



# COVID-19 Vaccine

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# OUTLINE

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- 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

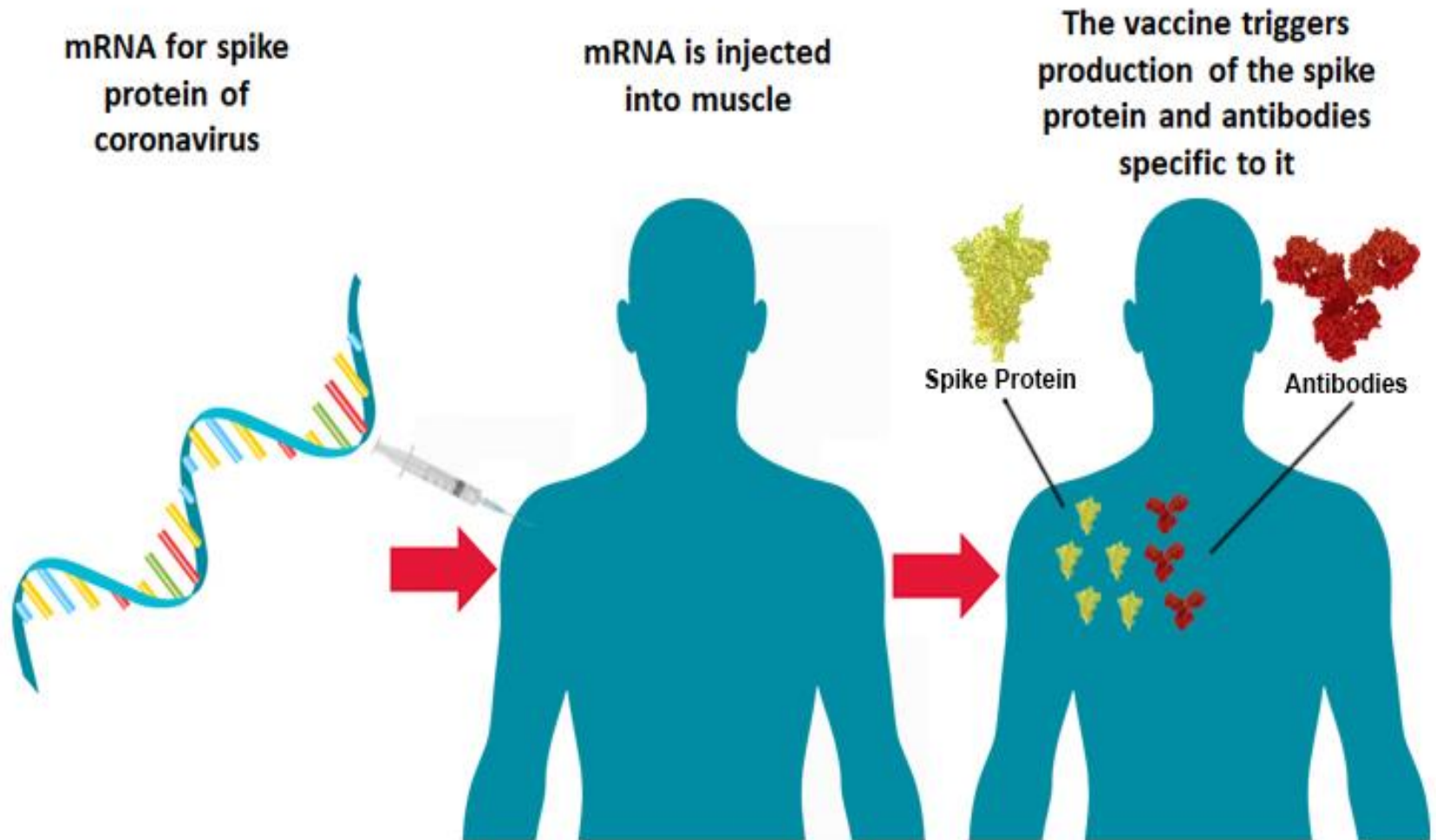
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- Pandemic spread of the virus SARS-CoV-2 has had a devastating impact around the world
- COVID-19, the disease caused by the virus, has caused millions of severe illnesses and over 1.4 million deaths
- Spreads easily through populations through respiratory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

# MRNA VACCINES

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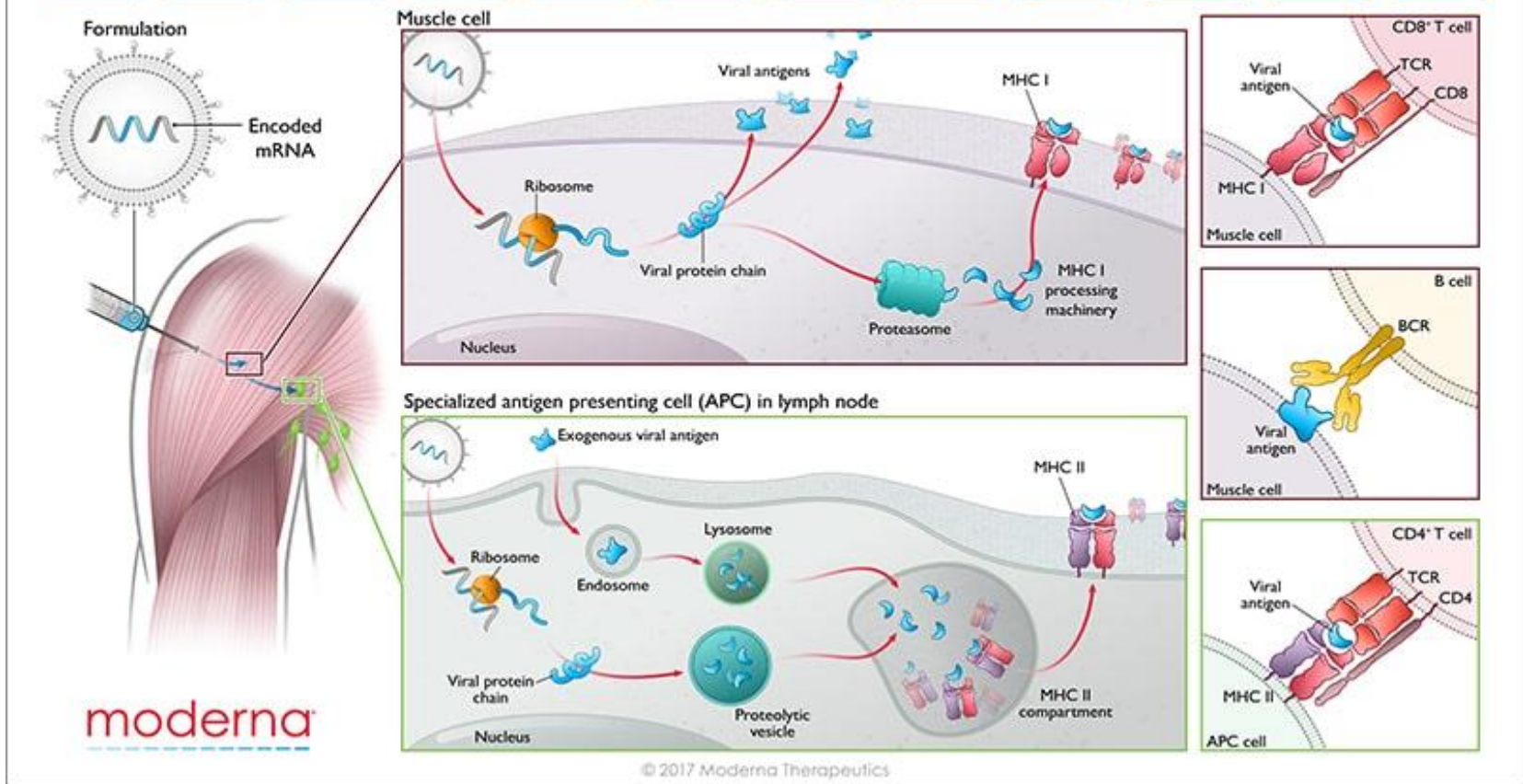
- New technology making development faster and easier to standardize
- Safety
  - No infectious components, live virus or DNA interaction
- Efficacy (how well the vaccine achieves results)
  - Tells our cells how to make a harmless piece of the protein found on the virus surface
  - When injected into 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

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

# VACCINE CANDIDATES

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- **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

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## **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

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- 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

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

# VACCINE ADMINISTRATION

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- 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

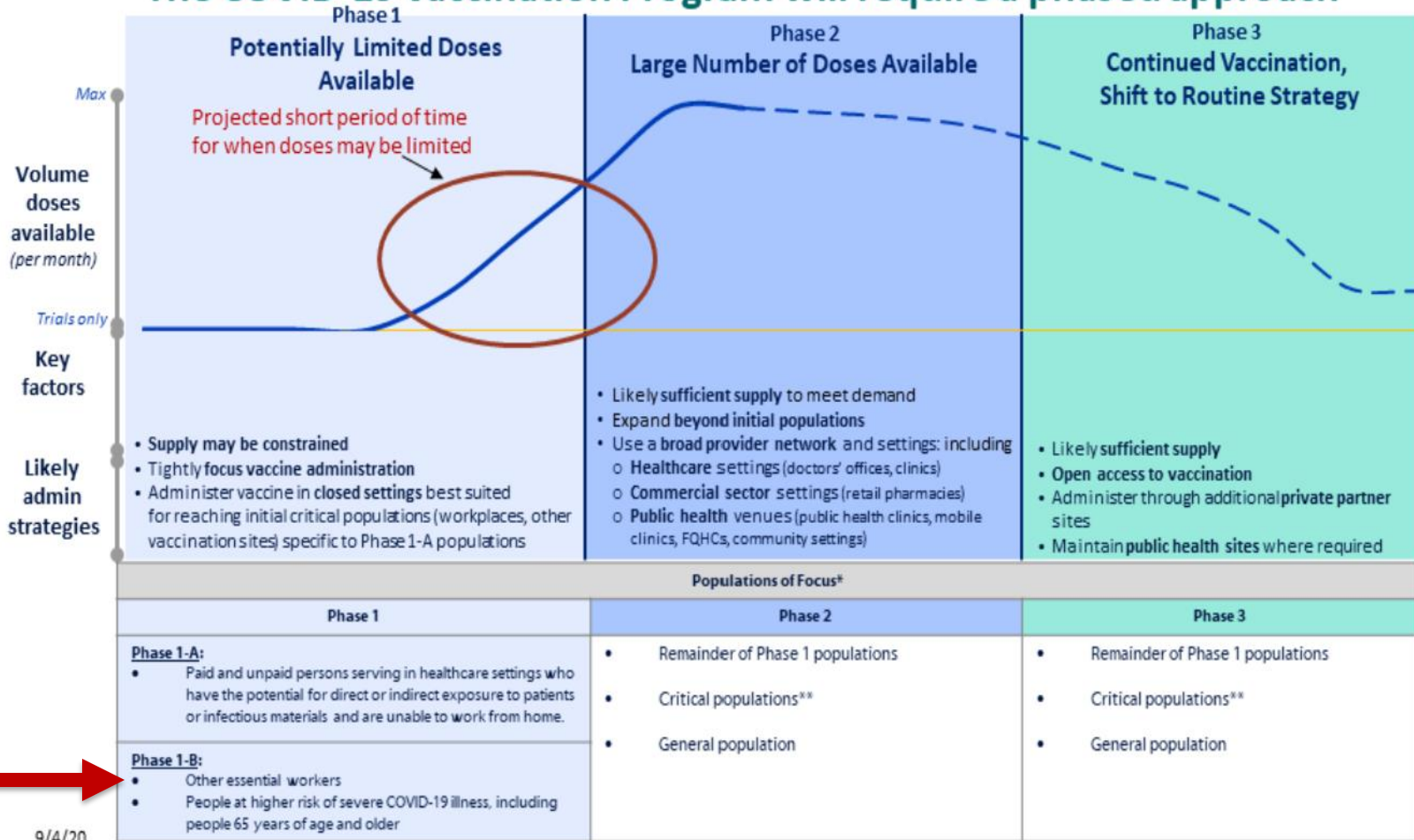
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Communication and sharing of information is crucial

- 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

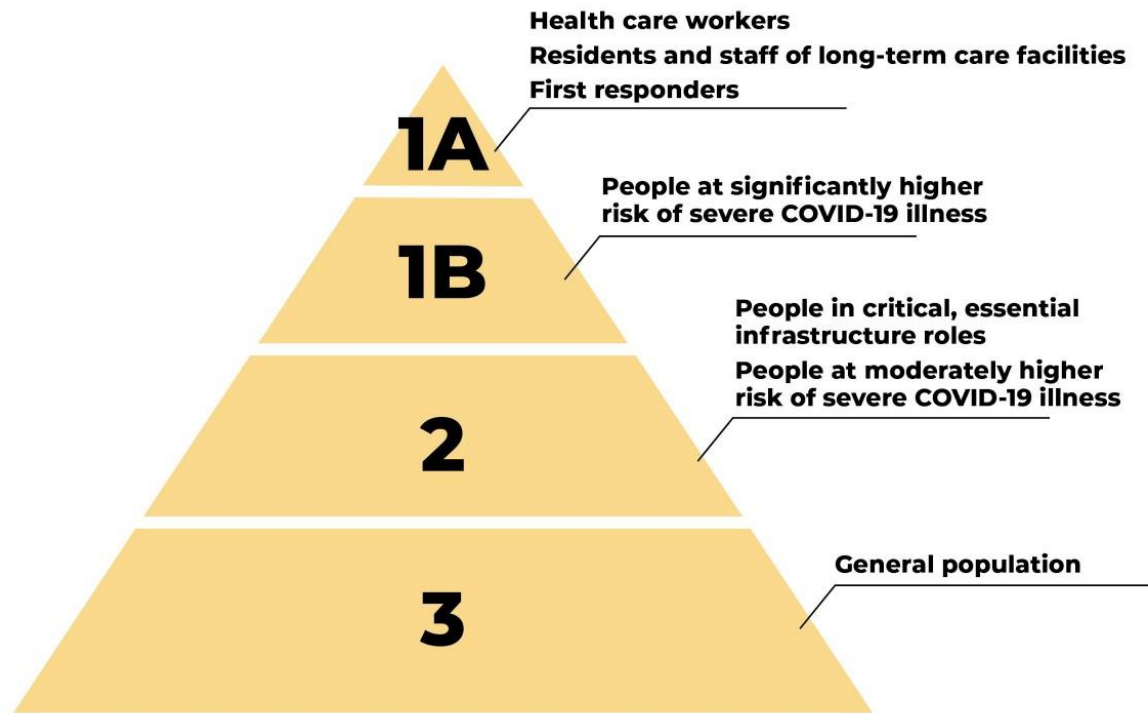
## The COVID-19 Vaccination Program will require a phased approach



9/4/20

# MARYLAND PRIORITY GROUPS

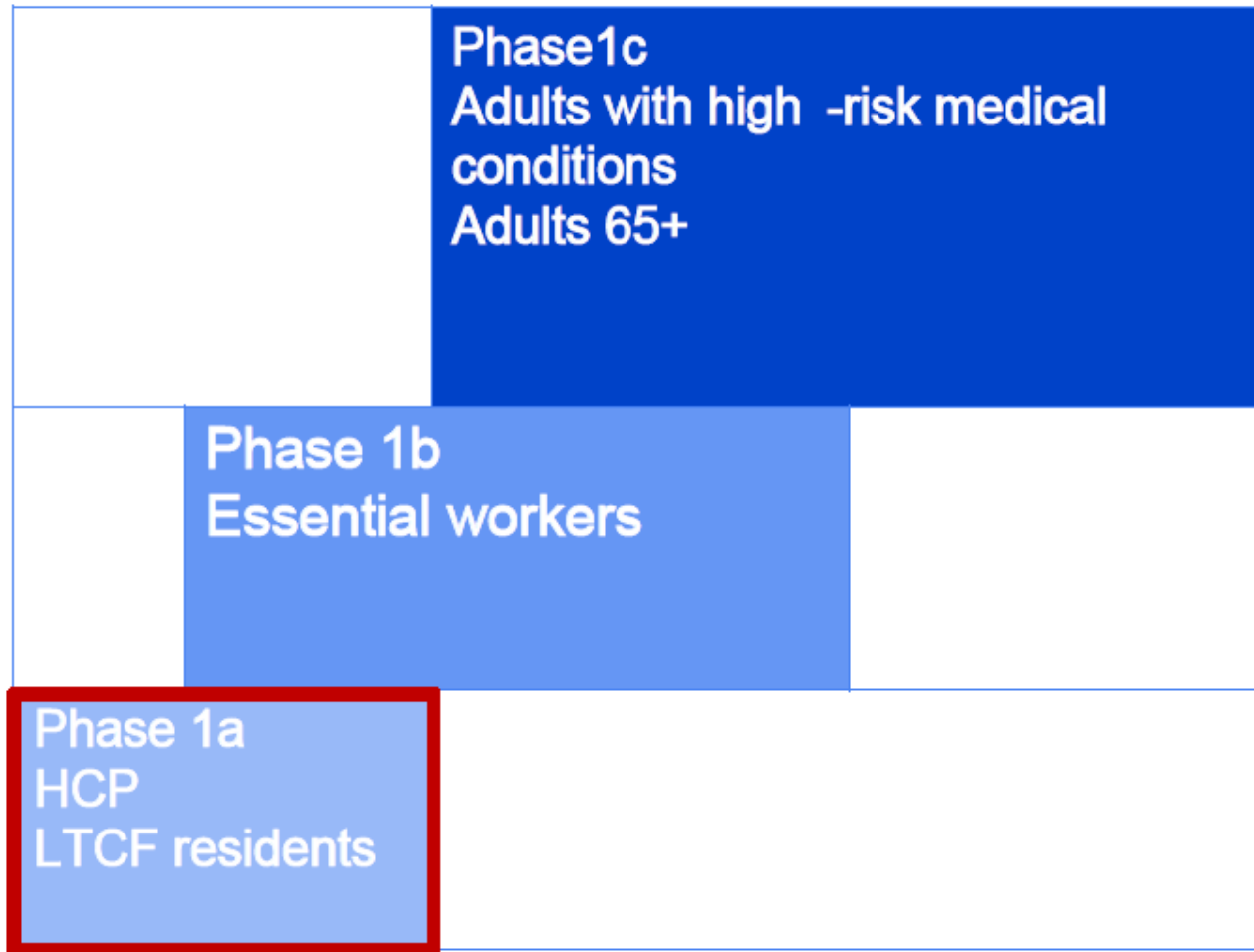
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Vaccine prioritization may be subject to change.

# PHASE 1 – LIMITED SUPPLY OF VACCINE

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# LOGISTICAL CONSIDERATIONS

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- 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

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- 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

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- 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

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- 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

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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

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