

# **COVID-19 Basics**

## **The Vaccine is Here**

### **Now What?**

**January 2021**

# Objectives:



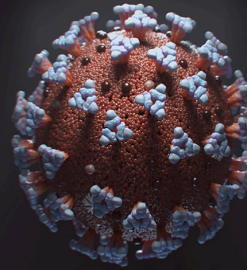
- 1. Describe the COVID-19 pandemic background**
- 2. Understand the COVID-19 vaccine development**
- 3. Explain why the COVID-19 vaccine is important**

## Current Statistics (as of 1/03/2021)\*

COVID-19 reported cases worldwide	84,985,054
COVID-19 reported cases in U.S.	20,577,177
Mortality worldwide	1,841,077
Mortality in U.S.	351,302

\*Johns Hopkins Coronavirus Resource Center.

# The 2019 Coronavirus Outbreak Wuhan, China - December 2019



## COVID-19

**CO** = Corona

**VI** = Virus

**D** = Disease

**19** = 2019

- Spread - Respiratory droplets or small particles resulting from coughs, sneezes, sings, talks, or breathes, inhaled into the nose, mouth, airways, and lungs and cause infection. Droplets can also land on surfaces and objects and be transferred by touch, then touching the mouth, nose, or eyes.
- Symptoms - fever or chills, cough, shortness of breath or difficulty breathing, fatigue, muscle or body aches, headache, new loss of taste or smell, sore throat, congestion or runny nose, nausea or vomiting, diarrhea (not a full list).
- Do not delay getting emergency care for your health problems or *any* health condition that requires immediate attention.

# Concerns

- Risks: age, ethnicity, health conditions, exposure
- Testing: Call your provider: rapid tests, nasal, oral & blood
  - Negative results
  - Positive results
- Travel
- Exposure, self isolate, self quarantine
- Infection/exposure
  - 10 days since symptoms first appeared **and**
  - 24 hours with no fever without the use of fever-reducing medications **and**
  - Other symptoms of COVID-19 are improving\*
- Systemic bias and structural racism also contribute to the high vulnerability to COVID 19 for communities of color.

# COVID-19 Treatment

- Currently **THERE IS NO CURE** for COVID-19 Infection!
  - Only management/treatment without a vaccine
    - Antivirals: Remdesivir
    - Steroids: Dexamethasone
    - Antibody: Monoclonal antibodies (Regeneron)
    - Symptomatic treatment for mild cases
    - Social mitigation
- Remember who is mostly affected, highest fatality rate
  - African Americans, Hispanics – both adult and pediatric
  - Healthcare Workers and Ancillary Personnel
    - Physicians, Nurses, Techs, Receptionists, Transporters, Environmental Personnel, Others deemed essential

## Why Getting a COVID-19 Vaccine is so Important

- Chronic or Underlying Health Condition
  - Asthma – both pediatric and adult
  - Diabetes – both pediatric and adult
  - Cardiovascular Disease: High Blood Pressure, Heart Disease
  - Neurological Disease: Stroke
  - Obesity
- Elderly patients, especially those confined to long term care facilities

## PANDEMIC MODE

- Need to take a non-conventional approach to manage this pandemic
- If vaccine has been properly vetted (approved by FDA, CDC, etc.) then it should be embraced by all communities.
  - Significant number of African-Americans, and Hispanics were involved in studies
  - No reported adverse effects

**COVID-19  
Vaccine  
Why is it  
important?**

# What is Vaccine Hesitancy?

- Delay in acceptance or refusal of vaccination despite availability of vaccination services
- Complex and context specific, varying across time, place and vaccines.
- Influenced by factors such as complacency, convenience and confidence



# The Vaccine Life Cycle

safety at every phase

## GUIDE

### ACIP

ADVISORY  
COMMITTEE ON  
IMMUNIZATION  
PRACTICES

### BLA

BIOLOGICS LICENSE  
APPLICATION

### CDC

CENTERS FOR  
DISEASE CONTROL  
AND PREVENTION

### FDA

FOOD AND DRUG  
ADMINISTRATION

### IND

INVESTIGATIONAL  
NEW DRUG  
APPLICATION

VACCINE

DEVELOPMENT

safety  
is a priority  
during vaccine  
development  
+ approval

safety  
continues with  
CDC + FDA  
safety  
monitoring

PHASE 1  
*safety*

PHASE 2  
*effectiveness*

PHASE 3  
*safety +  
effectiveness*

PHASE 4  
*safety monitoring for  
serious, unexpected  
adverse events*

BASIC  
RESEARCH

DISCOVERY

PRE-  
CLINICAL  
STUDIES

CLINICAL STUDIES / TRIALS

FDA  
REVIEW

ACIP  
REVIEW

POST-APPROVAL  
MONITORING +  
RESEARCH

IND  
SUBMITTED

BLA  
SUBMITTED

FDA  
APPROVAL OF 1  
NEW VACCINE

ACIP  
RECOMMENDATION

# COVID-19 Vaccine

## Update on Vaccines and Vaccination

- Thank you Dr. Kizzmekia Corbett, Immunologist
  - mRNA vaccines: contain genetic instructions for building the spike protein
  - When injected, cause cells to make spike proteins, released into the body, and provoke the immune system to respond
  - NO VIRAL PARTICLES, strictly chemical
- Breakdown of Trials (highlights)
  - Include ages 56-85 - 46%
    - 10% - African American
    - 13% Hispanic
    - 1% Native American/Alaskan Indian
    - 6% Asian

## Update on Vaccines and Vaccination (Cont'd)

- **Pfizer:** two doses given 21 days apart
- **Moderna:** two doses give 28 days apart
- **Side Effects:** 3% after 1<sup>st</sup> dose; 3.8% had fatigue, 2% had headache after 2<sup>nd</sup> dose
- **Most common:** local reaction (pain, swelling, muscle soreness), flu-like illness
- **Allergic Reactions:** few cases of anaphylaxis have occurred; COVID-19 vaccination is not recommended if you are allergic to any ingredient in the vaccine or have had reactions to other vaccines in the past

# COVID-19 Vaccine

# COVID-19 Vaccine trust

## **Response to building trust**

- Must be transparent
- Reassure that the vaccine is safe and efficacious
- Educate about clinical trial process
- Data must confirm these points
- Safety was maintained during all phases of development to approval
- African American involvement in every phase

# What is Herd Immunity?

- When enough people have been infected such that the virus's ability to spread and further infect is severely limited. Experts think this alone may take 3-4 years
- Need about 70% of the population, can be augmented by use of a vaccine

# Centers for Disease Control and Prevention (CDC)

- The *Vaccinate with Confidence* strategic framework is being customized to address the unique information and health equity needs created by the COVID-19 pandemic.
- Steps include:
  - Regularly sharing clear and accurate information
  - Support healthcare personnel
  - Engaging communities and individuals in an equitable and inclusive way
- Vaccine doses purchased with U.S. taxpayer dollars will be given to the American people **at no cost**.
- CDC is also implementing a new smartphone-based tool called **v-safe** to check-in on people's health after they receive a COVID-19 vaccine.

# COVID VACCINE PHASED APPROACH (not a complete list)

1a	1b	1c	1c
Health care personnel and long-term care facility residents	Frontline essential workers: first responders, corrections, food and agricultural, manufacturing, public transit, educators	Ages 16-64 with medical conditions that increase the risk of severe COVID-19	Essential workers not in 1b
	Ages 75 and above	Ages 65-74	

Expected that anyone who wants a COVID-19 should be able to by summer of 2021 (based on availability & distribution)



# COVID-19 When will the pandemic end?

## Why Getting a COVID-19 Vaccine is so Important

- This is the best way to STOP the Pandemic at the present time, until other proven methodologies emerge and are approved.
- **Dual Pandemics Factors**
  - Influenza and COVID-19 – could mean even higher death rates
- There is no CONSPIRACY against minorities, but rather a need to protect this group at all costs!
- If you had COVID-19 disease, you should still get vaccinated





# **coping....isolation....loneliness....FAITH**

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Loss, uncertainty, anxiety

- Situational/Environmental
- Personal/Professional
- Organizational

Touch Builds Trust – Believe the trusted voices

# Next Steps



**Partnerships**



**Messaging**



**Prevention**

**Wash hands**

**Watch distance**

**Wear masks - Stay home**

# Trusted Voices

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**Educate for informed  
decision making and  
personal responsibility**



**Prepare, Protect and Perform**

# References

CDC COVID-19 information

<https://www.cdc.gov/coronavirus/2019-ncov/>

NIH Clinical trial information

<https://www.niaid.nih.gov/clinical-trials/covid-19-clinical-trials>



**QUESTIONS???**

**Thank you**