# Historical Legacies: Conquering COVID & Combating the "Infodemic"



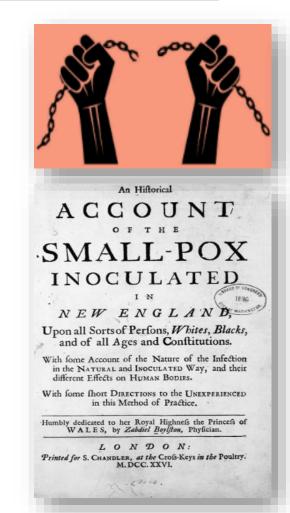
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July 2021

"Our lives begin to end the day we become silent about things that matter."

Reverend Dr. Martin Luther King

### Historical Legacies: A Slave's Role in Vaccine Development

- Smallpox epidemic of 1721: Onesimus, an enslaved man in Boston, introduced the practice of "variolation" to his slaveowner, Minister Mather
- \*Variolation, based on a medical procedure Onesimus experienced as a child in Africa, was a potential way to keep people from getting sick with a virus
- Initially residents rejected variolation because
  - (1) "Foreign and African" concept
  - (2)Belief that smallpox death and destruction was simply Gods will



#### Sources

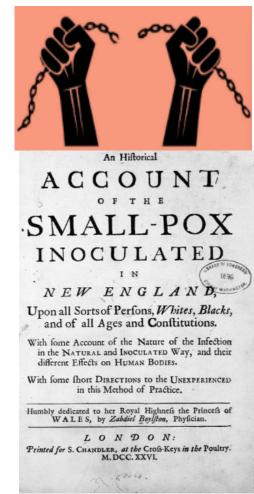
- \*How an Enslaved African Man in Boston Helped Save Generations from Smallpox HISTORY
- \*An African slave taught America to vaccinate from smallpox Quartz Africa (qz.com)

### Historical Legacies: A Slave's Role in Vaccine Development

- Despite objections, Minister Mather & Dr. Zabdiel Boylston applied the technique & significantly reduced the death and spread of smallpox
- In 1796, Edward Jenner developed a smallpox vaccine based on the above that was so effective the vaccination became mandatory in Massachusetts
- \*Onesimus' knowledge passed on & saved hundreds of lives—and led to the eventual eradication of smallpox.

#### Sources

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### 30 Year Timeline of COVID-19 vaccine technology & key scientists

First iPhone





Dr. Katalin Karikó began studying mRNA technology for humans at Temple, then UPenn facebook

Launches



Dr. Jason McLellan, specializing in structural biology, joins Dr. Graham's lab to study protein modification approach to vaccines

Dr. Graham/Dr. McLellan solved way to modify RSV virus prefusion spike protein to allow for successful structurebased vaccine

Dr. Karikó joins BioNTech to oversee mRNA research





Dr. McLellan (UT Austin) and Dr. Andrew Ward (Scripps Research) figured out coronavirus prefusion spike structure Dr. Graham partners

Dr. Graham partners with Moderna for mRNA MERS vaccine

2000

SARS-CoV-1

Syndrome)

2005

2012

2014

2020

1990s



2002

(Severe Acute Respiratory



2008

2013



2017

Dr. Barney Graham, head of Vanderbilt AIDS Vaccine Evaluation Unit, recruited as one of founders of NIH Vaccine Research Center

Dr. Karikó and Dr. Drew Weissman created successful synthetic mRNA delivery system



MERS (Middle East Respiratory Syndrome)

Dr. Kizzmekia Corbett appointed to NIH Vaccine Research Center after years of working on viruses and vaccines



Dr. Graham and Dr. Corbett get genetic code for virus to create structure-based SARS-CoV-2 vaccine with Moderna

First camera phone

Twitter launches

@ScrippsSHARCs <a href="https://cen.acs.org/pharmaceuticals/vaccines/tiny-tweak-behind-COVID-19/98/i38">https://cen.acs.org/pharmaceuticals/vaccines/tiny-tweak-behind-COVID-19/98/i38</a>

### Is the COVID-19 vaccine safe since it was made quickly?

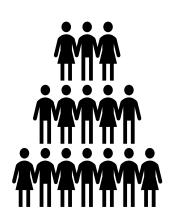


- \*Prior to the pandemic, similar virus vaccines were in development for years.
- \*The vaccine development process, in addition to advances in technology and manufacturing processes allowed faster COVID-19 vaccine production, but all required steps were followed. No steps or testing have been skipped.
- \*A comprehensive **U.S.** vaccine safety system that ensures the COVID-19 vaccine is safe is in place.
- \*In addition to multiple systems from text messaging to phone alerts, California has a task force for experts in the Western United States that reviews and continuously monitors safety concerns.

### Is the COVID-19 Vaccine Safe?



- \*Thousands of African American men and women of many ages, and others who have health conditions, took the COVID-19 vaccine to make sure it was safe for everyone in clinical trials. Historically black colleges also supported & participated in the clinical trials.
- \*Disproportionately impacted populations including older adults, those with multiple/pre-existing conditions and minorities were engaged thru churches, community organizations, colleges and other community-based approaches.
- \*The National Medical Association (NMA) representing Black physician experts also established a COVID-19 taskforce which includes conducting clinical trial data reviews. The NMA also established a partnership with the National Urban League for safety & equitable distribution.



## Race/Ethnicity in COVID-19 Clinical Trials

Clinical trials included a broad range of diverse participants



#### Moderna

	Racial/Ethnic group
20.5%	Hispanic/Latino
9.7%	Black
4.7%	Asian
2.1%	Multiracial
0.8%	American Indian
0.2%	Pacific Islander

#### Pfizer

%	Racial/Ethnic group
26.2%	Hispanic/Latino
9.8%	Black
4.4%	Asian
2.5%	Multiracial
0.6%	American Indian
0.2%	Pacific Islander

### Johnson & Johnson (Janssen

%	Racial/Ethnic group
45.0%	Hispanic/Latino
17.2%	Black
3.5%	Asian
5.4%	Multiracial
8.3%	American Indian
0.3%	Pacific Islander

## Is it safe to get the vaccine if I want to have a baby?



- \*\* Yes it is safe. If you are trying to become pregnant now or want to get pregnant in the future, you may get a COVID-19 vaccine
- \*There is currently no evidence that COVID-19 vaccination causes any problems with pregnancy, including the development of the placenta.
- In addition, there is no evidence that fertility problems are a side effect of any vaccine, including COVID-19 vaccines.



### Will a COVID-19 vaccine alter my DNA?

- No. COVID-19 vaccines do not change or interact with your DNA in any way.
- Current COVID-19 vaccines deliver instructions to our cells to start building protection against the virus
- However, the vaccine never enters the nucleus of the cell, which is where our DNA is kept.
- This means the genetic material in the vaccines cannot affect or interact with our DNA in any way.
- All COVID-19 vaccines work with the body's natural defenses to safely develop immunity to disease.
- Covid-19 vaccines, called mRNA or messenger vaccines- not DNA vaccines, do not use the live virus that causes COVID-19



# Six Ways to Help Build COVID-19 Vaccine Confidence



- Encourage leaders in your family, community, or organizations to be vaccine champions.
- 2) Have <u>discussions with your friends and family</u> about vaccination to understand their perspective and encourage their decision to vaccinate.
- 3) Share key messages that promote action through multiple trusted channels.
- 4) Help educate people about <u>COVID-19 vaccines</u>, including how they were developed and their intense safety monitoring, and how you can talk to others about the vaccines.
- 5) Learn more about <u>finding credible vaccine information</u>. When you come across COVID-19 information, cross-check with CDC.gov and learn how to respond to misinformation you encounter.
- 6) Make your decision to get vaccinated visible and celebrate it!

### **Additional Resources**

Los Angeles County Department of Public Health for Vaccine Sites <a href="http://www.publichealth.lacounty.gov/media/Coronavirus/vaccine/index.htm">http://www.publichealth.lacounty.gov/media/Coronavirus/vaccine/index.htm</a>

Masks (Flyers in various languages)

http://publichealth.lacounty.gov/acd/ncorona2019/masks/

COVID-19 Test Sites (includes Black Churches & Providers) https://covid19.lacounty.gov/testing/



### **African American Resources**

- \* The Conversation (COVID Vaccines) for Black Americans by Black American healthcare professionals <a href="https://www.greaterthancovid.org/theconversation/toolkit/-">https://www.greaterthancovid.org/theconversation/toolkit/-</a>
- Black COVID Facts <a href="https://blackcovidfactssd.org/experts/dr-rodney-hoo">https://blackcovidfactssd.org/experts/dr-rodney-hoo</a>
- Black Coalition Against COVID www.BlackCoalitionagainstCOVID.org/

#### **Videos**

- # Happy Birthday, Granny https://vimeo.com/574495934/f619a5b3b7
- Of Reasons and Rumors English: <a href="https://vimeo.com/574033678/adba2874da">https://vimeo.com/574033678/adba2874da</a>
- Community Immunity Rap- Hop Hop Public Health <a href="https://www.youtube.com/watch?v=wB9RSffVys4">https://www.youtube.com/watch?v=wB9RSffVys4</a>

### Continue to take steps to stop the spread

- Wear a face covering over your nose & mouth, particularly when unsure if everyone around you is fully vaccinated
- Consider avoiding close contact indoors& crowded spaces
- Wash your hands often
- Clean & disinfect frequently touched surfaces to reduce potential illness overall



