The COVID-19 pandemic and vaccine roll-out has affected everyone differently. Concerns about possible side effects, worries that the vaccine is too new, the role of the political system in the development process, and a lack of trust in the government to ensure the vaccines' safety and effectiveness are top of mind for those hesitant to get a COVID-19 vaccine. (Kaiser Family Foundation, December 2020). The reflective process outlined in this tool will assist staff in examining their insights about COVID-19 vaccine hesitancy and hopefully aid in a new personal understanding of their feelings and actions. Attached in this guidance are readings on COVID-19 vaccine hesitancy. It is recommended facilitators read this guidance prior to facilitating a discussion.

The process outlined in this reflective discussion guide is proposed not simply to understand each other's perspectives and actions. Rather, the intent of the discussions is to assist staff by providing a framework and strategy to explore, describe, evaluate, and analyze their decisions as they work on behalf of children and families. This guide is only one tool developed to support staff. Start Early and others have developed many approaches to support staff. You may want to use this process in combination with other methods in your discussion.

Who can facilitate the discussion: The reflective process can be used by staff leadership willing to undertake discussions that support staff in considering their feelings of vaccine hesitancy. The agency/home visiting group needs to have an identified leader(s) to enable discussions. The staff leader(s) can be individuals across the agency/home visiting group who are interested in discussing and processing COVID-19 information and issues.

Participation from all group members is encouraged. Communication within the group can be verbal and silent. It is the hope that the facilitator or other participants understand that all types of participation are valid and must be supported in different ways. As with all evolving processes, there will be conversations outside of the reflective group conversation. All conversations and COVID-19 related activities should be acknowledged during the reflective conversation process.

Who should participate in the reflective discussion: All staff who are willing to discuss their feelings of hesitancy and willing to support others in the journey.

When and where are they best facilitated: The discussions should take place in a confidential space during times where staff can relax and trust the group participants and the process.

#### Facilitating Small Group Reflective Discussions

**Initiating the discussions**: The leader may want to start with a description of the reflective discussions, making it clear that the discussions will not be facilitated to change staff decisions but to express true sentiments about the COVID-19 vaccine. The reflective discussion is a journey that will take the group in many directions. Let the group know that the initial discussion is only a starting point and will only be the beginning of a series of discussions. Let the participants know the group discussions can continue as long as there continues to be interest. State that the conversations are confidential. Honor the discussion and listen with empathy. The leader will clearly state the organization's policy but emphasize this is a non-judgmental time to reflect on feelings and actions. You may want to start with group-generated ground rules. The discussion facilitator can refer to Start Early's *Advancing Racial Equity (A.R.E) Norms for Discussions* as a guide (in the reference links below) to establish ground rules.

During the reflective discussion: In initiating the discussions, the leader may want to address:

- How have you and your family personally experienced the pandemic? *Ask* each individual
- What has it been like for you to experience the pandemic in your community and through your workplace?

Explore the things that were done to manage the staff person's pandemic situations and feelings – How did reflective group participants adapt to the many situations that they found themselves in? Give staff time to describe the adaptation mechanisms and empathically listen to others. Ask other questions as needed.

Continue the discussion by asking more exploratory questions. Be empathetic in your delivery of the questions for those who express trauma, frustration, or complete disruption during the pandemic.

- How can we more comfortably discuss your feelings and adaptations during the pandemic? How did talking about these make you feel?
- What might need to change for some relief or less disruption?
- What have been the discussions/comments of those around you?
- How have you reacted to those discussions/comments?
- How does your decision determine the way you navigate the present COVID-19 environment?
- Our shared work is our work with children and families. Do you want to discuss how your decision affects your work with children and families?

Facilitating Reflective Discussions: COVID-19 Vaccine Hesitancy

**Concluding the Reflective Discussion:** Bringing closure to the discussion can include some of the following questions:

- What should be our next steps?
- Is more information needed?
- Would you like to hear stories from other peers on this journey?
- Six months from now, what are your hopes for everyday life and the workplace?

End the discussion by following the next steps as directed by the participants. Create a consistent time for the sessions. Continue the reflective period until the participants feel all issues have been addressed. Work with your HR and agency health department to make sure all health-related questions have been answered. Be available for one-on-one follow-up sessions. Direct staff to reliable resources.

#### Facilitating Peer-to-Peer Reflective Discussions

Staff may feel more comfortable talking with co-workers about COVID-19 hesitancy. Below are the points to guide the reflective discussion.

Forming a Peer-to-Peer Session: Advertise the opportunity to reflectively talk with co-workers about personal and work-related feelings regarding the COVID-19 vaccination. Identify a leader who will facilitate the process. If there is interest, create a time and place to meet. Create goals and discussion points for the peer discussions. Make sure the reflective discussion group assigns a person who can follow-up with the agency on the resources they need to support hearty discussion.

**Guiding the Content:** The facilitator will ask that all participant comments are listened to respectfully and that the group show an appreciation for each participant's comments. Let them know that the purpose of the reflective discussion is not to change a person's decision but give them space to express it and to empathetically listen. Make sure the group knows that all reflective conversation is confidential. Ask the group to create ground rules. Start Early's *Advancing Racial Equity (A.R.E) Norms for Conversations* can be used. (Attached in the reference links)

**Concluding the reflective discussion**: Ask the group to conclude the conversation by discussing concrete next steps. Group members should follow-up with the assigned program vaccine discussion leader if resources are needed.

Facilitating Reflective Discussions: COVID-19 Vaccine Hesitancy

#### Resources

The reflective discussion process is not a cognitive process where we continue to share information and lots of paperwork; rather, the process should be framed as a time for participants to freely express social-emotional experiences and opinions.

Start Early's Advancing Racial Equity (A.R.E.) Norms for Conversations

<u>Intranet link</u> Shareable PDF starts on page 5

Strategies to increase vaccine acceptance and uptake: From behavioral insights to context-specific, culturally-appropriate, evidence-based communications and interventions Shareable PDF starts on page 6

#### COVID-19 Vaccine & Roll Out

Presentation with background and facts on COVID-19 vaccines. Includes strategies to address common myths related to the virus and vaccines. *Shareable PDF starts on page 8* 

Vaccination Considerations for People who are Pregnant or Breastfeeding Recommendations from the Centers for Disease Control <u>External Link</u>

Austin Community native puts dreams on hold to help West Side residents access COVID testing resources, vaccines *Chicago Tribune* <u>External Link</u>

### COVID-19 Vaccine Skepticism runs deep in the home of the infamous 'Tuskegee Syphilis Study' *Chicago Tribune*

Advocates don't shy away from a history that haunts so many families and informs their thinking about government medical campaigns and vaccination. <u>External Link</u>

#### HIP HOP Public Health

A series of four short videos that can be used to support family discussions on vaccine hesitancy.

<u>Video 1</u> <u>Video 2</u> <u>Video 3</u> <u>Video 4</u>

#### Advancing Racial Equity (A.R.E.) Norms for Conversations

In order to enhance learning and effectiveness of delivering on our mission, the following norms are established:

Procedural Norms (How we do things together)
1. Have materials ahead of time for pre-thinking/ reading
2. Have order and clear expectations
3. Define work-group concepts, terminology, and behaviors
4. Be action-oriented/outcome-focused and move beyond "talk"
5. Stay focused on our shared goals
6. Ensure there is space for everyone to contribute
7. Have the right to "pass" and not contribute to the conversation
8. If you miss a meeting or part of the discussion you are accountable for catching up with material and being up to speed

#### **BOTH (Procedural and Interpersonal Norms)**

9. Maintain and respect an individual's confidentiality

10. Slow down and be comfortable with silence: Take in contributions of the whole

11. Balance opportunity to speak with opportunity to listen to group: Step-up and step-down

Interpersonal Norms (How we interact/relate with each other)
12. Respect* what you hear and appreciate and value others' perspectives
13. Assume good intentions while being self-aware of the impact of your words, actions, and/or interactions
14. Model positive behaviors: stay engaged, listen, respond and display positive body language
15. Enter interactions with curiosity through asking clarifying questions
16. Seek a shared understanding and responsibility
17. Speak from personal perspective and experience
18. Become comfortable being uncomfortable
19. Be open to unlearning and relearning

\*Refer to Ounce values

#### Vaccine 36 (2018) 6457-6458

Contents lists available at ScienceDirect

#### Vaccine

journal homepage: www.elsevier.com/locate/vaccine

#### Editorial

# Strategies to increase vaccine acceptance and uptake: From behavioral insights to context-specific, culturally-appropriate, evidence-based communications and interventions

Vaccines save least 5 lives a minute, but they could save many more [1]. An estimated 1.5 million deaths - the equivalent of 8 jumbo jets crashing every day - could be averted if global vaccination uptake improved [2]. Yet, increasing vaccine coverage is not as simple as educating people about the benefits of vaccination. There are many barriers and drivers which affect vaccine uptake, ranging from logistics such as ensuring people have access to and are aware of affordable vaccines, to socio-psychological factors underpinning people's acceptance to be vaccinated [3]. Until recently, much that had been done to address vaccine hesitancy and low vaccine coverage was based on untested beliefs or good ideas rather than on solid evidence, but this is changing. This special issue, stemming from an annual meeting on vaccine confidence and coverage [4], builds on an increasing body of empirical evidence seeking to identify the determinants of vaccine acceptance and uptake. Importantly, it also echoes changes in this field, by moving beyond understanding to action, highlighting a number of social and behavior change interventions that have been designed and tested for impact. In the remainder of this Editorial, we highlight the key points from the contributing articles and their implications for designing effective communication and intervention strategies to increase vaccine acceptance and uptake.

#### 1. Communicating your reasons are not enough: Begin by understanding your target audience

"People just need to understand the benefits and value of vaccines!" This commonly-heard cry unfortunately assumes that low acceptance is due to lack of knowledge and thus providing facts and arguments will suffice to induce action. Most smokers understand the benefits and value of quitting smoking, illustrating that knowledge attainment does not necessarily influence health related behaviors. The research included in this issue highlights that vaccine hesitancy has numerous possible demographic and socio-psychological root causes, many of which are not knowledge-related. The development of effective strategies to sustain trust in vaccination programs requires an understanding of the particular social and psychological factors that determine the vaccination decisions of different populations with different vaccines. In this issue, a number of studies which variously investigated hesitant compliers (concerned but fully-vaccinated parents), hesitant mothers, pregnant women, parents of young children, and community leaders and members identified both common (eg. trust) and specific factors that may underpin vaccine acceptance in these different groups [5–10]. The important role in vaccine acceptance and uptake of communities, which may manifest through co-localization or common interests, is also highlighted [11].

#### 2. Saying it is not enough: Target your communications to the needs of your audience

Communication is important to sustaining uptake in any vaccination program, and while the content should be evidence-based, the development and implementation of communication is not always grounded in communication science principles. As a result, when vaccination communication strategies are tested for efficacy in terms of intentions to vaccinate they may often be ineffective, or may even backfire [12]. Through understanding the different communication needs of parents with different attitudes to vaccination, the study by Berry et al. helps facilitate tailoring of a communications intervention [8]. The lessons learned from an online hub of pro-vaccine information, that highlight the importance of transparency and credibility to build trust, and of tone. style (storytelling), and content (videos and animations) to increase resonance with readers provides a practical playbook for other online, and interpersonal, communications projects [13]. Ohlrogge et al. found that national influenza communications in Europe were often inconsistent with national recommendations and were rarely evaluated [14]. One challenge to the development of effective communications is a lack of consistent and validated outcome measures. This has, in part, been addressed by Kaufman et al., whose mapping of core outcome domains for communication on childhood vaccination allows the selection of appropriate measures for different communications approaches [15]. Parrish-Sprowl argues that research and practice that only account for message content misses the impact of the broader communication process and context [16]. Or, the way a healthcare professional (HCP), for example, talks about vaccination to a patient is as important, or perhaps more so, that what they actually say in terms of behavioral outcomes.

#### 3. Communicating to people is not enough: Listen to and engage healthcare professionals too

A recommendation from an HCP consistently emerges as an important determinant of vaccination acceptance. While HCPs are usually the most trusted source of information on vaccines, they themselves may be unsure about vaccination or vaccination conversations with their patients. Attwell et al. observed that while







most midwives studied supported vaccination, they held a broad of beliefs and concerns related to vaccination [17]. Two new validated scales for measuring motivation of HCPs towards influenza vaccination and towards advocating influenza vaccination [18] can be used to better understand the drivers of hesitancy among HCPs. A six-country study showed that these scales can identify meaningful and actionable clusters of HCPs, which may inform the tailoring of communications or interventions according to underlying motivations [19]. Equipping HCPs with tools to communicate with their patients may also contribute to establish a more trusting and constructive dialogue. For example, an intervention based on motivational interviewing, which acknowledges the importance of the communication process and context through emphasizing the importance of respect and empathy, and of understanding the position of the parent regarding vaccines, showed effectiveness on acceptance, intention to vaccinate, and actual vaccine coverage [20].

#### 4. Communicating is not enough: Design culturally targeted interventions to improve access to vaccines

Bedford et al underscore the importance of viewing vaccine hesitancy as only one possible determinant of under-vaccination [21]. In India, where just over half of infants are fully vaccinated, mothers reported that non-vaccination of their children was variously due to challenges related to awareness, acceptance and affordability (both financial and non-financial costs) [22]. While Nagar et al.'s randomized controlled trial of a multicomponent intervention with a culturally tailored digital vaccination record and reminders in rural India did not significantly increase timely vaccination, the inclusion of process outcomes will allow further adaptation of the approach to better match communication to the user [23].

The contributions from this special issue illustrate implications for designing effective communication and intervention strategies to increase vaccine acceptance and uptake. Clearly, context matters and communications must be designed to fit the needs and motivations of individuals. However, such communication needs to be designed based on evidence and with validated process and outcome measures. This requires that national authorities, researchers, HCPs and public health professionals understand and act upon the fact that there is no one-size fits all strategy to solve vaccine hesitancy and that collaborative efforts are needed and must be sustained over time. To sustain and extend the remarkable successes of global immunization programs, governments and funding agencies should not just expand funding and support for research, monitoring and evaluation related to vaccine acceptance and uptake, but they should also mandate that efforts are evidence based and that communications and interventions are culturally and context appropriate.

#### References

- [1] WHO. http://www.who.int/topics/immunization/en/.
- [2] WHO Immunization Coverage. http://www.who.int/news-room/fact-sheets/ detail/immunization-coverage.
- [3] Thomson A, Robinson K, Vallée-Tourangeau G. The 5As: a practical taxonomy for the determinants of vaccine uptake. Vaccine 2016;34:1018–24.
- [4] Fondation Merieux. https://www.fondation-merieux.org/en/news/strategiesto-increase-vaccine-acceptance-and-uptake-2016/# [accessed 18 July 2018].

- [5] Enkel SL, Attwell K, Snelling TL, Christian HE. 'Hesitant compliers': qualitative analysis of concerned fully-vaccinating parents. Vaccine 2018;36 (44):6459–63.
- [6] Mendel-Van Alstyne JA et al. What is 'confidence' and what could affect it?: a qualitative study of mothers who are hesitant about vaccines. Vaccine 2018;36 (44):6464–72.
- [7] Danchin MH et al. Vaccine decision-making begins in pregnancy: correlation between vaccine concerns, intentions and maternal vaccination with subsequent childhood vaccine uptake. Vaccine 2018;36(44):6473–9.
- [8] Berry NJ et al. Sharing knowledge about immunisation (SKAI): an exploration of parents' communication needs to inform development of a clinical communication support intervention. Vaccine 2018;36(44):6480–90.
- [9] Heyerdahl LW et al. Innovative vaccine delivery strategies in response to a cholera outbreak in the challenging context of Lake Chilwa. A rapid qualitative assessment. Vaccine 2018;36(44):6491–6.
- [10] Démolis R et al. A rapid qualitative assessment of oral cholera vaccine anticipated acceptability in a context of resistance towards cholera intervention in Nampula, Mozambique, Vaccine 2018;36(44):6497–505.
- [11] Attwell K, Smith DT. Hearts, minds, nudges and shoves: (How) can we mobilise communities for vaccination in a marketised society? Vaccine 2018;36 (44):6506–8.
- [12] Nyhan B, Reifler J. Does correcting myths about the flu vaccine work? An experimental evaluation of the effects of corrective information. Vaccine 2015;33(3):459–64.
- [13] Finnegan G et al. Lessons from an online vaccine communication project. Vaccine 2018;36(44):6509–11.
- [14] Ohlrogge AW, Suggs LS. Flu vaccination communication in Europe: what does the government communicate and how? Vaccine 2018;36(44):6512–9.
- [15] Kaufman J et al. Identification of preliminary core outcome domains for communication about childhood vaccination: an online Delphi survey. Vaccine 2018;36(44):6520–8.
- [16] Parrish-Sprowl J. Vaccine hesitancy communication: what counts as evidence. Vaccine 2018;36(44):6529–30.
- [17] Attwell K, Wiley KE, Waddington C, Leask J, Snelling T. Midwives' attitudes, beliefs and concerns about childhood vaccination: a review of the global literature. Vaccine 2018;36(44):6531–9.
- [18] Vallée-Tourangeau G et al. Motors of influenza vaccination uptake and vaccination advocacy in healthcare workers: development and validation of two short scales. Vaccine 2018;36(44):6540–5.
- [19] Kassianos G et al. Motors of influenza vaccination uptake and vaccination advocacy in healthcare workers: a comparative study in six European countries. Vaccine 2018;36(44):6546–52.
- [20] Gagneur A et al. Motivational interviewing: A promising tool to address vaccine hesitancy. Vaccine 2018;36(44):6553–5.
- [21] Bedford H et al. Vaccine hesitancy, refusal and access barriers: the need for clarity in terminology. Vaccine 2018;36(44):6556–8.
- [22] Francis MR et al. Factors associated with routine childhood vaccine uptake and reasons for non-vaccination in India: 1998–2008. Vaccine 2018;36 (44):6559–66.
- [23] Nagar R et al. A cluster randomized trial to determine the effectiveness of a novel, digital pendant and voice reminder platform on increasing infant immunization adherence in rural Udaipur, India. Vaccine 2018;36 (44):6567–77.

Angus Thomson<sup>\*</sup> Sanofi Pasteur, Lyon, France \* Corresponding author. E-mail address: angus.thomson@sanofi.com

Gaëlle Vallée-Tourangeau Kingston Business School, Kingston University London, Kingston upon Thames, United Kingdom

L. Suzanne Suggs

BeCHANGE Research Group, Institute of Public Communication, Faculty of Communication Sciences, Università della Svizzera italiana, Lugano, Switzerland

> Institute for Global Health Innovation, Faculty of Medicine, Imperial College London, United Kingdom





## COVID-19 VACCINE & ROLL OUT

CATHERINE ENRIGHT, MPH CHARLOTTE ERICKSON, MPH SANGEETA SOLSHE, MPH

## Willingness to accept a vaccine falls on a continuum

INCREASING CONFIDENCE IN VACCINE, VACCINATOR, AND HEALTH SYSTEM

### May have questions, take "wait and see" approach, want more information

Passive

Acceptance

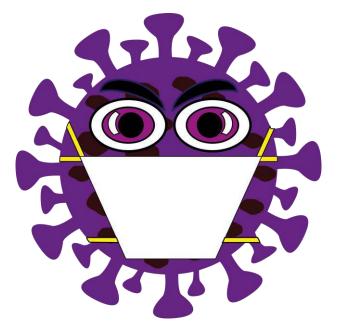
Le coc

Refusal

Demand

### **OBJECTIVES OF THIS PRESENTATION**

- Provide background and education on COVID-19 and its vaccines
- To dispel common myths related to the virus or the vaccines
- Increase comfort level with receiving the vaccine
- Reinforce mitigation and preventative strategies
- Explain where and when to receive the vaccine
- Answer any unresolved questions
- Highlight quality resources for further research and discussion
- Ideally, empower you to share this information with clients, family, friends, and other members of your community



### **ROOTS OF VACCINE HESITANCY & ITS IMPACT**

- Lack of accurate information
- Abundance of misinformation
- Fear or "fatalismo"/fatalism
- Mistrust of the medical system due to discrimination and medical racism
  - "Medical racism is the systematic and wide-spread racism against people of color within the medical system. It includes both the racism in our society that makes Black people less healthy, the disparity in health coverage by race, and the biases held by healthcare workers against people of color in their care" – YWCA
  - Polls show vaccine hesitancy is highest for African-Americans, followed by Latinos. Distrust in medicine and research may be rooted in experiences extending back to slavery and continuing to the present day.
  - Particularly worrisome because BIPOC communities have been catching the coronavirus, getting severely ill, and dying from it at higher rates than their white counterparts.



#### COVID-19 Cases, Hospitalizations, and Deaths, by Race/Ethnicity

Rate ratios compared to White, Non-Hispanic persons	American Indian or Alaska Native, Non-Hispanic persons	Asian, Non-Hispanic persons	Black or African American, Non-Hispanic persons	Hispanic or Latino persons
Cases <sup>1</sup>	1.8x	0.6x	1.4x	1.7x
Hospitalization <sup>2</sup>	4.0x	1.2x	3.7x	4.1x
Death <sup>3</sup>	2.6x	1.1x	2.8x	2.8x

Race and ethnicity are risk markers for other underlying conditions that affect health, including socioeconomic status, access to health care, and exposure to the virus related to occupation, e.g., among frontline, essential, and critical infrastructure workers.

#### How to Slow the Spread of COVID-19



Ğ



Wear a mask

Stay 6 feet apart

Wash your hands





References on back

CS319360-A 11/30/2020

# VACCINE HESITANCY IN AFRICAN AMERICANS IS ROOTED IN MEDICAL EXPLOITATION AND MISTREATMENT.

- Deliberately not treating 400 African-American men for syphilis between 1932 and 1972
- Using Henrietta Lacks' cancer cells for research without her knowledge
- Forced sterilizations, especially from the North Carolina Board of Eugenics in the 1950s
- Unequal treatment in the modern-day healthcare treatment.
- Lack of an FDA-approved vaccine for HIV, which continues to disproportionately affect people of color.
- Racial diversity within COVID-19 clinical trials.

#### Table 1: Race/Ethnicity of Participants in Pfizer-BioNTech and Moderna COVID-19 Vaccine Clinical Trials

	Total US Population Age 16+	Pfizer-BioNTech*	Moderna
Total	258 million	40,277	27,817
Race			
White	73.6%	81.9%	79.4%
Black	12.3%	9.8%	9.7%
Asian	5.9%	4.4%	4.7%
American Indian/Alaska Native	0.8%	0.6%	0.8%
Native Hawaiian or Other Pacific Islander	0.2%	0.2%	0.2%
Ethnicity			
Hispanic	17.6%	26.2%	20.0%
Non-Hispanic	82.4%	73.2%	79.1%

### ROLE OF BLACK DOCTORS IN ADDRESSING VACCINE HESITANCY

https://m.facebook.com/story.p hp?story\_fbid=1010428278148 3395&id=2417357

- BIPOC doctors and medical staff are trusted sources of information.
- Several have used their social media platforms to dispel myths, address hurt, and instill trust in the vaccines.
- Doctors to follow:
  - YouTube: Dr. Robert Drummond
  - TikTok: @drkristamarie
  - Facebook: Dr. Dave Montgomery

### **ADDITIONAL INFORMATION TO OVERCOME MISTRUST**

- Dr. Kizzmekia Corbet, an African-American woman, is a key scientist behind COVID-19 vaccine development. She is a part of a team at NIH that worked with Moderna.
- The task force at the National Medical Association (NMA) reviewed the Phase 3 clinical trial data in order to determine any potential for unfavorable health outcomes for African-Americans. They determined the following:
  - Ten percent of people who enrolled in both the Pfizer and Moderna clinical trials were Black, equaling more than 4,400 and 3,000 people, respectively.
  - Both the percentage and number of Black people enrolled are sufficient to have confidence in health outcomes of the clinical trials.
  - Persons receiving the vaccine were > 94% less likely to develop COVID-19 infection as compared to the placebo group.
  - Efficacy and safety were observed and consistent across age, gender, race, ethnicity and adults over 65 years of age.

### **MEDICAL ETHICS OF VACCINE RESEARCH TODAY**

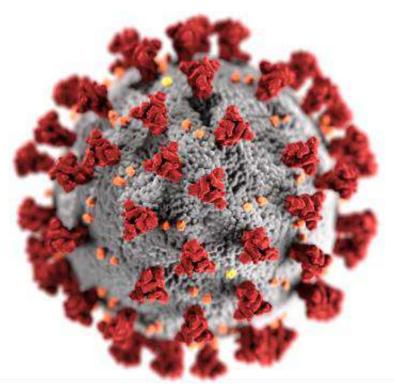
#### Prior to study

- Each study is carefully developed by a protocol team with a range of expertise
- Clinical trial protocol development is a stepwise process, which begins with presenting the protocol to an independent group of scientists not associated with the trial
- All research sponsored by the U.S. government must maintain the regulations and guidelines of the U.S. Department of Health and Human Services Office for Human Research Protections (OHRP) and the Food and Drug Administration (FDA)
- When a promising vaccine is identified, the development, production, and evaluation is carefully scrutinized by the FDA in a multi-step process.
- In addition to oversight from the FDA, the clinical protocol must be reviewed by the NIAID Institutional Review Board (IRB)
- The IRB also reviews the informed consent documents and make sure they are accurate and complete.
  - This means that the volunteer has to be educated and informed about all the details of the study and their rights
  - Even after the study begins, the volunteer is always in control of what happens next. Each subject is free to stop the study at any time
- While still in the planning stage, protocols are reviewed by a Community Advisory Board (CAB)

#### During and after the study

- The regulatory and oversight functions continue during the performance of the study. Investigators are required to submit regular reports to the sponsor of the study, the FDA, and the IRB
- In addition, an independent Data and Safety Monitoring Board (DSMB) of scientists, physicians, statisticians, ethicists, and community representatives evaluates the progress of studies where some subjects receive placebo rather than vaccine.
- The FDA, the IRB, the DSMB, or the investigators supervising the study all have the authority to stop the trial if there is evidence of concern for human subject protection.

### WHAT IS COVID-19?



s for Disease Control and Prevention, Alissa Eckert, Dan Higgins. | GAO-20-472SP

- First, we must ask, "What is a coronavirus?"
- Coronaviruses are common and known for decades
- You've probably had a coronavirus! Four common types cause the common cold and other generally mild upper respiratory diseases.
- Coronaviruses are named for their protein spikes, as they resemble a crown ("corona" comes from the Latin word for "crown")
- Coronaviruses are common in different animals.
   Occasionally, an animal coronavirus can infect humans. This is called a "spill-over event".

### **OTHER WELL-KNOWN CORONAVIRUS ILLNESS**

Virus Name	Area Impacted	When?	Global Impact of Disease	Suspected Animal Origin
SARS-CoV (Severe Acute Respiratory Syndrome)	First appeared in Southern China in Nov. 2002. Then spread to more than 24 countries in Asia, Europe, North America, and South America	2002 - 2004	8,098 infected and 774 deaths	Bats
MERS-CoV (Middle East respiratory syndrome)	First detected in Saudi Arabia. Spread to 27 countries in the Middle East, Africa, & South Asia	2012 - present	2,442 infected and 858 deaths	Camels

### WHAT ABOUT COVID-19? (SARS-COV-2)

#### Why is it called COVID-19?

CO (<u>Co</u>rona), VI (<u>Vi</u>rus) D (<u>D</u>isease) discovered in 20<u>19</u> = COVID-19

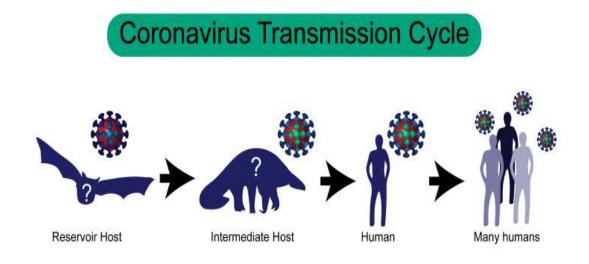
#### Where did this virus come from?

- The first known cases occurred in Wuhan, China, where many people became sick with a viral pneumonia. Most of those who presented with the disease had attended a local market.
- It is believed that an animal at this market may have had the disease. Bats are a known reservoir of coronaviruses.
- The World Health Organization (WHO) has now begun an investigation to determine the origin of the disease.

#### How is this virus different from SARS and MERS?

People infected with COVID-19 are infectious during a pre-symptomatic period of about 2-3 days

### WHY DO THESE ANIMALS KEEP GETTING US SICK!?



- Diseases that originate in animals and infect humans are called "Zoonotic Diseases"
- 6 out of every 10 infectious diseases in people are zoonotic
- Zoonotic diseases include:
  - Zoonotic Influenza, Lyme Disease, Rabies, Ebola, HIV (originally), and emerging Coronaviruses
- Increased populations and encroachment on wild lands has increased the potential for zoonotic diseases to spread to and among humans.
- The health of our planet and its eco-systems is directly linked to the health of humanity.
- More investment in monitoring and containment of zoonotic diseases before they spread is needed.

### WHAT IS A VACCINE? AND WHY DO THEY WORK?

A vaccine contains a dead, weakened, or just a small piece of the illness-causing pathogen.

A vaccine creates an immune response without actually infecting you with the disease.

You <u>CANNOT</u> get the disease from a vaccine

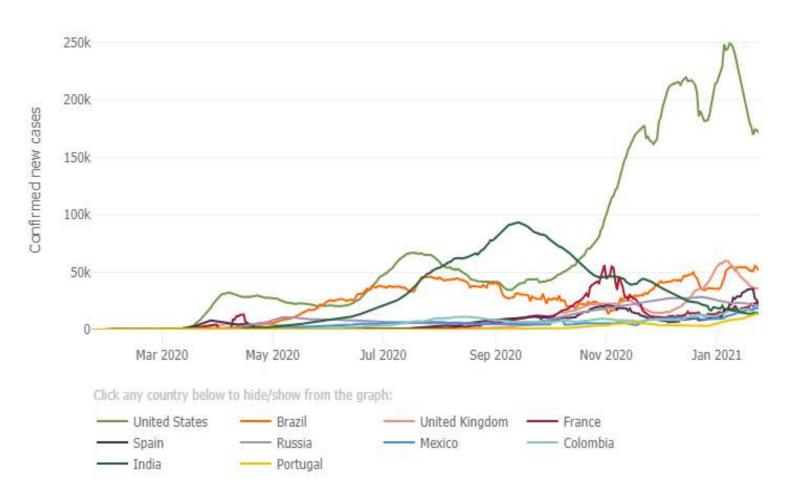
- How Vaccines work (in general): <u>https://youtu.be/-</u> <u>muloWofsCE</u>
- Things to know about mRNA vaccines: <u>https://youtu.be/w4sUuFBEo2g</u>



#### TOLL SO FAR...

- Over 97 million cases of COVID-19 globally.
- Over 24 million of these are in the US
- Over 1 million in Illinois.
- Over 2 million deaths globally
- Over 400,000 in the US,
- Over 20,000 in Illinois.

The US only accounts for 4.25% of the world's population but 25% of its COVID-19 infections.

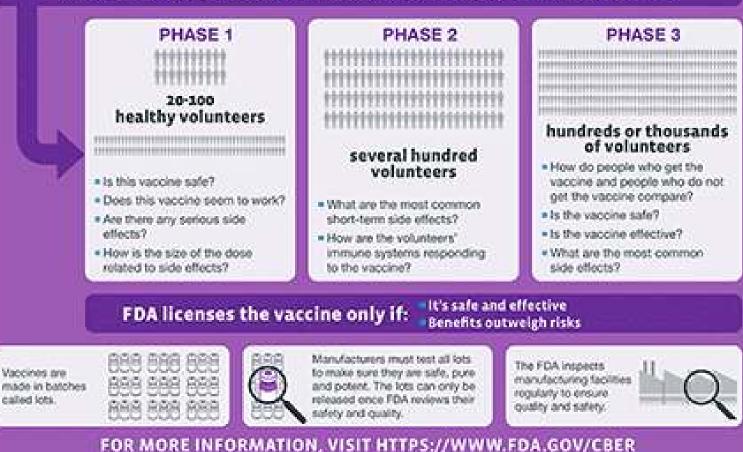


### **KEY DATES FOR COVID-19 VACCINE DEVELOPMENT**

- Late 1990s: Research begins on mRNA and viral vector vaccines
- 2002: SARS-Cov Pandemic
- 2010 present: mRNA vaccines researched and developed for influenza, Zika, and rabies
- 2012: MERS-Cov Pandemic
- 2019: Ebola vaccine created using viral vector platform
- Dec 2019: People in the city of Wuhan, China contract a pneumonia-like illness after visiting a local market.
- Jan 11: Professor Zhang Yongzhen and team successfully sequence the virus's genome and shares results with the world.
- Jan 20: WHO confirms human-to-human transmission, while first cases are confirmed in USA and South Korea
- Feb 24: Moderna/NIH starts Phase 1 of its vaccine trial. Oxford-AstraZeneca and Pfizer-BioNTech follow shortly after
- Feb 29: First US death from COVID-19
- Mar 11: WHO declares a pandemic
- July: Positive results from Phase 1 and 2 prompt Moderna, Pfizer-BioNtech, and Oxford-AstraZeneca to enter Phase 3 trials
- September: Johnson & Johnson begins Phase 3 trails
- Dec 10: FDA approves Pfizer-BioNtech
- Dec 14: First American receives their first COVID-19 vaccination
- Dec 17: FDA approves Moderna/NIH vaccine

# How a new vaccine is developed, approved and manufactured

The Food and Drug Administration (FDA) sets rules for the three phases of clinical trials to ensure the safety of the volunteers. Researchers test vaccines with adults first.



CLOSER LOOK AT CLINICAL TRIALS FOR THE COVID-19 VACCINES

#### Table 1: Race/Ethnicity of Participants in Pfizer-BioNTech and Moderna COVID-19 Vaccine Clinical Trials

	Total US Population Age 16+	Pfizer-BioNTech*	Moderna
Total	258 million	40,277	27,817
Race			
White	73.6%	81.9%	79.4%
Black	12.3%	9.8%	9.7%
Asian	5.9%	4.4%	4.7%
American Indian/Alaska Native	0.8%	0.6%	0.8%
Native Hawaiian or Other Pacific Islander	0.2%	0.2%	0.2%
Ethnicity			
Hispanic	17.6%	26.2%	20.0%
Non-Hispanic	82.4%	73.2%	79.1%

Group	Group Size	Number Infected	Infection Risk	If in U.S. Population
Placebo	21,830	162	$\frac{162}{21830} = 0.74\%$	2,427,200 ( about 2.5 million)
Vaccine	21,830	8	$\frac{8}{21830} = 0.04\%$	131,200 (131 thousand)

# WHAT DO SCIENTISTS MEAN WHEN THEY SAY THE VACCINES ARE 95% EFFECTIVE

### **COVID-19 VACCINE COMPARISONS**

Name of Vaccine	Type of Vaccine	Date Approved by the FDA	Number of Doses Required	Common Side Effects	Level of Protection
Pfizer- BioNTech	mRNA	December 10, 2020	2 doses. 2 <sup>nd</sup> dose 21 days* after first	<ul><li>Pain/swelling at injection site</li><li>Low grade fever</li></ul>	95% effective
Moderna- NIH	mRNA	December 17, 2020	2 doses. 2 <sup>nd</sup> dose 28 days* after first	Same	95% effective
Johnson & Johnson	Viral Vector	Mid to late February 2021	1 dose	Same	90% effective

### **KEY THINGS TO KNOW ABOUT THE NEW VARIANTS....**

- The vaccines will still help protect you. Although drop in potency may occur, the most recent research suggests the Moderna and Pfizer vaccines will still be effective against the COVID-19 variants.
- Mutations in viruses are common and expected. Virus variants occur when there is a mutation to the virus' genes. The National SARS-CoV-2 Strain Surveillance ("NS3") team in monitoring the situation.
- Community immunity is key. Increasing By increasing the number of people who get vaccinated we can minimize the spread of the virus and the the mutation process.
- Other mitigation tactics are still effective. Practice social distancing, wear your mask, wash or sanitize your hands, and ventilate your space whenever possible.
- Stay informed. Check WHO, CDC, and local health department websites for the most upto-date information.

### SIDE BY SIDE COMPARISON

- UK & South African variants appear to be more infectious (spreads to more people after exposure)
- UK may also cause more severe illness, but that is not confirmed
- P1 variant may affect how long immunity lasts, but that is also not confirmed

Name(s)	Distribution	Notable mutations	Potential effects on transmissibility, virulence, and immune escape
B.1.1.7, 201/501Y.V1, VOC202012/01	First identified in late December in the UK, it has spread to 62 countries in Europe, Asia, the US, and elsewhere.	17 recent mutations, in- cluding N501Y, P681H, HV 69–70 deletion, and four more on the spike protein; the ORF8 Q27stop mutation out- side the spike protein	<ul> <li>Thought to have greater than 40 percent increased transmissibility</li> <li>Increased virulence sug- gested but remains unresolved</li> <li>Little concern around current vaccine efficacy</li> </ul>
B.1.351, 20C/501YV2	Identified in late December in South Africa and now spot- ted in Africa, Europe, Asia, and Australia	21 mutations, including N501Y, E484K, and K417N on the spike protein, and ORF1b de- letion outside the spike protein	<ul> <li>Suggested to have heightened transmissibility</li> <li>No evidence of in- creased virulence</li> <li>In vitro studies suggest a potential for immune es- cape following natural in- fections and a small effect on the potency of vaccine-induced antibodies</li> </ul>
P.1. 20J/501Y.V3	Discovered in travel- ers from Brazil during screening at a Japan- ese airport in January; now known to widely circulate in Brazil's Amazonas state and also observed in the Faroe Islands, South Korea, and the US	17 amino acid changes, including N501Y, E484K, and K417N on the spike protein; ORF1b deletion outside the spike protein	<ul> <li>Effect on transmissibil- ity and/or virulence unknown</li> <li>Anecdotes of reinfec- tions reported, but poten- tial for immune evasion remains unresolved</li> </ul>

### **NATURAL IMMUNITY**

VS.

- Once you are exposed to the virus, you will either start developing symptoms or remain asymptomatic
- If you do develop symptoms, you are at risk for severe infection and even death
- Your immune system will take days to weeks to start producing B cells that can then go ahead and produce antibodies that can recognize and neutralize the viral particles
- During severe infection, by the time the immune system starts making neutralizing antibodies, the infection is widespread and too far along for the immune system to combat

### **VACCINE IMMUNITY**

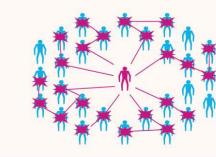
- The mRNA vaccine allows us to develop immune memory to the SARS-COV-2 virus without putting us in any danger
- Once the vaccine introduces our body to the spike protein, our immune response develops a memory of the antigen
- Then when we encounter the virus, we are already primed to fight it and our immune system will elicit a much faster and better response to it.
- In vaccine immunity, the dose, route, and effectiveness of the vaccines can be controlled to encourage appropriate immune responses.

### WHAT IS COMMUNITY (AKA "HERD") IMMUNITY THROUGH VACCINATION

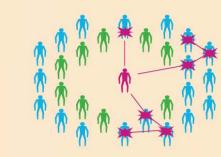
https://youtu.be/tC47JjakPSA

The percentage of the population required to achieve herd immunity through vaccination is still unknown, but most estimates are between 70% to 90%.

### **HOW HERD IMMUNITY WORKS**



When no one has immunity, contagion has many opportunities to spread quickly.



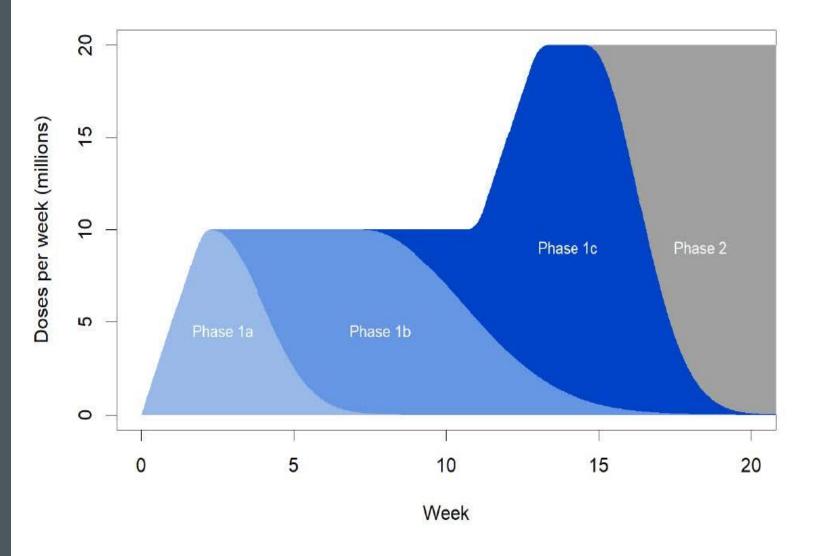


The more immunity we have in the system, the less often contagion comes into contact with the susceptible.

Spread of contagious disease is contained.



## COVID-19 VACCINE ROLL OUT IN ILLINOIS







#### FRONTLINE ESSENTIAL WORKERS

#### **1.3 MILLION IN ILLINOIS**

- Including, but not limited to, the following occupations: • First responders: Fire, law enforcement, 911 workers, security personnel, school officers • Education: Teachers, principals, student support, student
- aids, day care worker • Food and agriculture: Processing, plants, veterinary health,
- livestock services, animal care
- Manufacturing: Industrial production of good for distribution to retail, wholesale or other manufactures Corrections workers and inmates: Jail officers, juvenile facility staff, workers providing in-person support, inmates USPS workers
- Public transit workers: Flight crew, bus drivers, train conductors, taxi drivers, para-transit drivers, in-person support, ride sharing services
- Grocery store workers: Baggers, cashiers, stockers, pickup, customer service
- Shelters and day care staff: Homeless shelter, women's shelter, adult day/drop-in program, sheltered workshop, psycho-social rehab

#### PHASE 1B



RESIDENTS AGE 65 AND OVER

**1.9 MILLION IN ILLINOIS** 

### WHAT TO DO AFTER RECEIVING THE VACCINE

#### Rest and hydrate!

- Your body is <u>not</u> infected with the virus, but it <u>is</u> building immunity. Take it easy and drink plenty of liquids.
- Continue to wear a mask, social distance, and wash your hands.
  - This will protect you and others while you are building immunity

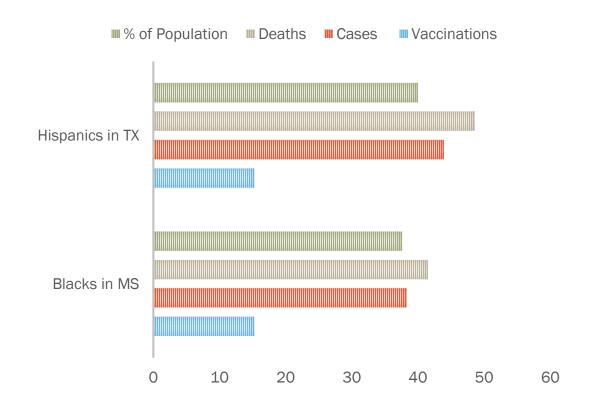
#### Share your story.

- Humans are social creatures. Others will feel more comfortable getting vaccinated when they see you.
- Monitor and report your side effects
  - Researchers want to know how everyone is doing after their vaccinations.
  - Learn more about vaccine safety monitoring: <u>https://www.cdc.gov/coronavirus/2019-</u> <u>ncov/vaccines/safety.html</u>

WAIT! WHY DO I STILL NEED TO WEAR A MASK AFTER GETTING VACCINATED?

- No vaccine is 100% effective (although 95% is pretty darn close)
- It takes up to 5-6 weeks to build protection to the virus after being vaccinated.
- Although the vaccine will prevent you from getting sick, you may still encounter the virus in the community and spread it others before your body has the chance to kill it.
  - This is especially concerning people who are immunocompromised or may otherwise be unable to be vaccinated.
- Helps protect you and yours from other respiratory illnesses like flu or new COVID-19 variants
- Nobody out in public knows you were vaccinated! Let's make sure everyone feels as safe and protected as possible until this pandemic is officially OVER!
- Masks show you care about others ③

### **VACCINE DISPARITIES BY RACE**



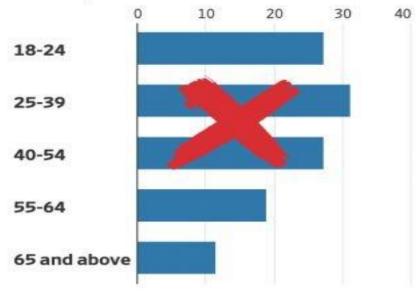
- Currently, there is no national plan for vaccine distribution.
- Each state has its own plan, which is implemented at the county level.
- With few exceptions\*, everyone is responsible for signing themselves up for vaccination.
- Making everyone sign-up themselves requires:
  - Trust in the medical system
  - Ability to travel to whatever site, whenever it is open
  - Flexible work and family schedules

## YES, AND.... A MAJORITY OF PEOPLE STILL WANT THE VACCINE

Original Version (emphasizes the few - unhealthy behavior)

#### A Matter of Age

Percentage of unvaccinated adults by age group who say they probably won't or definitely won't take the Covid-19 vaccine



#### **Behavioral Science Version**

(emphasizes vast majority - healthy behavior)

#### A Matter of Age

Percentage of unvaccinated adults by age who say they probably will or <u>definitely will</u> get the COVID-19 vaccine



Source: U.S. Census Bureau

# WHERE TO GO FOR COVID-19 VACCINATION

The first step is to complete the interest/registration form with your local health department. Most Kids Above All workers are considered 1B Workers. **Most counties are asking for proof of employment.** When signing up, select the group that best fits your profession.

Chicago: https://covidcoach.chicago.gov/ Cook: https://redcap.dph.illinois.gov/surveys/?s=PP8PJNFHMW Lake: https://allvax.lakecohealth.org/s/?language=en\_US Kane (English): https://redcap.dph.illinois.gov/surveys/?s=X4METTTHEK Kane (Spanish): https://redcap.dph.illinois.gov/surveys/?s=T3R33CJD34 DuPage: https://dupagehealth.jotform.com/200694254415049 McHenry: https://redcap.dph.illinois.gov/surveys/?s=W9ENTNFWE9 Will:

https://survey123.arcgis.com/share/14f1fac7773945a0a8cf99a96b3d804e?portalUrl=https://gis.willcountyilli nois.com/portal

Lake (Indiana)\*: <a href="https://www.coronavirus.in.gov/vaccine/">https://www.coronavirus.in.gov/vaccine/</a>

Note: at this time Lake County, Indiana is not allowing 1B or 1C populations to register for the vaccine; however, KAA residents of Indiana may register for the vaccine in the Illinois county they work in.

# VACCINE RECIPIENT TESTIMONIAL

 $\odot$ ....



# **KEY MESSAGES**

- COVID-19 infection and death rates have disproportionately affected Black, Latinx, and in Indigenous people
- Vaccine hesitancy is normal and often rooted in racism and adverse medical experiences
- Trusted voices decrease vaccine hesitancy
- Vaccines are developed with extremely high safety standards, transparency, and accountability
- Corona viruses are very common and have been around for a long time.
- Previous corona virus pandemics contributed knowledge on how to prevent and treat COVID-19
- mRNA and viral vector vaccines are new, but their research is not
- The COVID-19 vaccines are safe and very effective
- The COVID-19 vaccine <u>cannot</u> give you COVID-19, but it is important to continue wear a mask, wash your hands, and keep your distance
- It is up to all of us to assist our state in the roll-out and reach community immunity
- Community immunity protects the people that cannot receive the vaccine and is essential to reopening the economy and society

# **RECOMMENDED READING**

#### COVID-19 Dashboards

- WHO: <u>https://covid19.who.int/</u>
- CDC: <u>https://covid.cdc.gov/covid-data-tracker/#datatracker-home</u>
- John Hopkins University: https://coronavirus.jhu.edu/map.html

#### Addressing Vaccine Hesitancy or Disparity

- https://www.npr.org/sections/health-shots/2021/01/19/956015308/you-cant-treat-if-you-cant-empathize-black-doctors-tackle-vaccinehesitancy
- <u>https://www.propublica.org/article/vaccinating-black-americans</u>
- https://www.npr.org/2021/02/01/962905232/many-latinos-are-hesitant-to-get-a-covid-19-vaccine
- https://abcnews.go.com/Health/family-tuskegee-syphilis-study-participant-theyll-covid-19/story?id=74787123
- https://www.nytimes.com/2021/02/02/us/coronavirus-today.html
- https://www.kff.org/coronavirus-covid-19/issue-brief/latest-data-covid-19-vaccinations-cases-deaths-race-ethnicity/

#### Medical Racism

https://www.aamc.org/news-insights/racism-and-health-reading-list

# **RECOMMENDED LISTENING & WATCHING**

- Deep dive into mRNA and viral vector vaccines: <u>https://edhub.ama-assn.org/jn-learning/video-player/18547208</u>
- How vaccines in general work: <u>https://youtu.be/3aNhzLUL2ys</u>
- How the mRNA vaccines were created: <u>https://youtu.be/-92HQA0Gcl8</u>
- Fun and informative epidemiolocal podcast: <u>https://podcasts.apple.com/us/podcast/covid-19-chapter-13-vaccines-take-2/id1299915173?i=1000503178938</u>

# LINKS TO FREQUENTLY ASKED QUESTION SITES

- CDC: <u>https://www.cdc.gov/coronavirus/2019-ncov/vaccines/faq.html</u>
- FDA: <u>https://www.fda.gov/emergency-preparedness-and-response/mcm-legal-regulatory-and-policy-framework/pfizer-biontech-covid-19-vaccine-frequently-asked-questions</u>
- IDPH: <u>https://www.dph.illinois.gov/covid19/vaccine-faq</u>
- IDHS: <u>https://www.dhs.state.il.us/page.aspx?item=129735</u>
- Cook County Public Health Department: <u>https://cookcountypublichealth.org/communicable-diseases/covid-19/frequently-asked-questions/</u>
- City of Chicago: <u>https://www.chicago.gov/city/en/sites/covid19-vaccine/home/faqs.html</u>

Still have questions or concerns? We're here to help!

Catherine Enright <u>cenright@kidsaboveall.org</u>

Charlotte Erickson <a href="mailto:cerickson@kidsaboveall.org">cerickson@kidsaboveall.org</a>

Sangeeta Solshe <u>ssolshe@kidsaboveall.org</u>

### SOURCES

- https://www.chicagotribune.com/coronavirus/ct-viz-coronavirus-timeline-20200507-uvrzs32nljabrpn6vkzq7m2fpqstory.html
- <u>https://coronavirus.jhu.edu/</u>
- <u>https://covid19.who.int/</u>
- https://www.nytimes.com/interactive/2020/health/oxford-astrazeneca-covid-19-vaccine.html
- https://www.cdc.gov/mmwr/volumes/70/wr/mm7002e1.htm
- https://www.npr.org/sections/coronavirus-live-updates/2020/11/30/939000489/a-covid-19-vaccine-has-come-quick-butexpert-says-thats-no-reason-to-fear-it
- <u>https://www.npr.org/sections/health-shots/2020/12/12/945288710/what-you-need-to-know-as-the-first-covid-19-vaccine-heads-your-way</u>
- https://khn.org/news/article/5-reasons-to-wear-a-mask-even-after-youre-vaccinated/
- <u>https://www.cdc.gov/coronavirus/2019-</u> <u>ncov/vaccines/expect/after.html#:~:text=In%20most%20cases%2C%20discomfort,after%20a%20few%20days</u>.
- <u>https://www.pbs.org/wgbh/nova/article/herd-immunity/</u>

# **SOURCES CONTINUED**

- https://www.npr.org/sections/health-shots/2021/01/19/956015308/you-cant-treat-if-you-cant-empathize-blackdoctors-tackle-vaccine-hesitancy
- https://www.npr.org/2011/12/28/144375339/a-brutal-chapter-in-north-carolinas-eugenics-past
- https://www.nytimes.com/2020/12/13/learning/what-does-95-effective-mean-teaching-the-math-of-vaccineefficacy.html
- https://www.hopkinsmedicine.org/health/conditions-and-diseases/coronavirus/coronavirus-vaccines-infographic
- https://www.ucdavis.edu/sites/default/files/2020/herd\_immunity\_3.png
- https://www.who.int/news-room/q-a-detail/herd-immunity-lockdowns-and-covid-19
- https://www.dph.illinois.gov/covid19/vaccine-faq
- https://www.chicagotribune.com/coronavirus/ct-illinois-covid-19-next-phase-roundup-20210113ek4s7yuizrfp3bciktyy32k4ue-htmlstory.html
- https://www.nytimes.com/interactive/2020/health/johnson-johnson-covid-19-vaccine.html
- https://www.hhs.gov/coronavirus/explaining-operation-warp-speed/index.html

# **MORE SOURCES**

- https://www.cdc.gov/media/releases/2019/s0506-zoonotic-diseases-shared.html
- https://www.google.com/amp/s/www.hopkinsmedicine.org/health/conditions-and-diseases/coronavirus%3famp=true
- https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/animals.html
- https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200221-sitrep-32-covid-19.pdf?sfvrsn=4802d089\_2
- http://sitn.hms.harvard.edu/flash/2020/covid-19-emerging-viral-diseases-journey-animals-humans/
- <u>https://www.cdc.gov/sars/about/faq.html</u>
- <u>https://www.who.int/health-topics/middle-east-respiratory-syndrome-coronavirus-mers#tab=tab\_1</u>
- https://www.niaid.nih.gov/clinical-trials/vaccine-clinical-studies-safeguards
- <u>https://www.dph.illinois.gov/sites/default/files/COVID19/IL%20COVID-19%20Vaccination%20Plan%20V4.20210110.pdf</u>
- <u>https://www.dph.illinois.gov/covid19/vaccination-plan</u>