PRESENTATION OBJECTIVES

- Discuss Pfizer and Moderna mRNA COVID-19 vaccines
- Recognize factors leading to HCP hesitancy to receive the vaccine
- Discuss strategies for motivating HCP to get vaccinated

CDC/Lauren Bishop
COVID-19 VACCINES IN THE UNITED STATES:

- The First two Covid-19 Vaccines released by FDA, Emergency Use Authorizations (EUA), both 2 dose vaccines:
  - Pfizer-BioNTec
  - Moderna
# COMPARISON OF MRNA VACCINES

<table>
<thead>
<tr>
<th></th>
<th>Pfizer &amp; BioNTech</th>
<th>Moderna</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td>mRNA (virus genetic code)</td>
<td>mRNA (virus genetic code)</td>
</tr>
<tr>
<td><strong>Antigen</strong></td>
<td>Spike protein, 30 µg</td>
<td>Spike protein, 100 µg</td>
</tr>
<tr>
<td><strong>Doses</strong></td>
<td>Two injections, <strong>21 days apart</strong></td>
<td>Two injections, <strong>28 days apart</strong></td>
</tr>
<tr>
<td><strong>Study participants</strong></td>
<td>~44,000</td>
<td>~30,000</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td><strong>≥16 years</strong></td>
<td><strong>≥18 years</strong></td>
</tr>
<tr>
<td><strong>Effectiveness</strong></td>
<td>~95% (~50% after 1 dose)</td>
<td>~95%</td>
</tr>
<tr>
<td><strong>Long-term storage</strong></td>
<td><strong>-75 °C</strong></td>
<td><strong>-20 °C</strong> (up to 6 months)</td>
</tr>
<tr>
<td><strong>Administration</strong></td>
<td>Intramuscular (IM)</td>
<td>Intramuscular (IM)</td>
</tr>
<tr>
<td><strong>Stability when mixed</strong></td>
<td>6 hours</td>
<td>6 hours</td>
</tr>
</tbody>
</table>
WHAT ARE mRNA VACCINES?

- mRNA vaccines carry genetic material that teach our bodies to make a harmless piece of “spike protein” which is found on the SARS-COV-2 Virus.

- Our bodies recognize this protein and trigger an immune response (making antibodies against the virus).

- mRNA vaccines can’t change DNA, do not enter the cell nucleus and do not cause COVID-19.
PHASED ALLOCATION OF COVID-19 VACCINES

Work Group considerations: Balancing Goals

<table>
<thead>
<tr>
<th>Prevention of Morbidity and Mortality</th>
<th>Preservation of Societal Functioning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1a LTCF residents</td>
<td>Health care personnel</td>
</tr>
<tr>
<td>1b Persons 75 years and older</td>
<td>Frontline Essential Workers</td>
</tr>
<tr>
<td>1c Persons 65-74 years; and Persons 16-64 with high risk medical conditions</td>
<td>Other Essential Workers</td>
</tr>
</tbody>
</table>

- Insure safety and effectiveness of COVID-19 vaccines
- Insure equity in vaccine allocation and distribution

Dooling K, ACIP, 20 December
POTENTIAL SIDE EFFECTS

- Inform about the potential side effects and that they are normal
- Potential Side Effects:
  - **Local**: pain, redness, swelling at the injection site
  - **Systemic**: fever, muscle or joint aches, malaise
- Generally occur within 1-3 days following vaccine and resolve within 1-3 days of onset
- May be more pronounced after the second dose

### Reactogenicity reported to v-safe

<table>
<thead>
<tr>
<th>Local and systemic reactions, day 0-7*†</th>
<th>All vaccines</th>
<th>Pfizer-BioNTech dose 1 %</th>
<th>Pfizer-BioNTech dose 2 %</th>
<th>Moderna dose 1 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>70.7</td>
<td>67.7</td>
<td>74.8</td>
<td>70.1</td>
</tr>
<tr>
<td>Fatigue</td>
<td>33.4</td>
<td>28.6</td>
<td>50.0</td>
<td>29.7</td>
</tr>
<tr>
<td>Headache</td>
<td>29.4</td>
<td>25.6</td>
<td>41.9</td>
<td>26.0</td>
</tr>
<tr>
<td>Myalgia</td>
<td>22.8</td>
<td>17.2</td>
<td>41.6</td>
<td>19.6</td>
</tr>
<tr>
<td>Chills</td>
<td>11.5</td>
<td>7.0</td>
<td>26.7</td>
<td>9.3</td>
</tr>
<tr>
<td>Fever</td>
<td>11.4</td>
<td>7.4</td>
<td>25.2</td>
<td>9.1</td>
</tr>
<tr>
<td>Swelling</td>
<td>11.0</td>
<td>6.8</td>
<td>26.7</td>
<td>13.4</td>
</tr>
<tr>
<td>Joint pain</td>
<td>10.4</td>
<td>7.1</td>
<td>21.2</td>
<td>8.6</td>
</tr>
<tr>
<td>Nausea</td>
<td>8.9</td>
<td>7.0</td>
<td>13.9</td>
<td>7.7</td>
</tr>
</tbody>
</table>

* v-safe data lock point 1/14/2021, 5:00 AM ET
† Reported on at least one health check-in completed on days 0-7 after receipt of vaccine
PREVIOUS COVID-19 INFECTION AND VACCINE

- The CDC recommends that all eligible people receive the COVID-19 vaccine regardless of having prior infection.

- Clinical trials showed antibody response to vaccine was superior to having the infection.

- If you have recently been diagnosed/tested positive, you should wait until you have recovered from COVID-19 (precautions have been discontinued, per CDC guidelines).
  - If treated with monoclonal antibodies or convalescent plasma, should wait 90 days.
VACCINE UNKNOWNNS AT THE PRESENT TIME:

- 1) Safety and efficacy in subgroups (children, pregnant and lactating women, immunocompromised persons)
- 2) Duration of protection
- 3) Effectiveness when co-administered with other vaccine (separate vaccines by 2 weeks)
- 4) Impact of prior receipt of monoclonal antibodies (avoid vaccine for 90 days)
- 5) Long term safety
- 6) Potential requirement for booster doses or new vaccines at some future time
AFTER THE VACCINE: WHAT HAPPENS?

- Limited information on how much the vaccine might reduce transmission and how long protection lasts

- CDC continues to recommend vaccinated persons should continue to follow current guidance to protect themselves and others, including wearing a mask, staying at least 6 feet away from others, avoiding crowds, avoiding poorly ventilated spaces, covering coughs and sneezes, and washing hands often.
  - However, vaccinated persons with an exposure to someone with suspected or confirmed COVID-19 are not required to quarantine if they meet CDC criteria

- Added, as contingency strategies options to allow (2/14)
  - Symptomatic fully vaccinated HCP who have had a higher-risk exposure to SARS-CoV-2 but are not known to be infected to continue to work onsite throughout their 14-day post-exposure period.

STILL IMPORTANT!

Remember the 3 W’s

WEAR A MASK

WASH YOUR HANDS

WATCH YOUR DISTANCE

cdc.gov/coronavirus
Vaccine Hesitancy among HCP
VACCINE HESITANCY IS REAL

Published February 1st, 2021

Studied receipt of vaccine in first month of Pharmacy Partnership for LTC Program with data from NHSN and CMS

77.8% of residents and 37.5% of staff members per facility received ≥1 dose of vaccine through Pharmacy Partnership for LTC Program
VACCINE HESITANCY

INCREASING CONFIDENCE IN VACCINE, VACCINATOR, AND HEALTH SYSTEM

May have questions, take “wait and see” approach, want more information

Refusal

Passive Acceptance

Demand

https://www.cdc.gov/vaccines/covid-19/health-systems-communication-toolkit.html#slides
EXPLANATIONS FOR HESITANCY

▶ First line..."guinea pig"
  ▶ HCP in first group to receive the vaccine due to their essential role in fighting the pandemic, risk for getting COVID-19 and potentially spreading to others including patients, residents, family, friends and those in the community

▶ Vaccines were rushed

▶ Uncertain if vaccine works, long term effects ("wait and see how others do")

▶ Uncertain of side effects, out of work
  ▶ Out of work

EXPLANATIONS FOR HESITANCY

- Related political, cultural, social, and historical reasons
  - Disparities due to where one may live, access to health care, internet access, access to the vaccine, lack of trust in the system

- Not known how long protection lasts

- Social media, misinformation
  - Myths: alters my DNA, made from fetal tissue, government has it microchipped, affects fertility- currently no evidence to support
“You have a system of checks and balances and there are guidelines, there’s ethical standards, there’s review boards, there’s the FDA that has to approve of everything that has been done.”

Dr. Ernest Grant, president of the American Nurses Association, participating in the COVID-19 vaccine phase three clinical trials hosted by UNC researchers. UNC SCHOOL OF MEDICINE

Durham’s Miss Marcella becomes first in the country to get COVID-19 Vaccine from Walgreens

Marcella Thompson, “Miss Marcella,” recently received first dose on Good Morning America. Well known and respected African American community leader best known for her leadership in the Mustard Seed Project.

**Her message to her community:**

“If they see Miss Marcella doing this, Miss Marcella who they know, Miss Marcella who they respect is getting this vaccination, then we can save a lot of people.”

“You must protect yourself. If you don't want to get it for you, get it for your auntie, get it for your mama, your cousin. Get it for me.”

Strategies For Motivating HCP To Get Vaccinated
STRATEGIES FOR MOTIVATING HCP TO GET VACCINATED

- Leaders, managers, administrators get vaccinated to protect yourself and others from the virus
  - Set example, share your reasons and encourage others to do so
  - Honest discussions that vaccine, protects you, family, keeps patients/residents safe/help stop spread in the community
  - Work with representatives from all departments for sharing of ideas

- Identify “vaccine champions” in your facility to promote the vaccine
  - Positive and energetic
  - Tell their reasons why they got vaccinated
  - Who they are protecting

- Infection Preventionist of facility get vaccinated and promote with photos, news articles
Key to gaining trust and understanding

- Worries/concerns about the vaccine often impact people’s willingness to get vaccinated so **address them fully in a respective manner**
- Ask, listen, acknowledge fears, lack of confidence
- Address questions, use accurate sources, relate what is true
- Communicate regarding updates, any news
- Educate on other key concerns, details of how and when to get vaccine, no cost

Content provider: CDC/Robert Denty
Photo Credit: Lauren Bishop
EDUCATION

- Educate HCP about COVID-19 vaccines
- How developed and monitored for safety
- Address questions, use good sources, what is true
- Feedback
- Know your audience, how they best learn, what is affective within your facility

K. Dooling, ACIP 6/24/2020
Strategies to Improve Compliance

- Strategies from NC facilities and HCP, what has helped:
  - FAQs sheets for staff, key details
  - One-on-one education at time of vaccination
  - Posters/educational materials from CDC, NCDHHS
  - Photo gallery of staff who have received vaccine
  - Staff meetings – recognition and acknowledgment of vaccination
  - Buttons, lanyards
  - Small tokens (ice cream - lollipops)
COVID-19 Vaccinations
Perspectives from a Nursing Home CNA
REFERENCES

https://www.cdc.gov/vaccines/covid-19/

https://covid19.ncdhhs.gov/dashboard


https://www.vaccines.gov/diseases/covid/8-things
Questions??