



COVID-19 Vaccine

Maura J. Rossman, MD

Health Officer

December 7, 2020



Promote. Preserve. Protect.

hchealth.org



OUTLINE

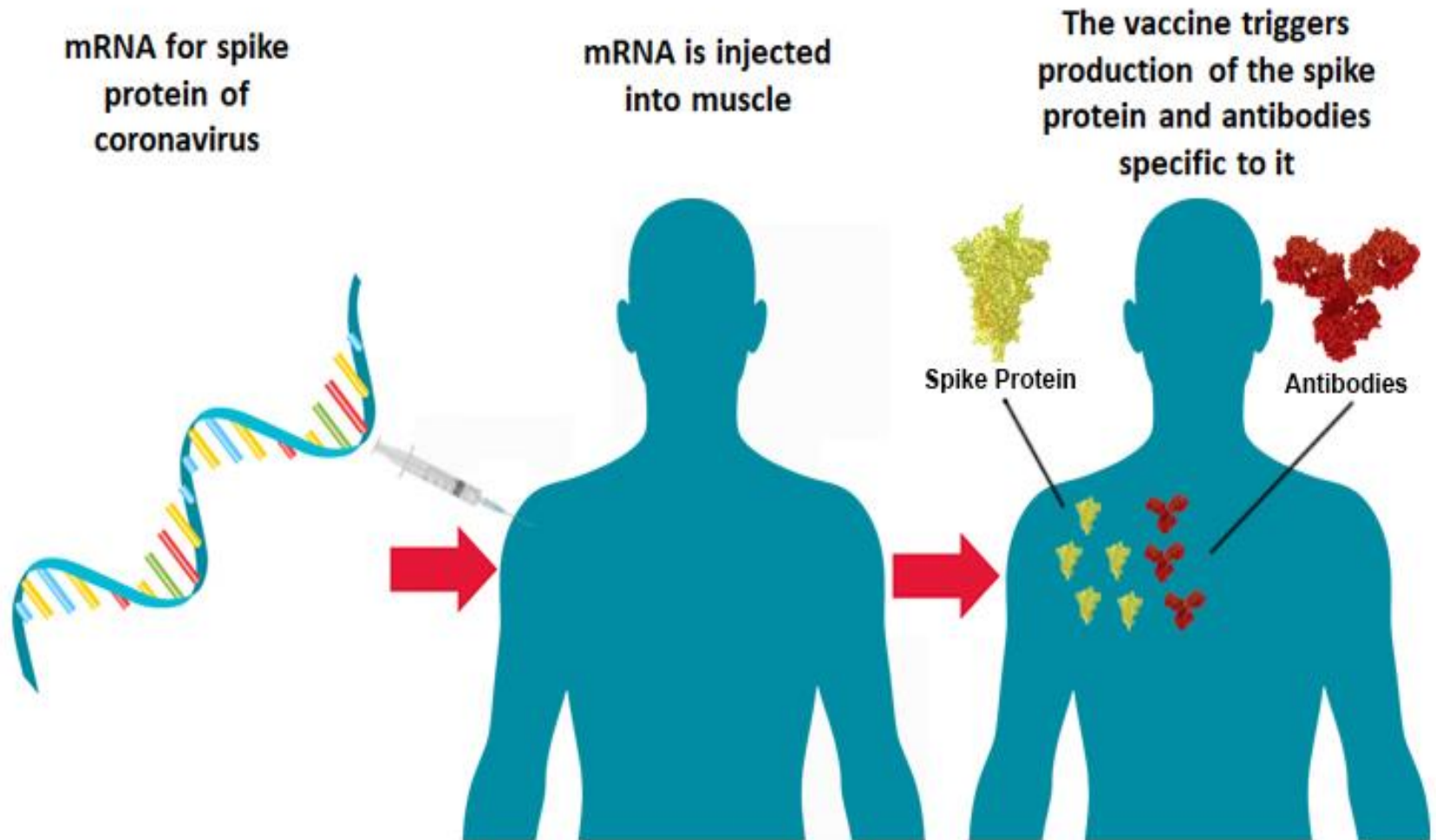
- Why do we need a vaccine?
- mRNA Vaccines
- SARS-CoV-2 Vaccine Candidates
- Phases of Manufacturing/Distribution Timeline
- Vaccine Priority Groups
- Maryland and Howard County Plans
- Sources of Additional Information and Updates

WHY WE NEED A VACCINE

- Pandemic spread of the virus SARS-CoV-2 has had a devastating impact around the world
- COVID-19, the disease caused by the virus, has caused millions of severe illnesses and over 1.4 million deaths
- Spreads easily through populations through respiratory droplets
- Vaccination will be a key in stopping the pandemic
 - Preventing infection
 - Reducing severity of disease

MRNA VACCINES

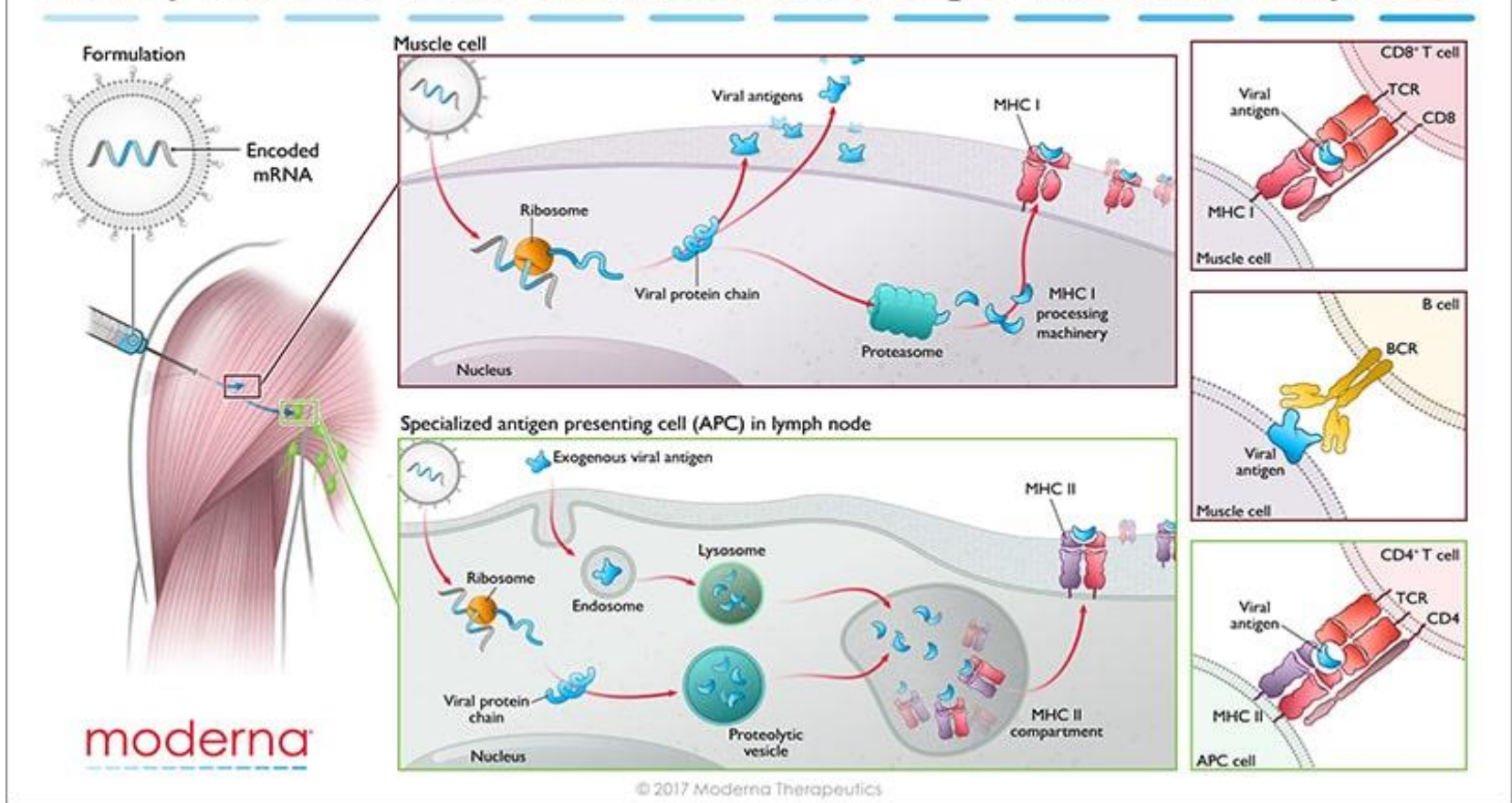
- New technology making development faster and easier to standardize
- Safety
 - No infectious components, live virus or DNA interaction
- Efficacy (how well the vaccine achieves results)
 - Tells our cells how to make a harmless piece of the protein found on the virus surface
 - When injected into the arm, muscle cells make copies of the protein piece
 - Your immune system recognizes the protein as not belonging and builds an immune response that protects against future infection



NIH <https://directorsblog.nih.gov/2020/07/16/researchers-publish-encouraging-early-data-on-covid-19-vaccine/>

Moderna's mRNA Vaccine Approach

Closely mimics a native viral infection leading to B and T cell responses



Moderna Inc <https://www.modernatx.com/moderna-blog/shedding-light-our-prophylactic-vaccines-moa>

POTENTIAL REACTIONS TO VACCINES

- Injection Site Pain and/or Redness
- Fatigue
- Muscle and/or Joint Pain
- Headache

VACCINE CANDIDATES

- **Pfizer (mRNA)**
 - 2 doses, 3 weeks apart
 - Ultra cold (-94°F) storage needed, once thawed can be kept in refrigerator 5 days, keeps only 6 hrs once diluted for use
- **Moderna (mRNA)**
 - 2 doses, four weeks apart
 - Stored frozen at -4°F, keeps for a month at refrigerator temp
- **AstraZeneca-Oxford (Adenovirus vector)**
 - 2 doses, one month apart
 - Can be stored at refrigeration temperatures for up to 6 months
- **58 Others in clinical trials:** include Johnson & Johnson (Ad vector, 1 dose); Novavax (recombinant protein, 2 doses), Sanofi (recombinant protein, 2 doses)

PRIORITY GROUPS FOR VACCINATION

Recommended at a meeting of the Advisory Committee on Immunization Practices (ACIP) December 1:

Once authorized by FDA and recommended by ACIP, vaccination in the initial phase (Phase 1a) should be offered to both:

- Health care personnel
 - paid and unpaid persons serving in healthcare settings with potential for direct or indirect exposure to patients or infectious materials
- Residents of long-term care facilities
 - adults who live in facilities that provide medical and personal care to persons unable to live independently

MARYLAND PLAN FOR COVID-19 VACCINATION

- MD mass vaccination planning has been underway with federal partners since Spring
- MD Plan, based on CDC COVID-19 Vaccination Interim Playbook, will evolve with more info
- Health care providers are currently registering with the state to administer COVID-19 vaccine
- Local health departments, hospital systems, and pharmacies will also be key partners in administering vaccine

PLAN COMPONENTS

- Provider Enrollment
- Vaccine Ordering and Distribution
- Vaccine Administration
- Communication and Outreach

VACCINE ADMINISTRATION

- State will work with federal partners, local health systems, local health departments, and pharmacies to administer vaccine to Phase 1 priority groups
- Once vaccine is widely available (Phase 2), Marylanders will be able to receive vaccinations through their health care provider or at a pharmacy (similar to flu shot)
- Health equity considerations are crucial to ensure access across all populations

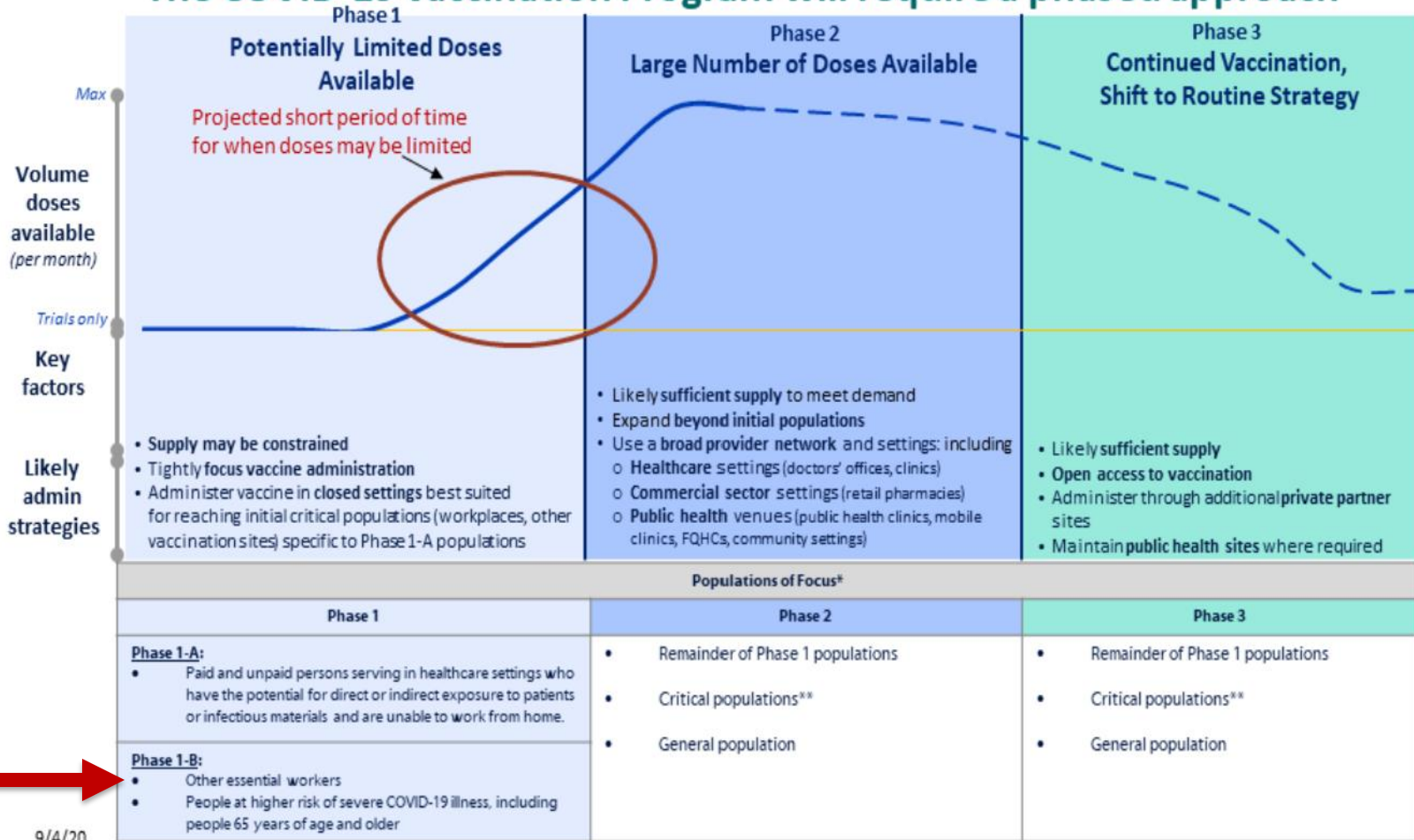
COMMUNICATION AND OUTREACH

Communication and sharing of information is crucial

- Some groups may be more hesitant to be vaccinated than others
- Messaging will need to provide facts about the vaccines(s), instill confidence, and encourage vaccination
- Outreach efforts will need to be culturally competent and account for the needs of communities of color and vulnerable populations

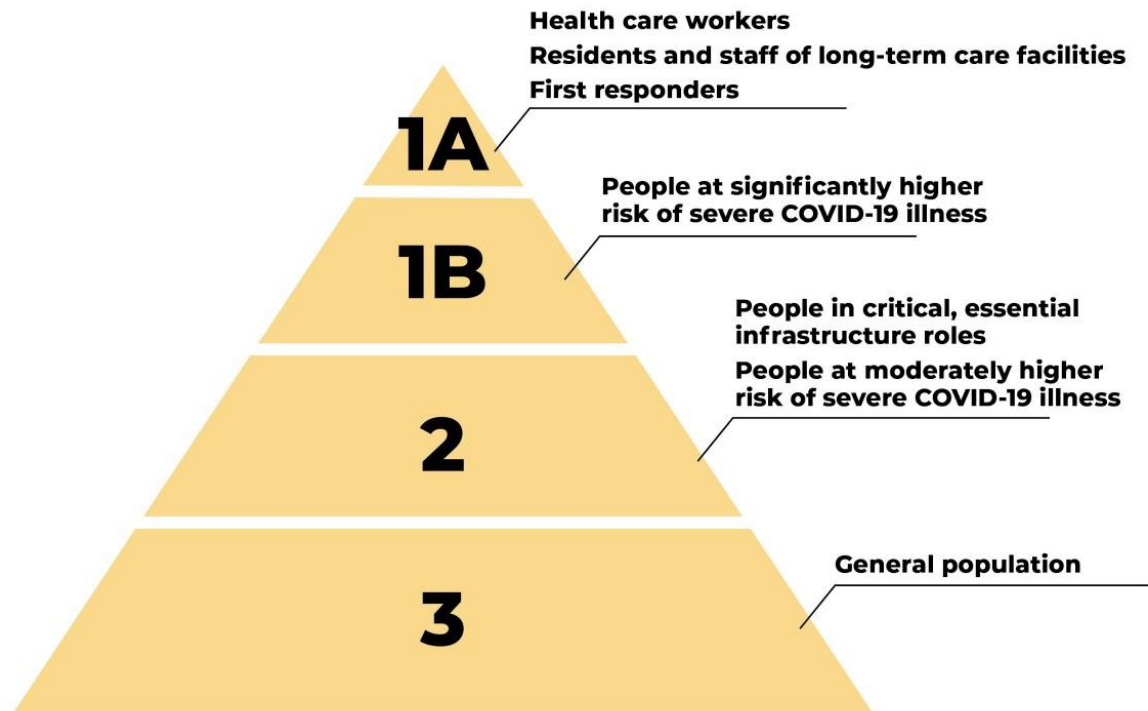
A PHASED APPROACH

The COVID-19 Vaccination Program will require a phased approach



9/4/20

MARYLAND PRIORITY GROUPS



Vaccine prioritization may be subject to change.

LOGISTICAL CONSIDERATIONS

- The vaccine comes in two doses and registration will be required
 - Pfizer: Second dose required after three (3) weeks
 - Moderna: Second dose required after four (4) weeks.
- Registration will occur via PrepMod.
(<https://www.marylandvax.org/>)
- Registration for both doses should be made at the same time.
- Reminder emails will be sent prior to appointments.
- Vaccine doses should be received at the required intervals to be effective.

EMPLOYER & ESSENTIAL WORKER CONSIDERATIONS

- Do not recommend vaccinating entire workforce at same time due to potential adverse effects and need for staff sick leave.
- Sub-prioritize employees based upon occupational risk (not personal risk) factors.
- Schedule second dose at time of first appointment for adherence and maximum efficacy. (Pfizer second dose must be administered after 21 – 28 days of first dose.)
- Awaiting guidance on pregnant women.

PROVIDER ENROLLMENT AND DATA SYSTEMS

- Providers register with [ImmuNet](#) (immunization info system)
- MDH is working through partners to encourage providers to enroll
- All Phase 1 vaccinations to be scheduled and tracked per federal guidance
 - PrepMod/Hospital Electronic Health Record system used to schedule appointments and second dose reminders
 - ImmuNet to be used for ordering vaccine, data reporting, and patient record keeping

VACCINE ORDERING AND DISTRIBUTION

- Registered providers place vaccine orders in [ImmuNet](#)
- Vaccine will be shipped directly to the provider from CDC's distributor
- MDH will work with providers to track inventory and administration of vaccine and to ensure that if two doses are required, people receive the same product each time

COMMUNITY AND STAKEHOLDER ENGAGEMENT

State is establishing three advisory groups to provide guidance and recommendations to the state:

- Technical Advisory Group
- Vulnerable Populations Advisory Group
- Stakeholder Advisory Group

HOW TO STAY UPDATED

- Howard County Health Department [Coronavirus Website](#) or 410-313-6284
- Howard County Government [Coronavirus Updates](#)
- CDC [Coronavirus Vaccines](#)
- FDA [COVID-19 Vaccines](#)