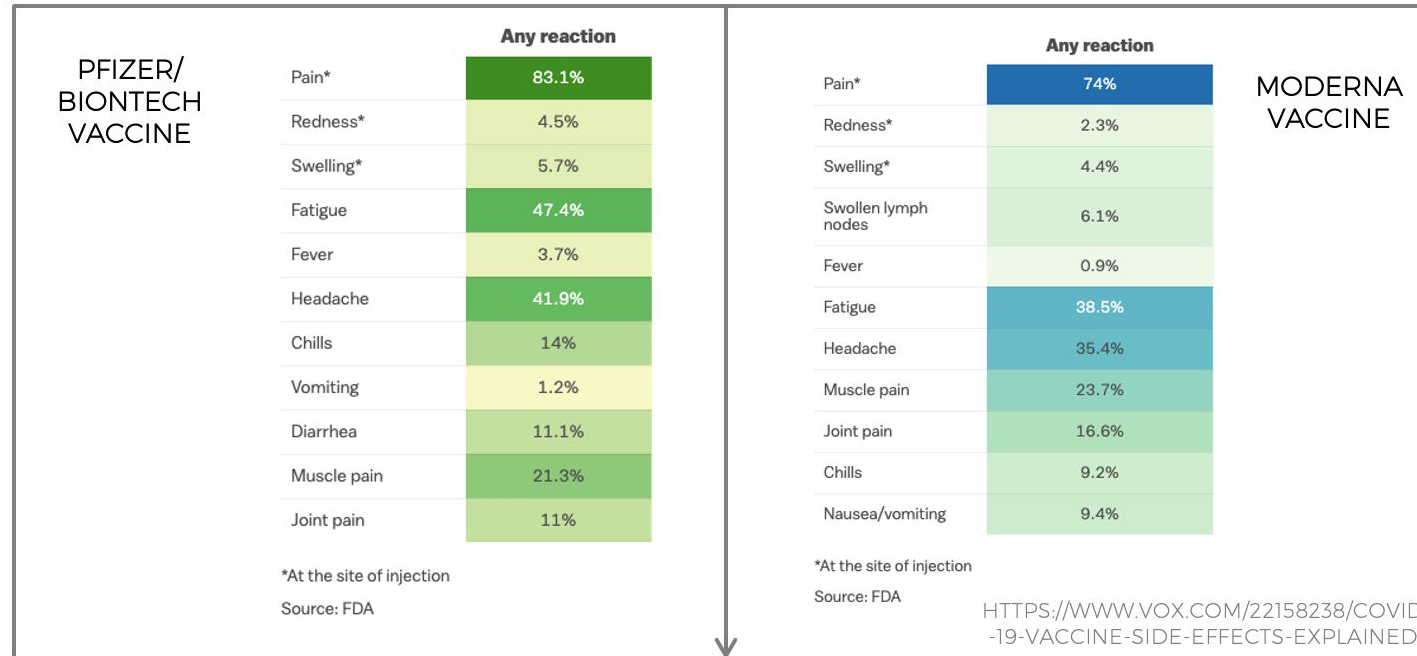
Concern: Vaccine side effects

- Pain at the injection site
- Reactogenicity side effects are common
 - Fever, chills, tiredness, and headache
 - Typically mild to moderate
 - Most commonly occur within 7 days after getting the vaccine
- Allergic reactions are **very rare**
 - People with a history of anaphylaxis can still get the vaccine
 - All people who get a COVID-19 vaccine should be monitored on-site. People with a history of severe allergic reactions should be monitored for 30 minutes after getting the vaccine. All other people should be monitored for 15 minutes after getting the vaccine.
 - Vaccination providers should have appropriate supplies for managing reactions
- **These side effects are minimal compared to the risk of COVID-19 infection**



THE MRNA VACCINES ARE ~95% EFFECTIVE AT PREVENTING COVID-19 DISEASE AND SEVERE SIDE EFFECTS ARE UNCOMMON.

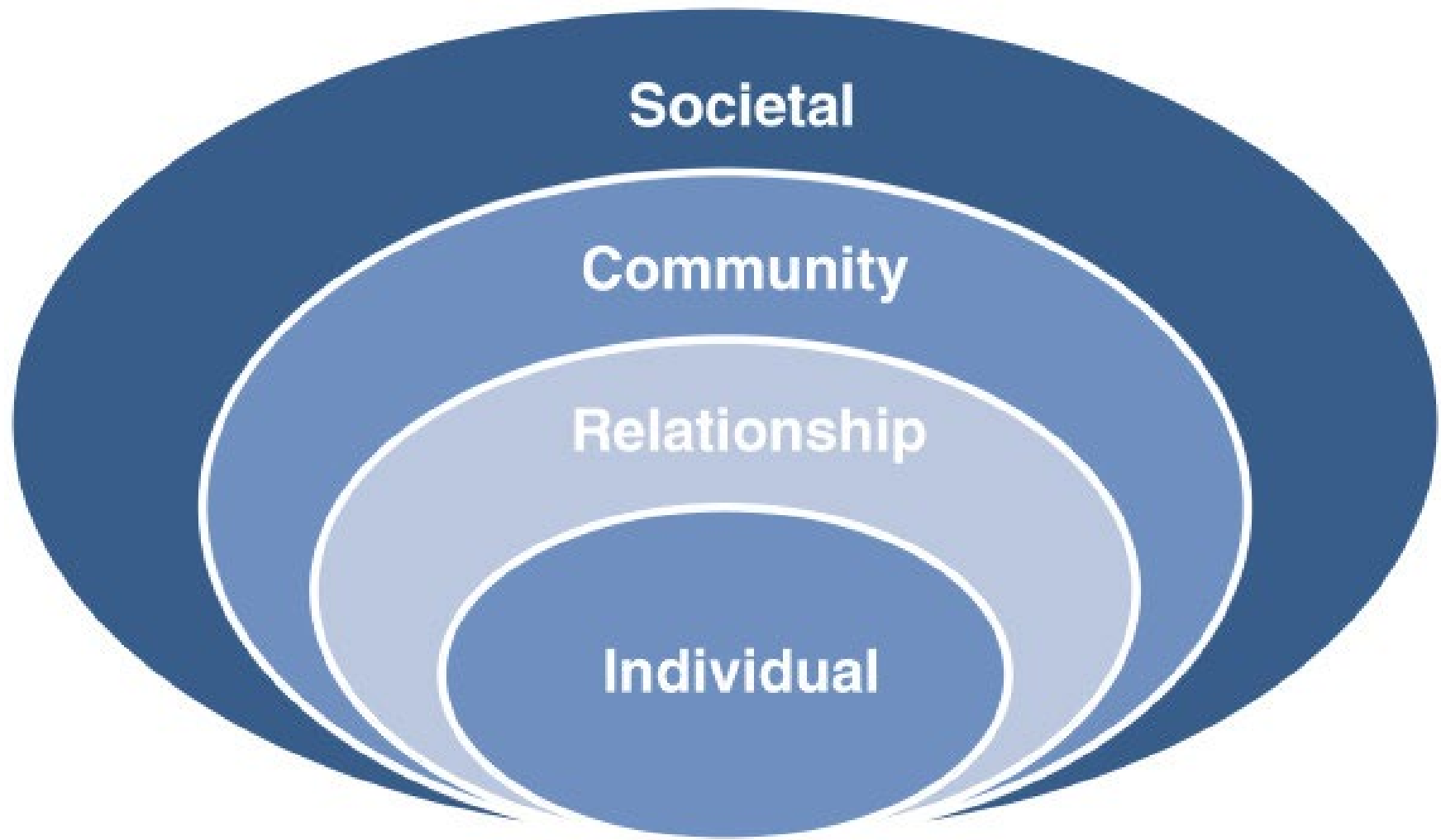
WE WANT VACCINES TO INDUCE INFLAMMATION; SIDE EFFECTS ARE A SIGN OF THE BODY'S IMMUNE RESPONSE TO THE VACCINE.



(1) THE REACTOGENICITY (IMMUNE RESPONSE) OF THESE MRNA VACCINES IS KNOWN TO BE HIGHER THAN THAT OF THE FLU SHOT AND IS KNOWN TO BE GREATER W/THE 2ND DOSE.

(2) MOST SERIOUS VACCINE REACTIONS DEVELOP WITHIN 6 WEEKS (BOTH SAFETY TRIALS OF TOTAL >70K PARTICIPANTS WERE LONGER THAN THIS).

7 strategies for addressing
vaccine-hesitancy:
It's not one-size fits all



Societal

Community

Relationship

Individual

1) Education initiatives

- Minnesota Dept of Health vaccine training (Required at CUHCC, check email!)
- CDC web-based training course for COVID-19 vaccine

**XAASHIDA MACLUUMAADKA EE LOOGU TALAGALAY TALLAAL
QAATAYAASHA IYO DARYEELAYAASHA**

**FASAXIDA ADEEGSIGA DEGDEGGA AH (EUA) EE
TALLAALKA COVID-19 EE PFIZER-BIONTECH EE LAGAGA HORTAGGO
CUDURKA KORONA-FAYRAS 2019 (COVID-19)
LOOGUNA TALAGALAY SHAKHSIYAADKA DA'DOODU TAHAY 16 SANNO JIR
AMA KA WEYN TAHAY**

Waxaa lagu siinayaa tallaalka COVID-19 ee Pfizer-BioNTech si looga hortaggo Cudurka Korona-fayras 2019 (COVID-19) ee uu dhaliyo SARS-CoV-2. Xaashidan Macluumaadku waxay ku qoran xog kaa caawinaysa inaad fahamto khataraha iyo faa'iidooyinka Tallaalka COVID-19 ee Pfizer-BioNTech ee laga yaabo inaad hesho maxaa yeelay waxaa hadda jirta aafadda COVID-19.

Tallaalka COVID-19 ee Pfizer-BioNTech waa tallaalka wuxuuna kaa ilaalin karaa inuu kugu dhaco COVID-19. Ma jiro tallaalka ay ansixiyeen Maamulka Cuntada iyo Dawooyinka ee Mareykanku (FDA) oo lagaga hortaggo COVID-19.

Akhri Xaashidan Macluumaadka si aad u hesho xog ku saabsan tallaalka COVID-19 ee Pfizer-BioNTech. La hadal bixiyaha tallaalka haddii aad su'aalo qabto. Adiga ayaa iska leh ikhtiyaarka qaadashada Tallaalka COVID-19 ee Pfizer-BioNTech.

Tallaalka COVID-19 ee Pfizer-BioNTech waxaa lagu bixiyaa qaab taxane oo 2-qaadasho ah oo ay dhaxeeyaan 3 toddobaad, waxaana lagu mudaa muruqa.

Did You Know?

2) Mandated vaccination



- Govt can impose coercive policies for mandatory vaccination
- Withhold freedom/benefits, enact penalties
 - Mandates may be more punitive to disadvantaged groups who face barriers to vaccination
- Some public health experts have speculated that health care institutions may enact COVID vaccine mandate

3) Pharmacy-driven vaccination

- 9 out of 10 people in the US live within 5 miles of a community pharmacy
- Increased access & convenience, with less barriers than health care office
- ~25% of people get flu vaccines from pharmacy

CVS, Walgreens begin offering COVID-19 vaccines to long-term care facilities in California

CVS will immunize nearly 700,000 residents and staff statewide

Share



Updated: 1:50 PM PST Dec 28, 2020

4) Partnering with faith leaders & other community leaders

- **2000's:** Mayo Clinic worked with community center for East African immigrants. Focus groups discussed perceptions of **TB**; testing and treatment rates increased
- **2017:** MDH + Children's Minnesota partnered with Imams during **measles** outbreak to advocate for vaccination within the Muslim Somali community
- **Now:** Community leaders are part of MDH **COVID-19** task force

COVID-19 CONTRACTORS THROUGH DECEMBER 2020

Current COVID-19 Community Engagement Contractors

UPDATED NOVEMBER 12, 2020

The following contractors are partnering with the Minnesota Department of Health through December 2020 to engage communities of color, American Indian communities, and LGBTQ communities with COVID-19 information – especially related to testing, case interviews, and contact tracing information, please contact the MDH COVID-19 Cultural, Faith, and Disabilities Branch at health.covidoutreach@state.mn.us.

Community Engagement Contractors

Organization	Communities Reached	
African American Leadership Forum	African American	
African Career, Education & Resources, Inc. (ACER)	West African	
African Immigrants Community Services	African Immigrants, Somali	
American Indian Cancer Foundation	American Indians living off reservation; all 11 Tribal Nations	
American Indian Community Housing Organization (AICHO)	American Indians	
Asian Media Access, Inc.	Asian Indian, Cambodian, Chinese, Filipino, Indonesian, Japanese, Korean, Thai, and Vietnamese	M
Bhutanese Community of MN (BCOM)	Bhutanese	
Briva Health	Somali	
CAPI USA	Hmong	
Casa de Esperanza	Latinx	
Catholic Charities of Southern MN	Recently arrived refugees	
Cedar Riverside Community Council	Somali, Amharic, Oromo	
Centro Tyrone Guzman	Latinx	
Comunidades Latinas Unidas En Servicio (CLUES)	Latinx	M
Comunidades Organizando el Poder y la Acción Latina (COPAL)	Latinx	
Cultural Wellness Center	African American, African immigrants, American Indian, LGBTQ	
East Africa Health Project (EAHPRO)	Somali	
EMERGE Community Development	African American, East African, Somali	
Family Tree Inc.	LGBTQIA	

Organization	Communities Reached
Girls Are Powerful	African American, Primarily East African and Somali
High School for Recording Arts	African American, LGBTQ
Hispanic Advocacy and Community Empowerment through Research (HACER)	Latinx
Hmong American Partnership	Hmong
Hmong Health Care Professionals Coalition (HHPC)	Hmong
Hmong Medical Association	Hmong
Immigrant Law Center	Latinx immigrants, African immigrants, Asian immigrants
Indigenous People's Task Force	American Indians living off reservation, African American, LGBTQ
Intercultural Mutual Assistance Association of Southeast Minnesota (IMAA)	Somali, South Sudanese, Sudanese, Ethiopian, Cambodian
Interfaith Action of Greater Saint Paul	American Indian
International Institute of Minnesota	Recently arrived refugees
Islamic Association of North America	African American; Somali and other East African communities
Islamic Civil Society of America/Open Path Resources	Somali
JustUs Health	LGBTQ, African American, American Indians living off reservation
Karen Organization of Minnesota	Karen, Karenni, Burmese
Lao Center of Minnesota	Lao
Latino Economic Development Center	Latinx
Leech Lake Band of Ojibwe	American Indians living off reservation, Leech Lake Reservation, LGBTQ
Lutheran Social Service	Recently arrived refugees
Minnesota Council of Churches	Recently arrived refugees
MN Africans United	African immigrants, including from Cameroon, Senegal, Ghana, Nigeria, Ivory Coast, Congo, Togo, Ethiopia
NAACP Minneapolis	African American
Northwest Indian Community Development Center	American Indians living off reservation, Red Lake Nation, Leech Lake Band of Ojibwe, White Earth Nation
Oromo Community of Minnesota	Oromo

Organization	Communities Reached	Geographic Area
Oromo Resource Center of Minnesota	African immigrants, including Oromo, Amhara, Eritreans, Somalis, Sudanese, other East African	Metro
OutFront Minnesota Community Services	LGBTQ	Metro
Riverside Plaza Tenants Association	African immigrant, Somali, Ethiopian	Metro
SEWA-AIFW, Inc.	South Asians, including from Bangladesh, Bhutan, Burma, India, Nepal, Pakistan, Guyana, Trinidad, Tibet, Sri Lanka	Metro, Central
Somali Medical Association of America	Somali	Statewide
Spiral Collective	American Indians living off reservation, LGBTQ	Statewide
Stairstep Foundation	African American	Statewide
The Power of People Leadership Institute	African American	Metro
Tibetan American Foundation of Minnesota	Tibetan	Metro
Tserha Aryam Kidist Selassie (TAKS)	Ethiopian	Metro
Vietnamese Social Services of Minnesota	Vietnamese, African American, Somali, Karen, Karenni, LGBTQ	Metro
WellShare International	African immigrants, including Somali, Hmong, Karen	Metro, Central, SW, S
Wilderness Health, Inc.	African immigrants, including Somali, Liberian, Nigerian, Zimbabwean, Ethiopian	NE

Metro, Central, SE, SW

Metro, NE, NW, Central

Statewide

Statewide

Metro, SE, SW

Statewide

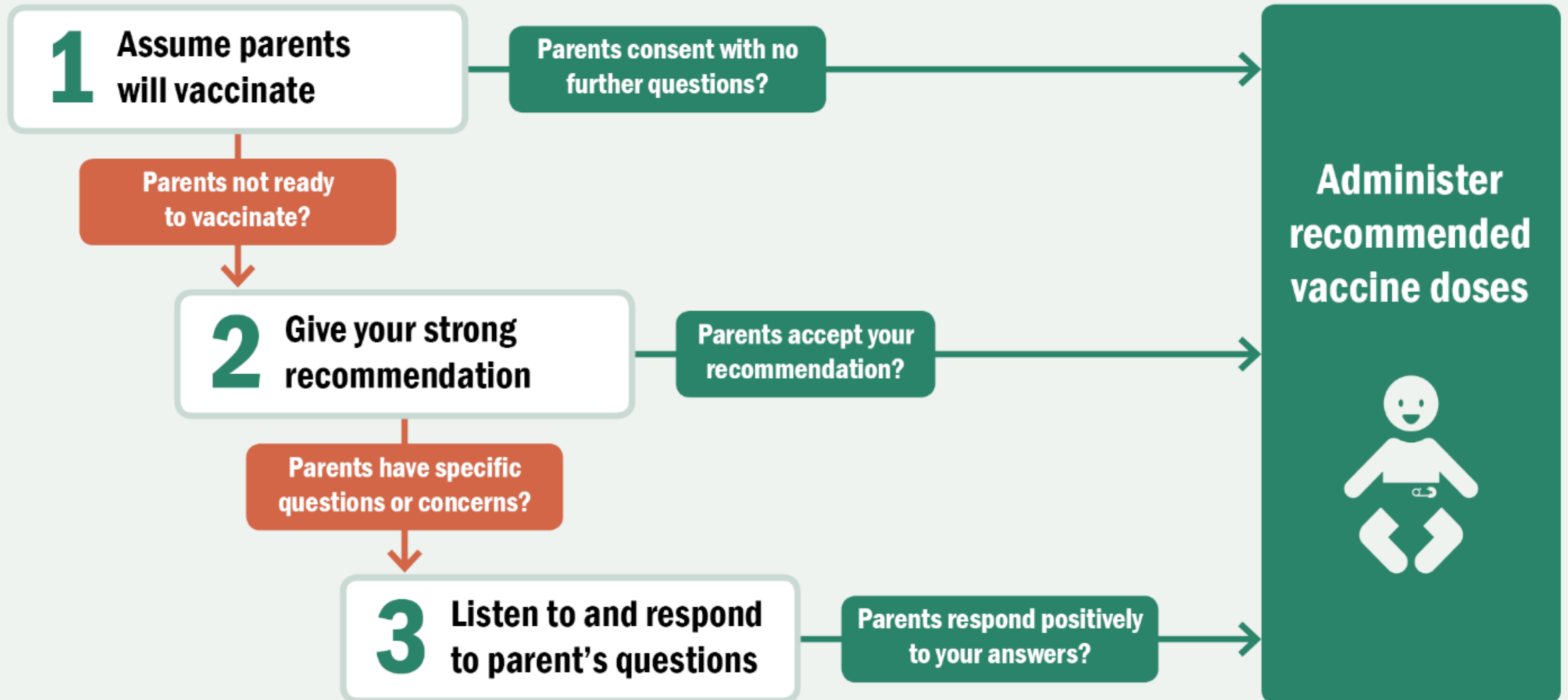
NW

Statewide

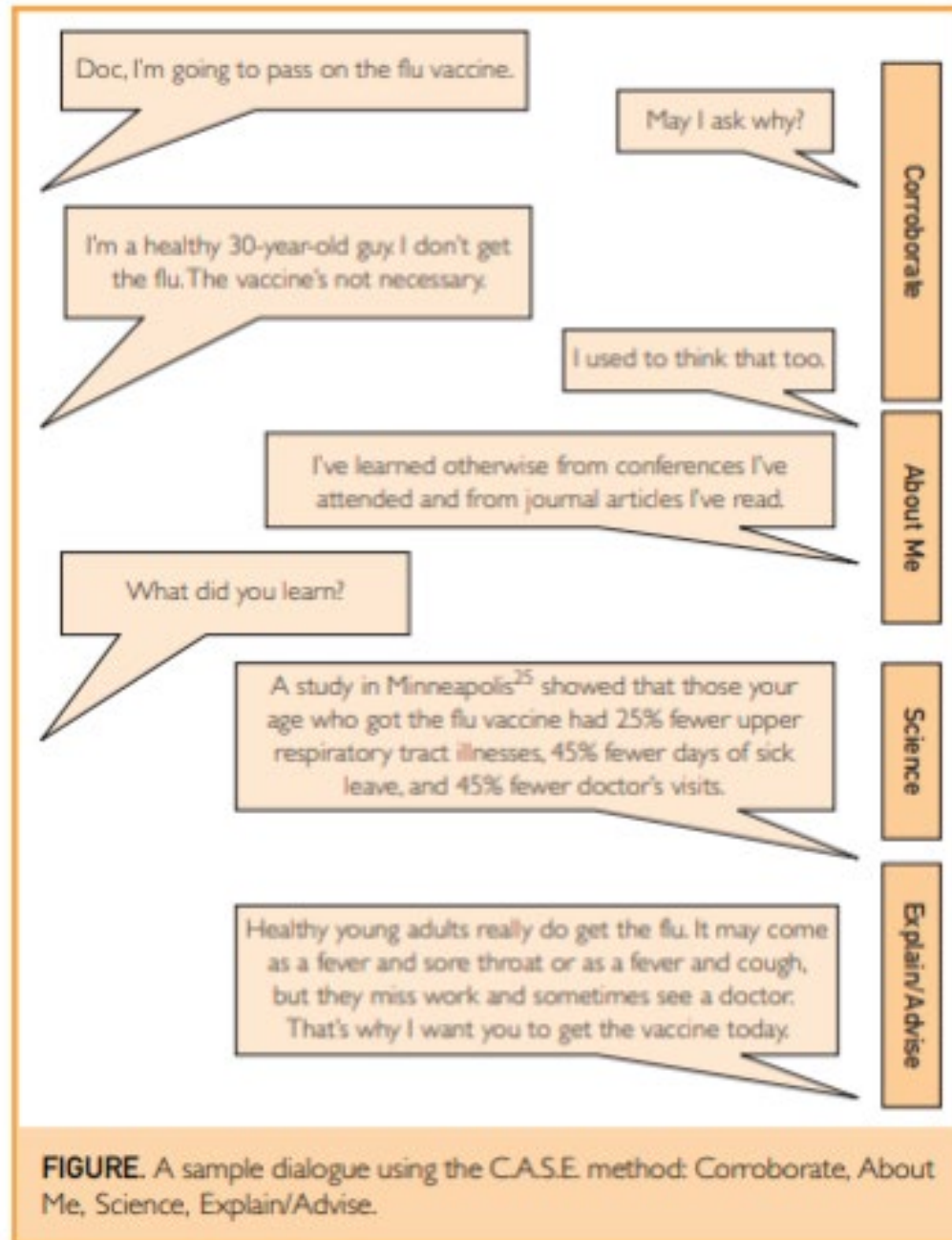
5) Use standing orders and nursing protocols

- Standing order protocols for health care workers can improve clinic vaccination rates
- Allows for non-physician health care professionals to assess vaccination needs, give vaccines, and reduce missed opportunities
- CUHCC has standing orders for influenza vaccines and is working on getting these in place for COVID-19 vaccination

6) Presumptive yes communication technique



7) CASE Method



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- FDA drug approval process: <https://www.fda.gov/media/82381/download>
- Food Allergy Research & Education. <https://www.foodallergy.org/resources/primer-mrna-covid-vaccines>
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- <https://indiancountrytoday.com/archive/havasupai-blood-samples-misused-NZqVR6paLU6cUiULDkoGrw>
- <https://www.scientificamerican.com/article/how-cia-fake-vaccination-campaign-endangers-us-all/>
- <https://www.theguardian.com/society/2018/jul/18/how-disgraced-anti-vaxxer-andrew-wakefield-was-embraced-by-trumps-america>
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- <https://speakingofresearch.com/2020/04/27/evergreen-celebrating-worldimmunizationweek-2020-the-post-wakefield-fallout/>
- <https://www.nytimes.com/2020/05/28/parenting/coronavirus-vaccine-parents.html>
- <https://news.mit.edu/2020/rna-vaccines-explained-covid-19-1211>
- <https://image-cdn.neatoshop.com/styleimg/81326/none/navy/default/404336-20;1542809186v.jpg>
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- <https://twitter.com/DrLeslieKim/status/1345451731098996738/photo/1>
- <https://health.clevelandclinic.org/moms-to-be-when-you-get-the-whooping-cough-vaccine-during-pregnancy-matters/>
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- <https://www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/pfizer-biontech-covid-19-vaccine>
- <https://www.cdc.gov/flu/resource-center/freeresources/graphics/animated-family-general.htm>
- <https://www.amazon.com/Finger-Pointing-Vinyl-Sticker-Waterproof/dp/B071NXDRXC>
- <https://www.kcra.com/article/cvs-covid-19-vaccines-long-term-care-facilities-california-dec-28/35084505>
- <https://www.cdc.gov/vaccines/hcp/conversations/talking-with-parents.html>

Other resources to check out

- A Pediatrician's Advice on Tackling COVID-19 Vaccine Hesitancy
<https://www.wbur.org/hereandnow/2020/12/15/coronavirus-vaccine-myths>
- New York Times article about importance of regular vaccinations for kids.
<https://www.nytimes.com/2020/12/21/well/family/children-health-pandemic.html>
- Missouri State Health Dept COVID vaccine info (great content and website)
<https://covidvaccine.mo.gov/facts/>

Questions

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